REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
		FINAL 15 Sep 93 TO 14 Dec 95

4. TITLE AND SUBTITLE
COMPILATION OF THE DIELECTRIC PROPERTIES OF BODY TISSUES AT RF AND MICROWAVE FREQUENCIES

5. FUNDING NUMBERS
F49620-93-1-0561
6277/57
62202F

6. AUTHOR(S)
Dr Camelia Gabriel

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Dept of Physics
King's College London
St5and
London WC2R 2LS

8. PERFORMING ORGANIZATION REPORT NUMBER
AFOSR-TR-96
0135

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
AFOSR/NL
110 Duncan Ave Suite B115
Bolling AFB DC 20332-8080

Dr Walter Kozumbo

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release;
distribution unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)
Knowledge of the dielectric properties of biological materials is of importance in solving electromagnetic interaction problems. There is, as yet, no consensus on such data among scientists dealing with these issues. This project is geared towards producing a database of dielectric data based on measurements using recently developed techniques. This has been achieved through measurement over a wide frequency range. The new data were evaluated by comparison with corresoonding data from the literature where available. To facilitate the incorporation of the dielectric data in numerical solutions, their frequency dependence was modelled to a spectrum characterised by 4 dispersion regions. The conductivity of tissues below 100 Hz was estimated from the recent measurements mitigated by data from the literature and used to estimate the [illegible] of the whole body and of various body parts.

19960322 041

14. SUBJECT TERMS
Dielectric properties, Permittivity; Conductivity; Biological materials; Literature review; Experimental techniques; modelling for frequency dependence; Conductivity of body parts.

15. NUMBER OF PAGES

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
(U)	(U)	(U)	(U)

NSN 7540-01-280-5500

Standard Form 298 (Rev 2-89)
Prescribed by ANSI Std Z39-18
298-102

DTIC QUALITY INSPECTED 1

COMPILATION OF THE DIELECTRIC PROPERTIES OF BODY TISSUES AT RF AND MICROWAVE FREQUENCIES

Camelia Gabriel, PhD.

Physics Department
King's College London
London WC2R 2LS, UK.

Approved for public release;
distribution unlimited.

February 1996

Final Report for the Period 15 December 1994 - 14 December 1995

Prepared for

AFOSR/NL
Bolling AFB DC 20332-0001

TABLE OF CONTENTS

Page

INTRODUCTION 1

EXPERIMENTAL TECHNIQUES 2
- Techniques 2
- Uncertainties 6
- Materials 6

RESULTS 7
- Measurements Across The Frequency Range 7

LITERATURE SURVEY 11
- Review of the Dielectric Properties of Tissues 11
- Presentation of Data 12

DATA ANALYSIS 12
- Parametric Description of the Dielectric Spectrum 12

THE DIELECTRIC PROPERTIES BELOW 100 Hz 13
- Electrical properties of Body Tissues 13
- Electrical properties of Body Parts 13

CONCLUSIONS 15

REFERENCES 16

APPENDIX A: Experimental Data 17

APPENDIX B: Literature Survey 37

APPENDIX C: Frequency Dependence Models 149

APPENDIX D: Tabulation of Experimental Data 195

FIGURES

Fig. No. Page

1. Uncorrected values of the permittivity and conductivity of a series of salt solutions. Also shown are the corrected and uncorrected data for heart tissue at 37°C. 4-5

2. Comparison between the dielectric properties of tongue muscle from animal and human samples. 8

3. Comparison between the dielectric properties of tendon from two anima species. 9

4. Comparison between the dielectric properties of small intestine tissue from animal and human samples 10

TABLES

Table No. Page

1. Estimates of the conductivity (S/m) of body tissues below 100 Hz at body temperature 14

2. Conductivity, in S/m, of the whole and parts of the body obtained by integrating the conductivity values in Table 1 over. 15

INTRODUCTION

Recent developments in the field of electromagnetic dosimetry have produced high resolution anatomically correct man and animal models from medical imaging data for use in numerical simulation exercises. The level of details is such that over 30 tissue types can be identified. The application of such models require that dielectric properties be allocated to the various tissues at all the frequencies to which the model is exposed. There is, as yet, no consensus on the dielectric data. This project is geared towards this objective.

The following has been achieved in the period covered by this report:

- Three experimental techniques were used to measure the dielectric properties of tissue in the frequency range 10 Hz to 20 GHz. Over 20 tissue types were measured over the full frequency range and over 10 others measured down to 1 MHz only.

- Internal consistency between the three sets of data was demonstrated in the overlapping frequency regions. When measurements are made on the same sample throughout, the agreement between data sets is particularly good.

- A comprehensive survey of dielectric data published over more 45 years has been carried out and presented for comparison purposes. The data obtained in the course of this study fall well within the vast body of literature data where available and bridge the gaps within it.

- To facilitate the incorporation of the dielectric data in numerical solutions, their frequency dependence was modelled to a spectrum characterised by 4 dispersion regions. This model was successfully applied to the new experimental data.

- Finally, the conductivity of tissues below 100 Hz was estimated from the recent measurements mitigated by data from the literature and used to estimate the conductivity of the whole body and of various body parts.

The work is briefly described in this report, the data are presented in graphical and tabular format in Appendices A to D.

EXPERIMENTAL TECHNIQUES

Techniques

The dielectric measurements were performed using automatic swept frequency network and impedance analysers. For the frequency range 10 Hz to 10 MHz, an HP4192A impedance analyser. An HP 8753C covered the frequency range 300 kHz to 3 GHz and an HP8720 measured from 130 MHz to 20 GHz. Open ended coaxial probes were used to interface the measuring equipment with the samples in all cases.

The technique used with the HP8700 series network analysers has been reported in details elsewhere (Gabriel et al 1994) and will not be discussed further. The techniques used in conjunction with the impedance analyser will be briefly described.

A 50 Ω impedance matched conical coaxial probe was adapted (Gabriel and Grant 1988) to interface the sample to the HP4192A impedance analyser. The probe is characterised by a fringing capacitance C and conductance G which are a function of its physical dimension and can be measured with the impedance analyser. The characteristic parameters of the probe were calculated from measurements of the impedance components of the probe in air and in a standard sample (water or salt solution). In principle, the dielectric properties (permittivity ε' and conductivity σ) of an unknown sample can then be calculated from measurements of the impedance of the probe against an unknown sample using the following relationships where ε_0 is the permittivity of free space

$$\varepsilon' = \frac{C}{K} \qquad \sigma = \frac{G\varepsilon_0}{K} \tag{1}$$

In practice, the measurement of conductive materials in the frequency range 10 Hz to 10 MHz are not so straightforward. The measurements are affected by two sources of systematic errors, electrode polarisation and lead inductance errors, which become apparent at the lower and higher ends of the frequency range under consideration.

Electrode polarisation is a manifestation of molecular charge organisation which occur at the sample-electrode interface in presence of water molecules and hydrated ions. In its simplest forms the phenomenon is equivalent to a frequency dependent capacitor in series with a resistor. Both components can be approximated by negative power functions of frequency, that is their absolute values decrease with increasing frequency. The effect increases with increasing sample conductivity and its consequences are more pronounced on the capacitance than the conductance of ionic solutions as well as biological samples (Schwan 1992). In the case of biological samples, the poorly conducting cells

shield part of the electrode from the ionic current thus reducing the polarisation effects compared to an ionic solution equivalent in conductivity to the intracellular fluid.

The material of the electrode plays an important part in determining its polarisation impedance. In the current study gold plated and sputted platinum electrodes were tested and a choice was made in favour of the latter. The effect of the rough platinum surface was to shift the electrode polarisation effect to lower frequencies and thus to reduce its contribution in the frequency range under consideration.

The inductance of the probe and connecting cable add another series component to the measured impedance. Its value could be determined from measurements on standard salt solutions and applying an equivalent circuit analysis. For the present setup the stray inductance is $L=2\cdot10^{-7}$ henry and the following equations were used to account for it

$$C = \frac{C_m + LG_m\omega^2 LC_m{}^2}{\left(1+\omega^2 LC_m\right)^2 + \left(\omega LC_m\right)^2}$$
$$G = \frac{G_m}{\left(1+\omega^2 LC_m\right)^2 + \left(\omega LC_m\right)^2} \qquad (2)$$

where C and G are the corrected capacitance and conductance expressed in terms of the measured values C_m and G_m , the lead inductance L and the angular frequency ω. The effect of the stray inductance increases with frequency and with sample conductivity.

Figures 1a and b show the effect of electrode polarisation and the stray inductance on the uncorrected permittivity and conductivity of a series of salt solutions ranging from zero molar (deionised water) to 0.09 molar. The high permittivity values at low frequencies are a manifestation of electrode polarisation while negative permittivity values at high frequency show the effect of the stray inductance. Superimposed on these data are the uncorrected permittivity and conductivity of a tissue sample (heart tissue). It can be seen that the low frequency conductivity of the tissue is less than that of 0.01 molar salt solution. It is therefore reasonable to assume that the effect of electrode polarisation on the tissue is also less than that exhibited by the 0.01 molar salt sample. A further observation indicates that the errors in the permittivity and conductivity of the sample are likely to be apparent below 1 kHz and significant below 100 Hz while the effect of inductance manifests above a few megahertz in the case of tissue samples.

a. Permittivity

b. Conductivity

Figure 1. Uncorrected values of the permittivity and conductivity of a series of salt solutions. Also shown are the corrected and uncorrected data for heart tissue at 37°C.

To correct for electrode polarisation and induction errors the capacitance and conductance of the tissue sample are evaluated in accordance with (2) and normalised to a salt solution of similar low frequency conductivity. The example in Figures 1a and b was corrected with reference to a 0.005 molar salt solution, the corrected dielectric properties are shown for comparison purposes. All impedance analyser tissue measurements were treated in a similar manner.

Uncertainties

The measurement techniques and associated instrumentation used in this study give random reproducibility of about 1% across the frequency range. This statement is based on multiple measurements carried out on standard samples of uniform composition. Biological tissues are inhomogeneous and show considerable variability in structure or composition and hence in dielectric properties. Such variations are natural and may be due to physiological processes or other functional requirements. The spread of values ranges from about ±5% above 100 MHz to ±15% at the lower end of the frequency scale.

Care has been taken to eliminate all known sources of systematic errors, however, in view of the assumptions made in correcting for electrode polarisation it is possible that the dielectric parameters below 1 kHz may be undercorrected. This source of errors may affect the dielectric parameters by up to a factor of two.

Materials

Three sources of materials were used:
1.Excised animal tissue, mostly ovine, from freshly killed sheep.
2.Human autopsy materials
3.Human skin and tongue in vivo.

All animal tissues were used as fresh as possible, mostly within two hours of death, human material was obtained 24 to 48 hours after death. The conical probe used in conjunction with the impedance analyser requires relatively large samples, at least a cube of 5 cm linear dimension. In view of this requirement not all samples could be measured at low frequencies.

RESULTS

Measurements Across The Frequency Range

Examples of measurements on the three experimental setup, across the frequency range are given in Appendix A (Figures A1 to A11). The agreement between measurements on the three machines was particularly good when the measurements were made on the same sample throughout. To achieve this objective the two network analysers and the impedance analyser were placed in close proximity to each other and interfaced to the same computer. All the measurement procedures were redesigned to operate through LabView™, a graphics interface medium from National Instruments running on an Intel Pentium microprocessor. In this arrangements the measurements could be carried out on all three machines in quick succession.

The dielectric properties of muscle are known to be anisotropic. The data reported were obtained by measurement on the paravertebral muscle. The sample was measured twice, first with a transverse section against the probe (Figure A9) and then it was cut along the muscle fibre and re-measured (Figure A10). In view of the radial nature of the fringing field of the coaxial probe these measurements do not represent the true limits of the dielectric properties with the field along and across the fibre. They show, however, the effect of fibre direction and the parts of the spectrum influenced by it.

Human material could not be obtained in sufficient quantities for optimum measurements with the conical probe. Under such conditions the measurements on the impedance analyser were consistently lower than those obtained on the network analyser in the same frequency range. Examples of such measurements are given in Figures A12 to A15.

Much smaller samples of human material were measured only in the frequency range above 1 MHz on the two impedance analysers. Examples of such measurements are given in Figures A16 to A19.

Comparison Between Species

The differences in the dielectric properties of animal a human species are not systematic. The variation in tissue properties within a species may well exceed variations between species. Example of comparative measurements are given in Figures 2 to 4.

Figure 2. Comparison between the dielectric properties of tongue muscle from animal and human samples.

Figure 3. Comparison between the dielectric properties of tendon from two animal species.

Figure 4. Comparison between the dielectric properties of small intestine tissue from animal and human samples.

LITERATURE SURVEY

Review of the Dielectric Properties of Tissues

The dielectric properties of tissues have been extracted from the literature of the past five decades and compared to the corresponding data from the current study. The purpose is to provide an objective basis for the evaluation of the experimental data and to reach a broad based consensus on the subject.

Reports of dielectric properties of tissues prior to 1950 are difficult to get hold off, they have more historical then practical interest and, with the exception of Osswald (1937), have not been reviewed. The literature in the 1950s and 60s is dominated by the work of H. P. Schwan and his collaborators and has been reviewed and tabulated by Durney et al 1986. Other extensive reviews include Geddes and Baker (1967) who summarised the early reports on the specific resistance of tissues, Stuchly and Stuchly (1980) who tabulated the dielectric properties tissues in the frequency range 10 kHz to 10 GHz Foster and Schwan (1989) who provided a wide historical perspective and Duck (1990) who extended their survey by including more recent data.

In the current survey, data that correspond more closely to living human tissues were selected in preference to any other. Consequently, human tissue and in vivo measurements were selected in preference to animal tissue and in vitro measurements. For in vitro measurements, data obtained at temperatures closest to that of the body and nearest to the time after death were used when available.

Most of the literature data were in graphical rather than table form and in a logarithmic rather than linear format. Such data were retrieved at each decade. When tables were available, a more extensive frequency range was often provided.

The data were translated from the various authors' preferred set of parameters and units to relative permittivity and conductivity expressed in S/m.

Data obtained at temperature as low as 20°C are included in this survey. It was not considered advisable to translate them to body temperature. The temperature coefficients, for both permittivity and conductivity, are tissue-type and frequency dependent. Information on these coefficients is scarce and not sufficiently robust to warrant generalisation and extrapolation. Moreover, the coefficients are highest (~1-2 %/°C) at low frequencies where the uncertainty and the scatter in the data are of a similar or higher order of magnitude than the differences due to a 10 or 15°C.

Presentation of Data

The data are presented in Appendix B in tabular as well as graphical formats. Details of the tissue-type, animal species, measurement temperature and the reference are included in the legend. To facilitate the comparison, the same scale was used for all tissues except where the conductivity of the tissue falls below 10-2 S/m.

The references which data were extracted are included in Appendix B.

DATA ANALYSIS

Parametric Description of the Dielectric Spectrum

One of the aims of this project is to derive models for the frequency dependence of the dielectric properties of the tissues investigated. The basis of the analysis is well known dispersions in the dielectric spectrum of biological materials and their expression as a summation of terms corresponding to the main polarisation mechanisms. The spectrum extends from Hz to GHz and shows 4 dispersion regions. The complexity of the structure and composition of biological material is such that each dispersion region is broadened by multiple contributions to it and could be described by a Cole Cole expression. The model corresponding to the whole spectrum

$$\varepsilon(\omega) = \varepsilon_\infty + \sum_{n=1}^{4} \frac{\Delta\varepsilon_n}{1+(j\omega\tau_n)^{(1-\alpha_n)}} + \sigma_i / j\omega\varepsilon_0 \tag{3}$$

in which, ε_∞ is the permittivity in the terahertz frequency range, σ_i is the ionic conductivity, for each dispersion region τ is the relaxation time and $\Delta\varepsilon$ is the drop in permittivity in the frequency range corresponding to $1 >> \omega\tau >> 1$.

With a choice of parameters appropriate to each tissue, (3) could be used to predict its dielectric behaviour over the desired frequency range.

The parameters of the model were adjusted to correspond to a close fit between the model and the most comprehensive data set available for the particular tissue.

The 4-Cole-Cole model describes the frequency dependence of the dielectric properties in the frequency range from Hz to GHz. It can be used with confidence for frequencies above 1 MHz. At lower frequencies, where the literature values are scarce and have larger than average uncertainties, the model should be used with caution in the knowledge that it provides a 'best estimate' based on present knowledge. It is important to stress the limitations of the model particularly where there are no data at all to support its predictions.

The 4-Cole-Cole analysis was carried out on 44 tissue types, the results are presented in a self explanatory manner in Appendix C, the experimental data are

tabulated in Appendix D.

THE DIELECTRIC PROPERTIES BELOW 100 Hz

Electrical properties of Body Tissues

Below 100 Hz the impedance of biological material is mostly resistive. The contribution of the capacitive component is of the order of 10 % in most cases. The literature surveyed in this study shows that there are wide variations in the conductivity values obtained for the same tissue in various studies. The contribution of the tissue permittivity to body current is well within the uncertainty associated with the corresponding tissue conductivity. Therefore, in practice, the estimation of induced current in tissue is based on such conductivity values.

Table 1 gives an estimate for conductivity in S/m of the main body tissues below 100 Hz from this study mitigated by literature values. The values tabulated by Duck (1990) are also shown for comparison . Average values were used where appropriate.

Electrical properties of Body Parts

The values obtained from this study were used to calculate the conductivity of the whole and various parts of the body (Table 2). The necessary integration of the conductivity of tissue to obtain values in table 2 were carried out by allocating the appropriate values to a voxel anatomical human model developed at The National Radiological Protection Board (NRPB) to aid dosimetry work. The model known as NORMAN (normal man) will be described in a future NRPB publication. The results of such an integration carried out at 10 and 100 kHz has also been included for comparison purposes.

Table 1: Estimates of the conductivity (S/m) of body tissues below 100 Hz at body temperature.

Tissue	From Duck 1990	This study
Bladder		0.2
Bone -Cancellous		0.07
Bone -Marrow		0.05
Cartilage		0.18
Cerebro Spinal Fluid	1.81	2.0
Cornea		0.4
Fat		0.04
Gall Bladder Bile	1.6	1.4
Heart	0.2	0.1
Lens		0.25
Lung -Deflated	0.1	0.2
Muscle	0.4	0.35
Pancreas	0.13	0.22
Small Intestine		0.5
Stomach		0.5
Testis		0.4
Tongue		0.3
Blood	0.68	0.7
Bone -Cortical	0.02	0.02
Breast		0.06
Cerebellum		0.1
Colon		0.1
Dura		0.5
White matter	0.1	0.06
Grey Matter	0.3	0.1
Kidney	0.9	0.1
Liver	0.12	0.07
Lung -Inflated	0.05	0.08
Nerve	0.4	0.03
Skin -Wet		0.1
Spleen		0.1
Tendon		0.3
Urine	3.3	
Vitreous Humour		1.5
Thyroid		0.5

Table 2: Conductivity, in S/m, of the whole and parts of the body obtained by integrating the conductivity values in Table 1 over

	Whole body	Head	Torso	Arm	Leg	Neck
50 Hz	0.216	0.254	0.223	0.195	0.196	
10 kHz	0.276	0.285	0.256		0.238	0.222
100 kHz	0.288	0.30	0.332		0.239	0.243

CONCLUSIONS

The main purpose of this project is to compile a database of dielectric properties of tissues for use by the scientific community in solving electromagnetic interaction problems. This has been achieved through measurement in the frequency rang 10 Hz to 20 GHz and modelling the frequency dependence of the dielectric properties of over 30 body tissues to parametric expressions for inclusion in numerical solutions.

REFERENCES

1. C Gabriel, T Y A Chan and E H Grant, "Admittance models for open ended coaxial probes and their place in dielectric spectroscopy", Physics in Medicine and Biology, 39, 12, 2183-2200, 1994.

2. Gabriel and E.H. Grant, "Dielectric sensors for industrial microwave measurements and control", Microwellen und HF Magazin, vol 15, pp 643-645, 1989.
3. P. Schwan, "Linear and nonlinear electrode polarisation and biological materials" Annals of Biomedical Engineering: 20, 269-288, 1992.

4. Durney, C.H., Massoudi, H. and Iskander, M.F., 1986, Radiofrequency radiation dosimetry handbook, Brooks Air Force Base- USAFSAM-TR-85-73 , .

5. Geddes, L. A. and Barker, L. E., 1967, The specific resistance of biological material - a compendium of data for the biomedical engineer and physiologist., Medical and Biological Engineering, 5, 271-293.

6. Stuchly, M. A. and Stuchly, S. S., 1980, Dielectric properties of biological substances - tabulated, Journal of Microwave Power, 15, 1, 19-26.

7. Foster, K. R. and Schwan, H. P., 1989, Dielectric properties of tissues and biological materials: A critical review, Critical Reviews in Biomedical Engineering, 17, 1, 25-104.

8. Duck, F. A., 1990, Physical properties of tissue:A comprehensive reference book, Academic Press, Harcourt Brace Jovanovich, Publishers.

APPENDIX A: Experimental data

Example of measurements from 10 Hz to 20 GHz

A1: Grey Matter
A2: White matter
A3: Heart
A4: Kidney
A5: Liver
A6: Lung (Inflated)
A7: Spleen
A8: Uterus
A9: Muscle Transverse
A10: Muscle Parallel
A11: Skin Wet

A12: Aorta
A13: Bone Cancellous
A14: Cervix
A15: Breast Fat

A16: Thyroid
A17: Testis
A18: Ovary
A19: Bladder

Grey Matter

Permittivity
Conductivity (S/m)
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

White Matter

Heart

Permittivity
Conductivity (S/m)
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Kidney

Permittivity
Conductivity (S/m)
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Liver

Permittivity
Conductivity (S/m)
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Lung Inflated

Spleen

Permittivity
Conductivity (S/m)
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Uterus

Permittivity
Conductivity (S/m)
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Muscle (Transverse Fiber)

Muscle (Parallel Fiber)

Skin (Wet)
Permittivity
Conductivity (S/m)
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
1.0E-4
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Aorta

Permittivity
Conductivity (S/m)
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Bone Cancellous

Cervix

Permittivity
Conductivity (S/m)
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Breast Fat

Permittivity
Conductivity (S/m)
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Thyroid

Permittivity
Conductivity (S/m)
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Testis

Permittivity
Conductivity (S/m)
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Ovary
Permittivity
Conductivity (S/m)
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Bladder

Permittivity
Conductivity (S/m)
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

APPENDIX B: Literature Survey

Dielectric data were compiled from the literature for the following tissues.

Blood
Bone -Cancellous
Bone -Cortical
Bone -Marrow
Breast Fat
Colon
Cornea
Eye Tissues
Fat
Grey Matter
Heart
Kidney
Lens Cortex
Lens Nucleus
Liver
Lung -Deflated
Lung -Inflated
Muscle
Pancreas
Skin -Dry
Skin -Wet
Spleen
Stomach
Vitreous Humour
White Matter

Frequency (Hz)	Properties			Blood
	ε′	ε″	σ (S/m)	
2.000E+8	7.216E+1	8.538E+1	9.500E-1	
4.000E+8	7.291E+1	4.359E+1	9.700E-1	
6.000E+8	7.123E+1	3.056E+1	1.020E+0	
8.000E+8	7.037E+1	2.539E+1	1.130E+0	Frog (In vivo)
1.000E+9	6.965E+1	2.211E+1	1.230E+0	Schwartz & Mealing, 1985
2.000E+9	6.754E+1	1.546E+1	1.720E+0	
4.000E+9	6.552E+1	1.636E+1	3.640E+0	
6.000E+9	6.259E+1	1.881E+1	6.280E+0	
8.000E+9	6.024E+1	2.078E+1	9.250E+0	
1.000E+6	1.800E+3	1.366E+4	7.600E-1	
2.500E+6	8.000E+2	5.968E+3	8.300E-1	Porcine (In vivo) @ 34-36°C
1.000E+7	1.800E+2	1.726E+3	9.600E-1	Hahn et al, 1980
2.500E+7	8.000E+1	7.406E+2	1.030E+0	
1.000E+8	5.600E+1	1.977E+2	1.100E+0	
1.770E+9	5.620E+1	1.808E+1	1.780E+0	
2.990E+9	5.600E+1	1.587E+1	2.640E+0	Human @ 35°C
9.390E+9	4.780E+1	1.970E+1	1.029E+1	Cook, 1952
2.770E+10	3.020E+1	2.600E+1	4.006E+1	
5.000E+4	5.800E+3	1.654E+5	4.600E-1	Human @ 21°C
5.000E+4	3.400E+3	1.510E+5	4.200E-1	Porcine @ 21°C
				Pfutzner, 1984
1.000E+8	8.700E+1	1.510E+2	8.400E-1	Rat (In vivo) @ 23°C
1.000E+9	6.400E+1	2.678E+1	1.490E+0	Burdette et al, 1980
1.000E+10	4.700E+1	3.146E+1	1.750E+1	
4.000E+9	5.000E+1	1.362E+1	3.030E+0	
1.000E+10	4.500E+1	1.943E+1	1.081E+1	Human @ 37°C
3.000E+10	2.400E+1	2.424E+1	4.045E+1	Alison & Sheppard, 1993
1.000E+11	8.000E+0	1.194E+1	6.643E+1	
1.000E+3	2.900E+3	1.222E+7	6.800E-1	
1.000E+4	2.810E+3	1.222E+6	6.800E-1	Rabbit @ Rm. Temp.
1.000E+5	2.740E+3	1.222E+5	6.800E-1	Schwan, 1956, 1963
1.000E+6	2.040E+3	1.283E+4	7.140E-1	
1.000E+7	2.000E+2	1.997E+3	1.111E+0	

Blood

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Blood

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivity (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Blood

□ Frog (In vivo) (2E8-8E9Hz) Schwartz & Mealing, 1985

◇ Porcine (In vivo) @ 34-36°C (1E6-1E8Hz) Hahn et al, 1980

△ Human @ 35°C (2E9-3E10) Cook, 1952

○ Human @ 21°C (5E4Hz) Pfutzner, 1984

× Porcine @ 21°C (5E4Hz) Pfutzner, 1984

✳ Rat (In vivo) @ 23°C (1E8-1E10Hz) Burdette et al, 1980

+ Human @ 37°C (4E9-1E11Hz) Alison & Sheppard, 1993

■ Rabbit @ Rm. Temp. (1E3-1E7Hz) Schwan, 1956, 1963

—— Ovine @ 37°C (1E6-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Bone Cancellous
	ε'	ε''	σ (S/m)	
1.000E+4	3.000E+3	9.886E+4	5.500E-2	Bovine (femur) @ RT
1.000E+5	8.000E+2	9.886E+3	5.500E-2	De Mercato, 1988
1.000E+6	1.000E+2	9.886E+2	5.500E-2	
1.000E+2	7.000E+5	3.000E+7	1.669E-1	
1.000E+3	1.000E+4	3.000E+6	1.669E-1	Human (distal tibiae) @ 27°C
1.000E+4	6.000E+2	4.314E+6	2.400E-1	Saha & Williams, 1989
1.000E+5	1.000E+2	4.314E+5	2.400E-1	
1.000E+6	5.000E+1	4.314E+4	2.400E-1	
1.000E+7	3.300E+1	4.314E+3	2.400E-1	
1.100E+6	5.065E+2	1.425E+3	8.640E-2	
3.300E+6	1.739E+2	5.915E+2	1.082E-1	
1.200E+7	6.663E+1	1.945E+2	1.292E-1	
3.600E+7	3.958E+1	7.359E+1	1.477E-1	
1.100E+8	2.864E+1	3.114E+1	1.887E-1	Ovine (skull) @ 37°C
4.000E+8	2.190E+1	1.182E+1	2.601E-1	Gabriel et al, 94
1.200E+9	1.932E+1	6.410E+0	4.256E-1	
4.000E+9	1.776E+1	6.400E+0	1.420E+0	
9.900E+9	1.264E+1	7.210E+0	3.964E+0	
2.000E+10	9.360E+0	6.250E+0	6.957E+0	

Bone Cancellous

Bone Cancellous

Bone Cancellous

□ Bovine (femur) @ RT (1E4-1E6Hz) De Mercato & GarciaSanchez, 1988

◇ Human (distal tibiae) @ 27°C (1E2-1E7Hz) Saha & Williams, 1989

△ Ovine (skull) @ 37°C (1E6-2E10Hz) Gabriel et al., 94

—— Human @ 23°C (1E6-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Bone Cortical
	ε′	ε″	σ (S/m)	
1.000E+3	2.154E+3	1.204E+5	6.700E-3	Rat (femur) @ 37°C Smith & Foster, 1985
1.000E+4	8.580E+2	1.294E+4	7.200E-3	
1.000E+5	2.510E+2	1.528E+3	8.500E-3	
1.000E+6	6.300E+1	2.157E+2	1.200E-2	
1.000E+7	2.500E+1	3.056E+1	1.700E-2	
1.800E+9	8.400E+0	1.498E+0	1.500E-1	Human (tibia) @ 37°C Cook, 1951 & England, 1950
3.000E+9	8.350E+0	1.198E+0	2.000E-1	
4.600E+9	7.830E+0	1.290E+0	3.300E-1	
9.400E+9	7.600E+0	1.434E+0	7.500E-1	
2.300E+10	6.300E+0	1.094E+0	1.400E+0	
1.000E+2	3.800E+3	2.265E+6	1.260E-2	Rat (femur) @ 37°C Kosterich, 1983
1.000E+3	1.000E+3	2.319E+5	1.290E-2	
1.000E+4	6.400E+2	2.391E+4	1.330E-2	
1.000E+5	2.800E+2	2.588E+3	1.440E-2	
1.000E+6	8.700E+1	3.110E+2	1.730E-2	
1.000E+7	3.700E+1	4.260E+1	2.370E-2	
1.000E+8	2.300E+1	1.032E+1	5.740E-2	
1.000E+3	5.900E+3	2.876E+5	1.600E-2	Bovine (femur) @ RT De Mercato, 1988
1.000E+4	9.400E+2	2.876E+4	1.600E-2	
1.000E+5	1.900E+2	2.876E+3	1.600E-2	
1.000E+6	9.000E+1	2.876E+2	1.600E-2	
1.000E+1	4.000E+4	1.025E+7	5.700E-3	Bovine (tibia) @ 23°C De Mercato, 1991
1.000E+2	4.000E+3	1.025E+6	5.700E-3	
1.000E+3	8.000E+2	1.025E+5	5.700E-3	
1.000E+4	3.000E+2	1.025E+4	5.700E-3	
1.000E+5	1.200E+2	1.079E+3	6.000E-3	
1.000E+6	4.000E+1	1.240E+2	6.900E-3	
1.000E+7	2.000E+1	1.726E+1	9.600E-3	
1.000E+3	8.500E+2	3.236E+4	2.700E-2	Bovine (femur) @ 21°C Reddy & Saha, 1984
1.000E+4	3.000E+2	3.236E+3	2.800E-2	
1.000E+5	1.000E+2	3.415E+2	3.200E-2	
1.000E+6	3.000E+1	5.932E+1	4.200E-2	
1.000E+4	3.080E+2	9.527E+3	5.300E-3	Human (distal tibiae) @27°C Saha & Williams, 1989
1.000E+5	1.110E+2	1.007E+3	5.600E-3	
1.000E+6	4.100E+1	1.204E+2	6.700E-3	
1.090E+6	2.086E+2	5.030E+2	3.050E-2	Ovine (Skull) @ 37°C (1E6-2E10Hz) Gabriel et al, 94
3.950E+6	6.520E+1	1.725E+2	3.790E-2	
1.190E+7	3.206E+1	6.767E+1	4.480E-2	
3.610E+7	2.207E+1	2.863E+1	5.750E-2	
1.090E+8	1.663E+1	1.181E+1	7.160E-2	
3.950E+8	1.362E+1	4.892E+0	1.075E-1	
1.080E+9	1.244E+1	3.283E+0	1.973E-1	
3.990E+9	1.096E+1	3.513E+0	7.797E-1	
1.090E+10	7.851E+0	3.960E+0	2.402E+0	
2.000E+10	6.687E+0	3.151E+0	3.505E+0	

Bone Cortical

Bone Cortical

Bone Cortical

□ Rat (femur) @ 37°C (1E3-1E7Hz) Smith & Foster, 1985

◇ Human (tibia) @ 37°C (2E9-2E10Hz) Cook, 1951 & England, 1950

△ Rat (femur) @ 37°C (1E2-1E8Hz) Kosterich et al, 1983

○ Bovine (femur) @ RT (1E3-1E6Hz) De Mercato & Garcia-Sanchez, 1988

× Bovine (tibia) @ 23°C (1E1-1E7Hz) De Mercato & Garcia-Sanchez, 1988

✳ Bovine (femur) @ 21°C (1E3-1E6Hz) Reddy & Saha, 1984

+ Human (distal tibiae) @27°C (1E4-1E6Hz) Saha & Williams, 1989

■ Ovine (Skull) @ 37°C (1E6-2E10Hz) Gabriel et al, 94

—— Ovine (Skull) @ 37°C (1E6-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Bone Marrow
	ε'	ε''	σ (S/m)	
1.000E+3	4.600E+3	3.775E+6	2.100E-1	Calf (femur and tibia) @25°C Smith & Foster, 1985
1.000E+4	1.400E+3	3.775E+5	2.100E-1	
1.000E+5	2.500E+2	3.775E+4	2.100E-1	
1.000E+6	9.000E+1	3.775E+3	2.100E-1	
1.000E+7	4.300E+1	3.955E+2	2.200E-1	
1.000E+8	1.800E+1	4.494E+1	2.500E-1	
1.000E+9	1.800E+1	6.471E+0	3.600E-1	
1.090E+6	2.421E+2	1.098E+3	7.000E-2	Ovine @37°C Current study measurements
3.950E+6	4.556E+1	3.244E+2	7.000E-2	
1.190E+7	2.842E+1	1.162E+2	8.000E-2	
3.610E+7	1.943E+1	4.358E+1	9.000E-2	
1.090E+8	1.292E+1	1.712E+1	1.000E-1	
3.950E+8	9.830E+0	5.780E+0	1.300E-1	
1.300E+8	1.147E+1	1.267E+1	9.000E-2	
3.940E+8	9.090E+0	5.320E+0	1.200E-1	
1.080E+9	8.490E+0	2.640E+0	1.600E-1	
3.990E+9	7.910E+0	2.050E+0	4.500E-1	
2.000E+10	4.530E+0	2.320E+0	2.580E+0	

Bone Marrow

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Bone Marrow

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
Conductivitty (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Bone Marrow

- □ Calf (femur and tibia) @25°C (1E3-1E9Hz) Smith & Foster, 1985
- ◇ Ovine @37°C (1E6-2E10Hz) Current study measurement
- —— Bovine @ 37°C (1E1-2E10Hz) Current study measurement

Frequency (Hz)	Properties			Breast Fat
	ε'	ε''	σ (S/m)	
5.000E+7	2.100E+1	3.955E+1	1.100E-1	
1.000E+8	2.050E+1	1.977E+1	1.100E-1	Human @ 23-25°C
5.000E+8	1.800E+1	4.674E+0	1.300E-1	Joines et al,1994
9.000E+8	1.500E+1	3.595E+0	1.800E-1	
3.200E+9	9.800E+0	2.078E+0	3.700E-1	Human (glandular and
3.200E+9	4.600E+1	1.910E+1	3.400E+0	connective tissue) @ 25°C
				Campbell & Land, 1992
1.000E+8	4.500E+1	1.798E+1	1.000E-1	Rat @ 30°C
1.000E+9	4.200E+1	6.471E+0	3.600E-1	Joines et al, 1980
2.000E+9	4.200E+1	5.842E+0	6.500E-1	

Breast Fat

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Breast Fat

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivity (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Breast Fat

□ Human @ 23-25°C (5E7-9E8Hz) Joines et al,1994

◇ Human (glandular and connective tissue) @ 25°C (3E9Hz) Campbell & Land, 1992

△ Rat @ 30°C (1E8-2E9Hz) Joines et al, 1980

—— Human @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Colon
	ε'	ε''	σ (S/m)	
5.000E+7	5.700E+1	2.193E+2	6.100E-1	
1.000E+8	5.200E+1	1.114E+2	6.200E-1	Human @ 23-25°C
5.000E+8	4.900E+1	2.552E+1	7.100E-1	Joines et al, 1994
9.000E+8	4.850E+1	1.857E+1	9.300E-1	

Colon

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Colon

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivitty (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Colon

□ Human @ 23-25°C (5E7-9E8Hz) Joines et al, 1994

—— Ovine @ 30°C (2E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Cornea
	ε'	ε''	σ (S/m)	
1.000E+7	1.500E+2	2.696E+3	1.500E+0	
1.000E+8	8.000E+1	2.876E+2	1.600E+0	Rabbit @ 37°C
1.000E+9	6.000E+1	3.415E+1	1.900E+0	Gabriel et al,1983
3.000E+9	5.500E+1	1.498E+1	2.500E+0	
8.500E+9	4.000E+1	1.269E+1	6.000E+0	

Cornea

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Cornea

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivitty (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Cornea

□ Rabbit @ 37°C (1E7-9E9Hz) Gabriel et al,1983

—— Ovine @ 37°C (1E6-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Eye Tissues (Sclera)
	ε′	ε″	σ (S/m)	
1.000E+7	6.000E+2	1.618E+3	9.000E-1	Rabbit (Retina) @ 37°C Gabriel et al, 1983
1.000E+8	1.000E+2	2.337E+2	1.300E+0	
1.000E+9	6.500E+1	2.696E+1	1.500E+0	
3.000E+9	6.500E+1	1.558E+1	2.600E+0	
8.500E+9	6.000E+1	1.692E+1	8.000E+0	
1.000E+10	5.000E+1	2.696E+1	1.500E+1	
1.000E+7	2.800E+2	1.528E+3	8.500E-1	Rabbit (Iris) @ 37°C Gabriel et al, 1983
1.000E+8	8.300E+1	1.977E+2	1.100E+0	
1.000E+9	6.000E+1	2.157E+1	1.200E+0	
3.000E+9	6.000E+1	1.498E+1	2.500E+0	
8.500E+9	5.000E+1	1.903E+1	9.000E+0	
1.090E+6		2.502E+4	1.520E+0	Ovine (Aqueous Humour) @ 37°C Current study measurements
3.950E+6		7.264E+3	1.600E+0	
1.190E+7		2.420E+3	1.610E+0	
3.610E+7		8.030E+2	1.610E+0	
1.090E+8		2.675E+2	1.620E+0	
3.950E+8		7.563E+1	1.660E+0	
1.190E+9		2.927E+1	1.940E+0	
1.300E+8	7.354E+1	2.522E+2	1.820E+0	
3.940E+8	7.489E+1	8.404E+1	1.840E+0	
1.080E+9	7.410E+1	3.395E+1	2.040E+0	
3.990E+9	7.213E+1	2.058E+1	4.570E+0	
1.090E+10	6.172E+1	2.993E+1	1.820E+1	
2.000E+10	4.519E+1	3.952E+1	4.398E+1	
1.090E+6	2.301E+3	1.008E+4	6.100E-1	Ovine (Choroid) @ 37°C Current study measurements
3.950E+6	5.882E+2	3.201E+3	7.000E-1	
1.190E+7	2.193E+2	1.172E+3	7.800E-1	
3.610E+7	1.020E+2	4.243E+2	8.500E-1	
1.090E+8	6.682E+1	1.523E+2	9.200E-1	
3.950E+8	5.554E+1	4.659E+1	1.030E+0	
1.190E+9	5.153E+1	1.998E+1	1.330E+0	
3.940E+8	6.360E+1	5.305E+1	1.160E+0	
1.080E+9	6.014E+1	2.353E+1	1.410E+0	
3.990E+9	5.669E+1	1.711E+1	3.800E+0	
1.090E+10	4.477E+1	2.481E+1	1.509E+1	
2.000E+10	3.200E+1	2.770E+1	3.082E+1	
1.090E+6	2.170E+3	9.929E+3	6.000E-1	Ovine (Iris) @ 37°C Current study measurements
3.950E+6	5.495E+2	3.123E+3	6.900E-1	
1.190E+7	2.090E+2	1.137E+3	7.600E-1	
3.610E+7	1.006E+2	4.102E+2	8.200E-1	
1.090E+8	6.754E+1	1.473E+2	8.900E-1	
3.950E+8	5.641E+1	4.533E+1	1.000E+0	
1.190E+9	5.214E+1	1.954E+1	1.300E+0	
1.300E+8	7.226E+1	1.307E+2	9.500E-1	

3.940E+8	6.238E+1	4.769E+1	1.040E+0	
1.080E+9	5.865E+1	2.182E+1	1.310E+0	
3.990E+9	5.461E+1	1.672E+1	3.710E+0	
1.090E+10	4.205E+1	2.411E+1	1.466E+1	
2.000E+10	2.985E+1	2.649E+1	2.947E+1	
1.090E+6	2.610E+3	7.140E+3	4.300E-1	Ovine (Eye Retina) @ 37°C Current study measurements
3.950E+6	1.019E+3	2.615E+3	5.800E-1	
1.190E+7	4.143E+2	1.133E+3	7.500E-1	
3.610E+7	1.600E+2	4.640E+2	9.300E-1	
1.090E+8	8.149E+1	1.756E+2	1.060E+0	
3.950E+8	6.135E+1	5.369E+1	1.180E+0	
1.190E+9	5.662E+1	2.197E+1	1.460E+0	
1.300E+8	8.653E+1	1.861E+2	1.350E+0	
3.940E+8	7.037E+1	6.536E+1	1.430E+0	
1.080E+9	6.671E+1	2.773E+1	1.660E+0	
3.990E+9	6.365E+1	1.813E+1	4.030E+0	
1.090E+10	5.274E+1	2.667E+1	1.622E+1	
2.000E+10	3.860E+1	3.303E+1	3.675E+1	

Eye Tissues (Sclera)

Eye Tissues (Sclera)

Eye Tissues (Sclera)

□ Rabbit (Retina) @ 37°C (1E7-1E10Hz) Gabriel et al, 1983

◇ Rabbit (Iris) @ 37°C (1E7-9E9Hz) Gabriel et al, 1983

○ Ovine (Aqueous Humour) @ 37°C (1E6-2E10Hz) Current study measurements

× Ovine (Choroid) @ 37°C (1E6-2E10Hz) Current study measurements

✱ Ovine (Iris) @ 37°C (1E6-2E10Hz) Current study measurements

+ Ovine (Eye Retina) @ 37°C (1E6-2E10Hz) Current study measurements

—— Ovine (Sclera) @ 37°C (1E6-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Fat
	ε′	ε″	σ (S/m)	
1.000E+2	2.154E+5	6.866E+6	3.820E-2	
1.000E+3	1.468E+4	7.172E+5	3.990E-2	
1.000E+4	1.334E+3	7.334E+4	4.080E-2	Bovine @ 25°C
1.000E+5	2.150E+2	7.603E+3	4.230E-2	Rigaud et al, 1994
1.000E+6	3.800E+1	7.747E+2	4.310E-2	
1.000E+7	2.200E+1	8.071E+1	4.490E-2	
1.000E+6	3.000E+2	3.056E+3	1.700E-1	
2.500E+6	1.000E+2	1.438E+3	2.000E-1	Porcine @ 34-36°C
1.000E+7	4.000E+1	3.775E+2	2.100E-1	Hahn et al, 1980
2.500E+7	2.000E+1	1.438E+2	2.000E-1	
1.000E+8	1.400E+1	3.775E+1	2.100E-1	
1.000E+3	1.585E+3	6.291E+5	3.500E-2	
1.000E+4	5.840E+2	6.291E+4	3.500E-2	Equine & Canine @ 25°C
1.000E+5	7.400E+1	6.291E+3	3.500E-2	Smith & Foster,1985
1.000E+6	1.800E+1	6.291E+2	3.500E-2	
1.000E+7	1.000E+1	6.291E+1	3.500E-2	
4.000E+10	1.100E+1	3.595E+0	8.000E+0	Bovine @ 37°C
9.000E+10	1.000E+1	1.997E+0	1.330E+1	Edrich & Hardee,1976
4.000E+7	1.400E+1	2.247E+1	5.000E-2	
1.000E+8	7.000E+0	3.595E+0	2.000E-2	
1.000E+9	6.000E+0	1.079E+0	6.000E-2	
1.000E+10	4.000E+0	4.674E-1	2.600E-1	Human
4.000E+7	1.400E+1	2.247E+1	5.000E-2	Schwan, 1955
1.000E+8	7.000E+0	1.258E+1	7.000E-2	
1.000E+9	6.000E+0	2.696E+0	1.500E-1	
1.000E+10	4.000E+0	8.448E-1	4.700E-1	
1.000E+8	4.700E+1	3.775E+1	2.100E-1	Canine (In vivo) @ 37°C
1.000E+9	1.400E+1	3.775E+0	2.100E-1	Burdette et al, 1980
2.000E+9	1.300E+1	5.662E+0	6.300E-1	
1.000E+2	6.373E+4	2.696E+5	1.500E-3	
1.000E+3	5.484E+3	3.146E+4	1.750E-3	Porcine (peritoneal
1.000E+4	4.499E+2	4.116E+3	2.290E-3	cavity) @ 22°C
1.000E+5	9.047E+1	4.638E+2	2.580E-3	Kyber et al, 1992
1.000E+6	2.861E+1	5.878E+1	3.270E-3	
1.000E+3	5.000E+4	3.595E+5	2.000E-2	Canine (In situ)
1.000E+3	5.000E+4	1.204E+6	6.700E-2	Schwan 1956,57,63
				(in Durney et al, 1986)
3.200E+9	2.800E+0	2.809E-1	5.000E-2	Human (breast) @ 25°C
3.200E+9	7.600E+0	1.629E+0	2.900E-1	Campbell & Land, 1992
1.090E+6	2.657E+2	1.016E+3	6.000E-2	
3.950E+6	6.317E+1	3.028E+2	7.000E-2	
1.190E+7	3.016E+1	1.129E+2	8.000E-2	
3.610E+7	1.940E+1	4.246E+1	9.000E-2	
1.090E+8	1.387E+1	1.650E+1	1.000E-1	

3.950E+8	1.141E+1	5.670E+0	1.200E-1	Ovine @ 37°C Current study measurements
1.190E+9	1.069E+1	3.040E+0	2.000E-1	
1.300E+8	1.231E+1	1.317E+1	1.000E-1	
3.940E+8	1.058E+1	6.100E+0	1.300E-1	
1.080E+9	9.710E+0	3.110E+0	1.900E-1	
3.990E+9	8.840E+0	2.520E+0	5.600E-1	
1.090E+10	6.650E+0	3.300E+0	2.000E+0	
2.000E+10	5.070E+0	2.830E+0	3.150E+0	
3.000E+5	1.419E+2	1.251E+3	2.088E-2	Human @ 37°C Current study measurements
1.089E+6	6.930E+1	4.285E+2	2.597E-2	
3.955E+6	2.267E+1	1.322E+2	2.908E-2	
1.089E+7	1.255E+1	5.105E+1	3.094E-2	
3.955E+7	8.246E+0	1.571E+1	3.456E-2	
1.089E+8	7.018E+0	6.370E+0	3.860E-2	
3.955E+8	6.306E+0	2.201E+0	4.844E-2	
1.089E+9	5.964E+0	1.413E+0	8.562E-2	
3.000E+9	4.964E+0	1.568E+0	2.616E-1	
1.300E+8	8.014E+0	5.135E+0	3.713E-2	
3.936E+8	6.553E+0	2.414E+0	5.286E-2	
1.025E+9	6.237E+0	1.399E+0	7.977E-2	
3.992E+9	5.905E+0	1.182E+0	2.624E-1	
1.039E+10	4.853E+0	1.754E+0	1.014E+0	
2.000E+10	3.825E+0	1.483E+0	1.650E+0	

Fat

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Fat

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivity (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Fat

- □ Bovine @ 25°C (1E2-1E7Hz) Rigaud et al, 1994
- ◇ Porcine @ 34-36°C (1E6-1E8Hz) Hahn et al, 1980
- △ Equine & Canine @ 25°C (1E3-1E7Hz) Smith & Foster,1985
- ○ Bovine @ 37°C (4E10-7E10Hz) Edrich & Hardee,1976
- × Human (4E7-1E10Hz) Schwan, 1955
- + Canine (In vivo) @ 37°C (1E8-2E9Hz) Burdette et al, 1980
- ■ Porcine (peritoneal cavity) @ 22°C (1E2-1E6Hz) Kyber et al, 1992
- ◆ Canine (In situ) (1E3Hz) Schwan 1956,57,63 (in Durney et al, 1986)
- ▲ Human (breast) @ 25°C (3E9Hz) Land & Campbell, 1992
- ● Ovine@ 37°C (1E6-2E10Hz) Current study measurements
- ⊠ Human @ 37°C (3E5-2E10Hz) Current study measurements
- —— Bovine Fat @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Grey Matter
	ε′	ε″	σ (S/m)	
3.000E+9	4.740E+1	1.438E+1	2.400E+0	
4.000E+9	4.740E+1	1.348E+1	3.000E+0	
8.000E+9	4.200E+1	1.618E+1	7.200E+0	Rabbit @ 37°C
1.000E+10	4.000E+1	1.690E+1	9.400E+0	Steel & Sheppard, 1985
1.400E+10	3.640E+1	1.849E+1	1.440E+1	
1.800E+10	3.240E+1	2.037E+1	2.040E+1	
1.000E+5	3.800E+3	3.056E+4	1.700E-1	
1.000E+6	1.250E+3	3.775E+3	2.100E-1	
1.000E+7	3.520E+2	6.291E+2	3.500E-1	Canine @ 37°C
2.500E+7	2.220E+2	3.307E+2	4.600E-1	Stoy et al, 1982
5.000E+7	1.400E+2	2.085E+2	5.800E-1	
1.000E+8	9.000E+1	1.240E+2	6.900E-1	
1.000E+7	2.367E+2	5.680E+2	3.160E-1	
1.000E+8	8.570E+1	1.109E+2	6.170E-1	Mouse @ 37°C
1.000E+9	4.490E+1	1.666E+1	9.270E-1	Thurai et al, 1984
1.400E+9	4.080E+1	3.016E+1	2.349E+0	
1.000E+8	8.540E+1	1.348E+2	7.500E-1	
9.000E+8	5.260E+1	2.097E+1	1.050E+0	Rat (In vivo) 32°C +/- 1°C
4.000E+9	4.850E+1	1.878E+1	4.180E+0	Kraszewski et al, 1982
8.000E+9	4.350E+1	2.427E+1	1.080E+1	
1.000E+8	7.300E+1	1.618E+2	9.000E-1	
9.000E+8	5.500E+1	2.457E+1	1.230E+0	Feline (In vivo) @ 36°C
4.000E+9	5.000E+1	1.393E+1	3.100E+0	Kraszewski et al, 1982
8.000E+9	4.400E+1	1.505E+1	6.700E+0	
2.000E+8	6.600E+1	3.865E+1	4.300E-1	Canine (In situ) @ 36°C
1.000E+9	5.700E+1	2.337E+1	1.300E+0	Burdette et al, 1986
4.000E+9	4.800E+1	1.308E+1	2.910E+0	
1.000E+8	7.753E+1	1.114E+2	6.200E-1	Canine @ 20°C +/- 1°C
1.000E+9	5.879E+1	1.959E+1	1.090E+0	Xu et al, 1987
1.100E+10	3.001E+1	2.472E+1	1.513E+1	
1.000E+5	2.800E+3	3.056E+4	1.700E-1	
1.000E+6	9.000E+2	3.415E+3	1.900E-1	Bovine @ 24-25°C
1.000E+7	2.700E+2	5.393E+2	3.000E-1	Suroweic et al, 1986
1.000E+8	8.300E+1	1.025E+2	5.700E-1	
1.000E+7	2.990E+2	9.707E+2	5.400E-1	Feline (In vivo) @ 33°C
1.000E+8	8.100E+1	1.402E+2	7.800E-1	Stuchly et al, 1981
1.000E+9	5.300E+1	2.049E+1	1.140E+0	(in Durney et al, 1986)
1.000E+7	3.700E+2	6.795E+2	3.780E-1	
1.000E+8	9.000E+1	1.249E+2	6.950E-1	Canine @ 37°C
1.000E+9	4.600E+1	1.799E+1	1.001E+0	Foster et al, 1979
1.000E+10	3.900E+1	1.700E+1	9.457E+0	(in Stuchly & Stuchly, 1980)
1.090E+6	2.028E+3	2.832E+3	1.700E-1	
3.950E+6	8.069E+2	1.259E+3	2.800E-1	
1.190E+7	3.682E+2	6.262E+2	4.200E-1	

3.610E+7	1.706E+2	2.979E+2	6.000E-1	Ovine @ 37°C Current study measurements
1.090E+8	8.654E+1	1.287E+2	7.800E-1	
3.950E+8	5.783E+1	4.349E+1	9.600E-1	
1.190E+9	5.228E+1	1.845E+1	1.230E+0	
1.300E+8	8.185E+1	1.164E+2	8.400E-1	
3.940E+8	5.872E+1	4.543E+1	9.900E-1	
1.080E+9	5.296E+1	2.070E+1	1.240E+0	
3.990E+9	4.922E+1	1.440E+1	3.200E+0	
1.090E+10	4.034E+1	2.097E+1	1.275E+1	
2.000E+10	2.961E+1	2.517E+1	2.800E+1	
3.000E+5	1.923E+3	5.830E+3	9.720E-2	Human @ 37°C Current study measurements
1.089E+6	1.307E+3	2.377E+3	1.443E-1	
3.955E+6	6.510E+2	1.009E+3	2.220E-1	
1.089E+7	3.587E+2	5.423E+2	3.287E-1	
3.955E+7	1.513E+2	2.370E+2	5.213E-1	
1.089E+8	8.317E+1	1.120E+2	6.793E-1	
3.955E+8	5.707E+1	3.797E+1	8.360E-1	
1.089E+9	5.123E+1	1.740E+1	1.057E+0	
3.000E+9	4.697E+1	1.074E+1	1.797E+0	
1.300E+8	7.697E+1	1.008E+2	7.300E-1	
3.936E+8	5.550E+1	4.017E+1	8.797E-1	
1.025E+9	5.050E+1	1.930E+1	1.100E+0	
3.992E+9	4.617E+1	1.327E+1	2.943E+0	
1.039E+10	3.760E+1	1.880E+1	1.087E+1	
2.000E+10	2.663E+1	2.080E+1	2.317E+1	

Grey Matter

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Grey Matter

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivitty (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Grey Matter

□ Rabbit @ 37°C (3E9-2E10Hz) Steel & Sheppard, 1985

◇ Canine @ 37°C (1E5-1E8Hz) Stoy et al, 1982

△ Mouse @ 37°C (1E7-1E9Hz) Thurai et al, 1984

○ Rat (In vivo) 32°C +/- 1°C (1E8-8E9Hz) Kraszewski et al, 1982

× Feline (In vivo) @ 36°C (1E8-8E9Hz) Kraszewski et al, 1982

✳ Canine (In situ) @ 36°C (2E8-4E9Hz) Burdette et al, 1986

+ Canine @ 20°C +/- 1°C (1E8-1E10Hz) Xu et al, 1987

■ Bovine @ 24-25°C (1E5-1E8Hz) Suroweic et al, 1986b

◆ Feline (In vivo) @ 33°C (1E7-1E9Hz) Stuchly et al, 1981

▲ Canine @ 37°C (1E8-1E10Hz) Foster et al, 1979

● Ovine @ 37°C (1E6-2E10Hz) Current study measurements

⊠ Human @ 37°C (3E5-2E10Hz) Current study measurements

—— Ovine @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Heart
	ε′	ε″	σ (S/m)	
2.000E+8	7.313E+1	7.909E+1	8.800E-1	
4.000E+8	7.227E+1	4.134E+1	9.200E-1	
6.000E+8	7.031E+1	2.966E+1	9.900E-1	
8.000E+8	6.881E+1	2.494E+1	1.110E+0	Bullfrog (In vivo-muscle)
1.000E+9	6.848E+1	2.229E+1	1.240E+0	@ 22°C
2.000E+9	6.565E+1	1.591E+1	1.770E+0	Schwartz & Mealing, 1985
4.000E+9	6.259E+1	1.829E+1	4.070E+0	
6.000E+9	5.934E+1	2.250E+1	7.510E+0	
8.000E+9	5.544E+1	2.582E+1	1.149E+1	
1.000E+6	1.500E+3	8.628E+3	4.800E-1	
2.500E+6	6.000E+2	3.811E+3	5.300E-1	Porcine (In vivo) @ 34-36°C
1.000E+7	1.400E+2	1.132E+3	6.300E-1	Hahn et al,1980
2.500E+7	7.000E+1	5.464E+2	7.600E-1	
1.000E+8	3.900E+1	1.510E+2	8.400E-1	
1.000E+8	6.125E+1	8.269E+1	4.600E-1	Canine @ 20°C +/-1°C
1.000E+9	5.300E+1	2.121E+1	1.180E+0	Xu et al, 1987
1.100E+10	2.875E+1	2.118E+1	1.296E+1	
1.000E+4	4.080E+4	8.269E+5	4.600E-1	
1.000E+5	5.500E+3	8.628E+4	4.800E-1	Human (muscle) @ 36.8°C
1.000E+6	1.245E+3	9.527E+3	5.300E-1	Suroweic et al,1987
1.000E+7	3.120E+2	1.240E+3	6.900E-1	
1.000E+8	7.190E+1	1.600E+2	8.900E-1	
1.000E+1	7.000E+6	1.869E+8	1.040E-1	Canine (In situ-muscle) @ 37°C
1.000E+2	8.100E+5	1.941E+7	1.080E-1	Schwan 56,57,63
1.000E+3	3.100E+5	2.247E+6	1.250E-1	(in Durney et al, 1986)
1.000E+4	1.000E+5	3.002E+5	1.670E-1	
3.000E+5	3.337E+3	3.173E+4	5.297E-1	
1.089E+6	1.763E+3	1.100E+4	6.660E-1	
3.955E+6	5.137E+2	3.420E+3	7.520E-1	
1.089E+7	2.343E+2	1.353E+3	8.183E-1	
3.955E+7	1.167E+2	4.150E+2	9.133E-1	
1.089E+8	8.017E+1	1.667E+2	1.010E+0	
3.955E+8	6.337E+1	5.403E+1	1.190E+0	
1.089E+9	5.677E+1	2.663E+1	1.617E+0	Human @ 37°C
3.000E+9	4.853E+1	2.090E+1	3.483E+0	Current study measurements
1.300E+8	7.720E+1	1.490E+2	1.083E+0	
3.936E+8	6.755E+1	5.588E+1	1.223E+0	
1.025E+9	6.255E+1	2.785E+1	1.588E+0	
3.992E+9	5.478E+1	2.003E+1	4.445E+0	
1.039E+10	4.135E+1	2.565E+1	1.483E+1	
2.000E+10	2.725E+1	2.545E+1	2.833E+1	

Heart

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Heart

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivity (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Heart

□ Bullfrog (In vivo) @ 22°C (2E8-8E9Hz) Schwartz & Mealing, 1985

◇ Porcine (In vivo) @ 34-36°C (1E6-1E8Hz) Hahn et al,1980

△ Canine @ 20°C +/-1°C (1E8-1E10Hz) Xu et al, 1987

○ Human @ 36.8°C (1E4-1E8Hz) Suroweic et al,1987

× Canine (In situ) @ 37°C (1E1-1E4Hz) Schwan 1956,1957,1963

✳ Human @ 37°C (3E5-2E10Hz) Current study measurements

—— Ovine @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Kidney
	ε′	ε″	σ (S/m)	
5.000E+7	1.190E+2	2.481E+2	6.900E-1	Porcine & Bovine @ 37°C
5.000E+7	1.320E+2	3.990E+2	1.110E+0	Osswald, 1937 (in Stoy et al, 1982)
1.000E+5	1.170E+4	4.494E+4	2.500E-1	
1.000E+6	2.540E+3	6.831E+3	3.800E-1	
1.000E+7	4.650E+2	1.186E+3	6.600E-1	Canine @ 37°C
2.500E+7	2.760E+2	5.752E+2	8.000E-1	Stoy et al,1982
5.000E+7	1.320E+2	3.307E+2	9.200E-1	
1.000E+8	9.200E+1	1.780E+2	9.900E-1	
1.000E+4	2.988E+4	1.258E+5	7.000E-2	
1.000E+5	7.973E+3	1.977E+4	1.100E-1	Bovine @ 25°C
1.000E+6	1.573E+3	3.415E+3	1.900E-1	Surowiec etal, 1985
1.000E+7	2.880E+2	6.651E+2	3.700E-1	
1.000E+8	7.400E+1	1.204E+2	6.700E-1	
1.000E+6	1.300E+3	6.471E+3	3.600E-1	
1.000E+7	1.900E+2	8.808E+2	4.900E-1	Porcine (In vivo) @ 34-36°C
2.500E+7	9.000E+1	4.494E+2	5.500E-1	Hahn et al, 1980
1.000E+8	3.500E+1	1.258E+2	7.000E-1	
1.000E+4	3.000E+4	2.337E+5	1.300E-1	
1.000E+5	9.600E+3	3.775E+4	2.100E-1	Feline (In vivo) @ 34.7°C+/-0.9°C
1.000E+6	2.000E+3	6.112E+3	3.400E-1	Suroweic et al, 1986
1.000E+7	3.500E+2	1.025E+3	5.700E-1	
1.000E+8	6.000E+1	1.474E+2	8.200E-1	
1.000E+4	8.140E+4	4.314E+5	2.400E-1	
1.000E+5	1.120E+4	5.932E+4	3.300E-1	Human @ 36.5°C
1.000E+6	2.450E+3	8.808E+3	4.900E-1	Suroweic et al, 1987
1.000E+7	4.690E+2	1.384E+3	7.700E-1	
1.000E+8	8.350E+1	2.103E+2	1.170E+0	
1.000E+8	7.250E+1	1.438E+2	8.000E-1	
9.000E+8	5.260E+1	2.057E+1	1.030E+0	Rat (In vivo) @ 32°C +/-1°C
5.000E+9	4.800E+1	1.499E+1	4.170E+0	Kraszewski et al, 1982
1.000E+10	3.970E+1	1.751E+1	9.740E+0	
1.000E+8	8.500E+1	1.348E+2	7.500E-1	
9.000E+8	4.300E+1	1.658E+1	8.300E-1	Feline (In vivo) @ 36°C +/-2°C
4.000E+9	3.950E+1	1.034E+1	2.300E+0	Kraszewski et al, 1982
8.000E+9	4.100E+1	1.382E+1	6.150E+0	
1.000E+8	6.830E+1	9.707E+1	5.400E-1	Canine @ 20 °C+/-1°C
1.000E+9	5.577E+1	1.708E+1	9.500E-1	Xu et al, 1987
1.100E+10	3.071E+1	2.508E+1	1.535E+1	
5.000E+7	9.700E+1	2.732E+2	7.600E-1	
1.000E+8	7.200E+1	1.384E+2	7.700E-1	Human @ 23-25°C
5.000E+8	6.180E+1	3.451E+1	9.600E-1	Joines et al, 1994
9.000E+8	6.100E+1	2.397E+1	1.200E+0	
1.000E+8	7.800E+1	1.833E+2	1.020E+0	Canine (In vivo)
1.000E+9	5.300E+1	2.445E+1	1.360E+0	Burdette et al, 1980
4.000E+9	4.700E+1	1.806E+1	4.020E+0	

1.000E+7	2.010E+2	1.007E+3	5.600E-1	Feline (In vivo) @ 35 °C+/-1°C
1.000E+8	5.600E+1	1.222E+2	6.800E-1	Stuchly et al, 1981
1.000E+9	4.100E+1	1.708E+1	9.500E-1	
1.089E+6	2.718E+3	6.226E+3	3.773E-1	
3.955E+6	7.048E+2	2.191E+3	4.821E-1	
1.089E+7	3.045E+2	9.540E+2	5.781E-1	
3.955E+7	1.254E+2	3.241E+2	7.130E-1	
1.089E+8	7.932E+1	1.345E+2	8.148E-1	
3.955E+8	6.118E+1	4.382E+1	9.641E-1	
1.089E+9	5.615E+1	2.143E+1	1.298E+0	Human @ 37°C
3.000E+9	4.907E+1	1.716E+1	2.864E+0	Current study measurements
1.300E+8	7.751E+1	1.172E+2	8.476E-1	
3.936E+8	6.458E+1	4.480E+1	9.810E-1	
1.025E+9	6.002E+1	2.229E+1	1.271E+0	
3.992E+9	5.364E+1	1.789E+1	3.973E+0	
1.039E+10	4.018E+1	2.379E+1	1.375E+1	
2.000E+10	2.813E+1	2.355E+1	2.620E+1	

Kidney

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Kidney
Conductivity (S/m)
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Kidney

- □ Porcine & Bovine @ 37°C (5E7Hz) Osswald, 1937 (in Stoy et al, 1982)
- ◇ Canine @ 37°C (1E5-1E8Hz) Stoy et al,1982
- △ Bovine @ 25°C (1E4-1E8Hz) Surowiec etal, 1985
- ○ Porcine (In vivo) @ 34-36°C (1E6-1E8Hz) Hahn et al, 1980
- × Feline (In vivo) @ 34.7°C+/-0.9°C (1E4-1E8Hz) Suroweic et al, 1986
- ✳ Human @ 36.5°C (1E4-1E8Hz) Suroweic et al, 1987
- + Rat (In vivo) @ 32°C +/-1°C (1E8-1E10Hz) Kraszewski et al, 1982
- ■ Feline (In vivo) @ 36°C +/-2°C (1E8-8E9Hz) Kraszewski et al, 1982
- ◆ Canine @ 20 °C+/-1°C (1E8-1E10Hz) Xu et al, 1987
- ▲ Human @ 23-25°C (5E7-9E8Hz) Joines et al, 1994
- ● Canine (In vivo) (1E8-4E9Hz) Burdette et al, 1980
- ⊠ Feline (In vivo) @ 35 °C+/-1°C (1E7-1E9Hz) Stuchly et al, 1981
- ⊠ Human @ 37°C (1E6-2E10Hz) Current study measurements
- —— Ovine @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Lens Cortex
	ε′	ε″	σ (S/m)	
1.000E+7	2.050E+2	9.886E+2	5.500E-1	
1.000E+8	6.700E+1	1.168E+2	6.500E-1	Rabbit @ 37°C
1.000E+9	5.000E+1	1.798E+1	1.000E+0	Gabriel et al, 1983
3.000E+9	4.500E+1	9.587E+0	1.600E+0	
8.500E+9	4.000E+1	7.402E+0	3.500E+0	
3.000E+9	4.940E+1	1.396E+1	2.330E+0	
4.000E+9	4.510E+1	1.348E+1	3.000E+0	
8.000E+9	4.120E+1	1.640E+1	7.300E+0	Rabbit @ 37°C
1.000E+10	3.820E+1	1.798E+1	1.000E+1	Steel & Sheppard,1986
1.400E+10	3.440E+1	1.977E+1	1.540E+1	
1.800E+10	2.970E+1	2.127E+1	2.130E+1	
1.000E+5	7.200E+2	1.833E-1	5.100E-1	Bovine @ 32°C
1.000E+6	5.800E+2	9.347E+3	5.200E-1	Pauly & Schwan, 1964
1.000E+7	1.790E+2	1.096E+3	6.100E-1	(in Duck, 1990)
1.000E+8	6.600E+1	1.312E+2	7.300E-1	
1.000E+8	4.600E+1	7.190E+1	4.000E-1	
1.000E+9	3.200E+1	9.527E+0	5.300E-1	Bovine
3.000E+9	3.000E+1	8.988E+0	1.500E+0	Schwan, 1958
1.000E+10	2.800E+1	1.798E+1	1.000E+1	(in Stuchly & Stuchly, 1980)
1.000E+2	9.000E+5	1.079E+7	6.000E-2	
1.000E+3	1.500E+5	1.258E+6	7.000E-2	
1.000E+4	2.200E+4	1.618E+5	9.000E-2	Frog (whole Lens) 25 °C
1.000E+5	2.200E+3	1.798E+4	1.000E-1	Watanabe et al, 1991
1.000E+6	5.200E+2	2.337E+3	1.300E-1	
1.000E+7	8.200E+1	3.236E+2	1.800E-1	
1.000E+8	3.700E+1	3.955E+1	2.200E-1	

Lens Cortex

Permittivity
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Lens Cortex

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivity (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Lens Cortex

□ Rabbit @ 37°C (1E7-9E9Hz) Gabriel et al, 1983

◇ Bovine @ 32°C (1E5-1E8Hz) Pauly & Schwan, 1964

△ Rabbit @ 37°C (3E9-2E10Hz) Steel & Sheppard,1986

○ Bovine (Lens) (1E8-1E10Hz) Schwan, 1958

× Frog (whole Lens) 25 °C (1E2-1E8Hz) Watanabe et al, 1991

—— Ovine @ 37°C (1E6-2E10Hz) Current study measurement

Frequency (Hz)	Properties			Lens Nucleus
	ε'	ε''	σ (S/m)	
1.000E+7	5.800E+1	1.079E+2	6.000E-2	
1.000E+8	4.600E+1	3.236E+1	1.800E-1	Rabbit @ 37°C
1.000E+9	3.200E+1	1.079E+1	6.000E-1	Gabriel et al,1983
3.000E+9	3.000E+1	4.793E+0	8.000E-1	
8.500E+9	2.500E+1	6.344E+0	3.000E+0	
4.000E+9	2.750E+1	8.089E+0	1.800E+0	
8.000E+9	2.500E+1	1.079E+1	4.800E+0	Rabbit @ 37°C
1.000E+10	2.260E+1	1.079E+1	6.000E+0	Steel & Sheppard, 1986
1.400E+10	2.000E+1	1.143E+1	8.900E+0	
1.800E+10	1.760E+1	1.118E+1	1.120E+1	
1.000E+5	1.100E+2	6.831E-2	1.900E-1	Bovine @ 32°C
1.000E+6	8.000E+1	3.505E+3	1.950E-1	Pauly & Schwan, 1964
1.000E+7	6.000E+1	3.595E+2	2.000E-1	

Lens Nucleus

Lens Nucleus

Lens Nucleus

□ Rabbit @ 37°C (1E7-9E9Hz) Gabriel et al,1983

◇ Rabbit @ 37°C (4E9-2E10Hz) Steel & Sheppard, 1986

△ Bovine @ 32°C (1E5-1E7Hz) Pauly & Schwan, 1964

—— Ovine @ 37°C (1E6-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Liver
	ε′	ε″	σ (S/m)	
2.500E+7	1.361E+2	3.379E+2	4.700E-1	Porcine & Bovine @ 37°C Osswald, 1937 (in Stoy et al, 1982)
5.000E+7	8.893E+1	1.833E+2	5.100E-1	
1.000E+8	7.679E+1	1.007E+2	5.600E-1	
2.500E+7	1.361E+2	3.883E+2	5.400E-1	
5.000E+7	8.893E+1	2.085E+2	5.800E-1	
1.000E+8	7.679E+1	1.168E+2	6.500E-1	
1.000E+6	1.970E+3	2.696E+3	1.500E-1	Canine @ 37°C Stoy et al, 1982
1.000E+7	3.380E+2	4.853E+2	2.700E-1	
2.500E+7	1.900E+2	3.379E+2	4.700E-1	
5.000E+7	1.100E+2	2.049E+2	5.700E-1	
1.000E+8	7.700E+1	1.204E+2	6.700E-1	
1.000E+5	1.370E+4	2.876E+4	1.600E-1	Rabbit @ 37°C Stoy et al,1982
1.000E+6	1.970E+3	5.393E+3	3.000E-1	
1.000E+7	3.000E+2	8.269E+2	4.600E-1	
2.500E+7	1.750E+2	3.955E+2	5.500E-1	
5.000E+7	1.100E+2	2.265E+2	6.300E-1	
1.000E+8	7.900E+1	1.258E+2	7.000E-1	
1.000E+4	1.829E+4	1.977E+5	1.100E-1	Bovine @ 25°C Surowiec et al, 1985
1.000E+5	5.677E+3	2.337E+4	1.300E-1	
1.000E+6	1.078E+3	3.775E+3	2.100E-1	
1.000E+7	1.830E+2	5.752E+2	3.200E-1	
1.000E+8	5.300E+1	7.909E+1	4.400E-1	
1.000E+2	1.995E+5	1.887E+7	1.050E-1	Calf @ 25°C Rigaud et al, 1994
1.000E+3	3.350E+4	1.941E+6	1.080E-1	
1.000E+4	1.778E+4	1.995E+5	1.110E-1	
1.000E+5	7.079E+3	2.588E+4	1.440E-1	
1.000E+6	1.496E+3	4.134E+3	2.300E-1	
1.000E+7	2.990E+2	9.707E+2	5.400E-1	
1.000E+6	1.300E+3	5.393E+3	3.000E-1	Porcine (In vivo) @ 34-36°C Hahn et al, 1980
1.000E+7	1.500E+2	7.729E+2	4.300E-1	
2.200E+7	8.000E+1	3.922E+2	4.800E-1	
1.000E+8	3.800E+1	1.043E+2	5.800E-1	
1.000E+3	1.200E+5	6.291E+5	3.500E-2	Rabbit @ 25°C Smith & Foster, 1985
1.000E+4	5.800E+4	8.988E+4	5.000E-2	
1.000E+5	1.400E+4	2.337E+4	1.300E-1	
1.000E+6	1.600E+3	4.314E+3	2.400E-1	
1.000E+7	2.150E+2	7.010E+2	3.900E-1	
1.000E+8	7.400E+1	9.347E+1	5.200E-1	
1.000E+9	5.400E+1	1.528E+1	8.500E-1	
1.000E+4	2.400E+4	1.258E+5	7.000E-2	Feline (In vivo) @ 34.8°C ±0.8°C Surowiec et al,1986
1.000E+5	1.000E+4	1.977E+4	1.100E-1	
1.000E+6	2.300E+3	4.674E+3	2.600E-1	
1.000E+7	3.500E+2	8.628E+2	4.800E-1	
5.000E+7	8.000E+1	2.624E+2	7.300E-1	

1.000E+4	2.101E+4	2.157E+5	1.200E-1	Human @ 36.8°C +/-0.2°C Suroweic et al, 1987
1.000E+5	6.940E+3	2.517E+4	1.400E-1	
1.000E+6	1.940E+3	4.134E+3	2.300E-1	
1.000E+7	4.090E+2	7.370E+2	4.100E-1	
1.000E+8	7.390E+1	1.258E+2	7.000E-1	
1.000E+8	7.130E+1	1.150E+2	6.400E-1	Rat (In vivo) @ 32°C +/-1°C Kraszewski et al, 1982
9.000E+8	4.820E+1	1.857E+1	9.300E-1	
5.000E+9	4.350E+1	1.366E+1	3.800E+0	
1.000E+10	3.540E+1	1.591E+1	8.850E+0	
1.000E+8	8.200E+1	1.132E+2	6.300E-1	Feline (In vivo) @ 36°C Kraszewski et al, 1982
9.000E+8	5.100E+1	1.997E+1	1.000E+0	
4.000E+9	4.550E+1	1.213E+1	2.700E+0	
8.000E+9	4.100E+1	1.281E+1	5.700E+0	
1.000E+8	5.683E+1	5.752E+1	3.200E-1	Canine @ 20°C +/-1°C Xu et al, 1987
1.000E+9	5.462E+1	1.546E+1	8.600E-1	
1.100E+10	3.213E+1	2.450E+1	1.499E+1	
5.000E+7	6.900E+1	1.726E+2	4.800E-1	Human @ 23-25°C Joines et al, 1994
1.000E+8	6.200E+1	8.808E+1	4.900E-1	
5.000E+8	5.200E+1	2.517E+1	7.000E-1	
9.000E+8	5.110E+1	1.897E+1	9.500E-1	
1.000E+3	1.100E+5	1.079E+6	6.000E-2	Rabbit @ 25°C Smith et al, 1986
1.000E+4	6.200E+4	1.258E+5	7.000E-2	
1.000E+5	1.500E+4	2.876E+4	1.600E-1	
1.000E+6	1.500E+3	5.393E+3	3.000E-1	
1.000E+7	2.620E+2	7.729E+2	4.300E-1	Feline (In vivo) @ 35°C +/-5°C Stuchly et al, 1981
1.000E+8	6.500E+1	1.061E+2	5.900E-1	
1.000E+9	4.800E+1	1.708E+1	9.500E-1	
1.000E+1	1.600E+7	1.474E+8	8.200E-2	Canine (In situ) @ BT Schwan 1956b,57,63a
1.000E+2	8.750E+5	1.690E+7	9.400E-2	
1.000E+3	1.500E+4	1.851E+6	1.030E-1	
1.000E+4	5.500E+4	2.121E+5	1.180E-1	
1.000E+1	1.600E+7	2.139E+8	1.190E-1	
1.000E+2	8.750E+5	2.247E+7	1.250E-1	
1.000E+3	1.500E+4	2.337E+6	1.300E-1	
1.000E+4	5.600E+4	2.624E+5	1.460E-1	
1.000E+1	5.000E+7	2.157E+8	1.200E-1	Canine (In situ) Schwan & Kay, 1957
1.000E+2	8.500E+5	2.337E+7	1.300E-1	
1.000E+3	1.300E+5	2.337E+6	1.300E-1	
1.000E+4	5.500E+4	2.696E+5	1.500E-1	
3.000E+9	4.200E+1	1.198E+1	2.000E+0	Bovine @ 37°C Brady et al, 1981
3.000E+5	1.993E+3	1.512E+4	2.524E-1	
1.089E+6	1.174E+3	5.378E+3	3.259E-1	
3.955E+6	3.859E+2	1.788E+3	3.934E-1	
1.089E+7	1.585E+2	7.360E+2	4.460E-1	
3.955E+7	7.118E+1	2.278E+2	5.011E-1	
1.089E+8	5.097E+1	8.995E+1	5.451E-1	

3.955E+8	4.309E+1	2.887E+1	6.351E-1	Human @ 37°C
1.089E+9	3.967E+1	1.507E+1	9.134E-1	Current study measurements
3.000E+9	3.346E+1	1.316E+1	2.197E+0	
1.300E+8	5.396E+1	8.547E+1	6.182E-1	
3.936E+8	4.711E+1	3.217E+1	7.044E-1	
1.025E+9	4.432E+1	1.644E+1	9.373E-1	
3.992E+9	3.931E+1	1.290E+1	2.865E+0	
1.039E+10	3.002E+1	1.684E+1	9.735E+0	
2.000E+10	2.123E+1	1.669E+1	1.857E+1	

Liver

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Liver

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivity (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Liver

- □ Porcine & Bovine @ 37°C (3E7-1E8Hz) Osswald, 1937
- ◇ Canine @ 37°C (1E6-1E8Hz) Stoy et al, 1982
- △ Rabbit @ 37°C1E5-1E8Hz) Stoy et al,1982
- ○ Bovine @ 25°C (1E4-1E8Hz) Surowiec et al, 1985
- × Calf @ 25°C1E2-1E7Hz) Rigaud et al, 1994
- ✳ Porcine (In vivo) @ 34-36°C (1E6-1E8Hz) Hahn et al, 1980
- + Rabbit @ 25°C (1E3-1E9Hz) Smith & Foster, 1985
- ■ Feline (In vivo) @ 34.8°C ±0.8°C (1E4-5E7Hz) Surowiec et al,1986a
- ◆ Human @ 36.8°C ±0.2°C (1E4-1E8Hz) Suroweic et al, 1987
- ▲ Rat (In vivo) @ 32°C ±1°C (1E8-1E10Hz) Kraszewski et al, 1982
- ● Feline (In vivo) @ 36°C (1E8-8E9Hz) Kraszewski et al, 1982
- ⊠ Canine @ 20°C ±1°C (1E8-1E10Hz) Xu et al, 1987
- ⊠ Human @ 23-25°C (5E7-9E8Hz) Joines et al, 1994
- ⊞ Rabbit @ 25°C (1E3-1E6Hz) Smith et al, 1986
- ▦ Feline (In vivo) @ 35°C ±5°C (1E7-1E9Hz) Stuchly et al, 1981
- ◆ Canine (In situ) @ BT (1E1-1E4Hz) Schwan 1956,57,63
- ▲ Canine (In situ) (1E1-1E4Hz) Schwan & Kay, 1957
- ● Bovine @ 37°C (3E9Hz) Brady et al, 1981
- ⊠ Human @ 37°C (3E5-2E10Hz) Current study measurements
- —— Ovine @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Lung Deflated
	ε'	ε''	σ (S/m)	
1.000E+6	5.000E+2	2.696E+3	1.500E-1	Porcine (In vivo) @ 34-36°C Hahn et al, 1980
1.000E+7	1.200E+2	4.494E+2	2.500E-1	
2.500E+7	6.000E+1	2.229E+2	3.100E-1	
1.000E+8	2.200E+1	6.471E+1	3.600E-1	
1.000E+4	5.000E+4	2.517E+5	1.400E-1	Feline (In vivo) @ 34 °C Suroweic et al, 1987
1.000E+5	1.000E+4	3.955E+4	2.200E-1	
1.000E+6	1.500E+3	5.752E+3	3.200E-1	
1.000E+7	2.500E+2	8.628E+2	4.800E-1	
1.000E+8	5.000E+1	1.150E+2	6.400E-1	

Lung Deflated

Lung Deflated

Lung Deflated

□ Feline (In vivo) @ 34°C (1E4-1E8Hz) Suroweic et al, 1987

◇ Porcine (In vivo) @ 34-36°C 1E6-1E8Hz) Hahn et al, 1980

—— Human @ 37°C (3E6-2E10Hz) Current study measurement

Frequency (Hz)	Properties			Lung Inflated
	ε'	ε''	σ (S/m)	
1.000E+6	2.000E+2	1.258E+3	7.000E-2	Porcine (In vivo-inflated)
1.000E+7	5.000E+1	1.977E+2	1.100E-1	@ 34-36°C
2.500E+7	3.000E+1	9.347E+1	1.300E-1	Hahn et al, 1980
1.000E+8	1.200E+1	2.696E+1	1.500E-1	
1.000E+4	5.000E+4	2.517E+5	1.400E-1	
1.000E+5	1.000E+4	3.955E+4	2.200E-1	Feline (In vivo-deflated)
1.000E+6	1.500E+3	5.752E+3	3.200E-1	@ 34 °C
1.000E+7	2.500E+2	8.628E+2	4.800E-1	Suroweic et al, 1987
1.000E+8	5.000E+1	1.150E+2	6.400E-1	
1.000E+1	2.500E+7	1.600E+8	8.900E-2	
1.000E+2	4.500E+5	1.654E+7	9.200E-2	Canine (In situ-inflated)
1.000E+3	8.500E+4	1.726E+6	9.600E-2	Schwan & Kay, 1957
1.000E+4	2.500E+4	1.977E+5	1.100E-1	

Lung Inflated

Lung Inflated

Lung Inflated

□ Porcine (In vivo) @ 34-36°C (1E6-1E8Hz) Hahn et al, 1980

◇ Canine (In situ) (1E1-1E4Hz) Schwan & Kay, 1957

△ Feline (In vivo) @ 34°C (1E4-1E8Hz) Suroweic et al,1987

—— Ovine @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Muscle
	ε′	ε″	σ (S/m)	
1.000E+1	1.600E+7	5.123E+8	2.850E-1	Rat Parallel (In vivo) @ 37°C ±1°C Gielen et al, 1984
1.000E+2	1.200E+7	5.752E+7	3.200E-1	
1.000E+3	2.800E+6	9.077E+6	5.050E-1	
1.000E+4	6.400E+4	1.474E+6	8.200E-1	
1.000E+5	2.045E+4	1.977E+5	1.100E+0	
1.000E+2	1.200E+6	9.886E+7	5.500E-1	Canine Parallel @ 36-38°C Epstein & Foster, 1983
1.000E+3	2.700E+5	9.886E+6	5.500E-1	
1.000E+4	8.000E+4	1.043E+6	5.800E-1	
1.000E+5	1.100E+4	1.222E+5	6.800E-1	
1.000E+6	8.000E+2	1.438E+4	8.000E-1	
1.000E+1	5.800E+7	8.089E+7	4.500E-2	Bovine Parallel @ 20°C Bodakian & Hart, 1994
1.000E+2	7.100E+6	2.337E+7	1.300E-1	
1.000E+3	2.900E+5	2.696E+6	1.500E-1	
1.000E+4	6.300E+4	3.236E+5	1.800E-1	
1.000E+5	9.300E+3	4.674E+4	2.600E-1	
1.000E+1	1.000E+7	1.869E+8	1.040E-1	Canine (In situ) Schwan 1956,57,63
1.000E+2	8.000E+5	2.049E+7	1.140E-1	
1.000E+3	1.300E+5	2.211E+6	1.230E-1	
1.000E+4	5.500E+4	2.373E+5	1.320E-1	
1.000E+1	6.400E+6	3.325E+8	1.850E-1	Rat Transverse (In vivo) @ 37°C ±1°C Gielen et al,1984
1.000E+2	4.500E+6	3.775E+7	2.100E-1	
1.000E+3	4.300E+5	4.314E+6	2.400E-1	
1.000E+4	9.500E+4	5.393E+5	3.000E-1	
1.000E+5	4.200E+4	1.079E+5	6.000E-1	
1.000E+2	3.700E+5	1.438E+7	8.000E-2	Canine Transverse @ 36-38°C Epstein & Foster,1983
1.000E+3	1.300E+5	1.438E+6	8.000E-2	
1.000E+4	7.500E+4	2.157E+5	1.200E-1	
1.000E+5	3.100E+4	5.752E+4	3.200E-1	
1.000E+6	3.500E+3	1.043E+4	5.800E-1	
1.000E+1	3.500E+7	6.291E+7	3.500E-2	Bovine Transverse @ 20°C Bodakian & Hart,1994
1.000E+2	2.700E+6	1.258E+7	7.000E-2	
1.000E+3	1.400E+5	1.438E+6	8.000E-2	
1.000E+4	4.300E+4	1.708E+5	9.500E-2	
1.000E+5	1.700E+4	2.517E+4	1.400E-1	
2.000E+8	6.958E+1	8.269E+1	9.200E-1	Frog (In vivo) @ 22°C Schwartz & Mealing, 1985
4.000E+8	6.851E+1	4.359E+1	9.700E-1	
6.000E+8	6.807E+1	3.146E+1	1.050E+0	
8.000E+8	6.442E+1	2.629E+1	1.170E+0	
1.000E+9	6.365E+1	2.319E+1	1.290E+0	
2.000E+9	5.693E+1	1.564E+1	1.740E+0	
4.000E+9	5.396E+1	1.685E+1	3.750E+0	
6.000E+9	5.076E+1	2.061E+1	6.880E+0	
8.000E+9	4.721E+1	2.328E+1	1.036E+1	
1.000E+5	1.520E+4	7.370E+4	4.100E-1	

1.000E+6	2.080E+3	1.079E+4	6.000E-1	Canine @ 37°C Stoy et al,1982
1.000E+7	1.680E+2	1.294E+3	7.200E-1	
2.500E+7	1.010E+2	5.393E+2	7.500E-1	
5.000E+7	7.600E+1	2.768E+2	7.700E-1	
1.000E+8	6.700E+1	1.402E+2	7.800E-1	
1.000E+5	2.605E+4	1.043E+5	5.800E-1	Rat @ 37°C Stoy et al, 1982
1.000E+6	2.495E+3	1.510E+4	8.400E-1	
1.000E+7	1.960E+2	1.690E+3	9.400E-1	
2.500E+7	1.300E+2	6.974E+2	9.700E-1	
5.000E+7	1.010E+2	3.559E+2	9.900E-1	
1.000E+8	9.000E+1	1.887E+2	1.050E+0	
1.000E+8	7.260E+1	1.744E+2	9.700E-1	Rat (In vivo) @ 31°C ±1°C Kraszewski et al, 1982
9.000E+8	5.690E+1	2.536E+1	1.270E+0	
5.000E+9	5.100E+1	1.826E+1	5.080E+0	
1.000E+10	4.380E+1	2.062E+1	1.147E+1	
1.000E+8	6.800E+1	1.618E+2	9.000E-1	Feline (In vivo) @ 33°C ±1°C Kraszewski et al, 1982
9.000E+8	5.850E+1	2.397E+1	1.200E+0	
4.000E+9	5.000E+1	1.573E+1	3.500E+0	
8.000E+9	4.050E+1	1.438E+1	6.400E+0	
1.000E+3	1.300E+6	2.966E+6	1.650E-1	Frog (In vivo) Hart & Dunfee, 1993
1.000E+4	1.200E+5	4.314E+5	2.400E-1	
1.000E+5	1.200E+4	6.291E+4	3.500E-1	
1.000E+6	7.000E+2	7.100E+3	3.950E-1	
1.000E+8	7.200E+1	1.798E+2	1.000E+0	Canine @ 25°C Schwan & Foster, 1977
2.000E+8	6.100E+1	8.988E+1	1.000E+0	
5.000E+8	5.700E+1	3.595E+1	1.000E+0	
1.000E+9	5.500E+1	1.995E+1	1.110E+0	
3.000E+9	5.000E+1	1.198E+1	2.000E+0	
5.000E+9	4.200E+1	1.402E+1	3.900E+0	
1.000E+10	4.000E+1	2.193E+1	1.220E+1	
1.000E+6	1.900E+3	1.043E+4	5.800E-1	Porcine (In vivo) @ 34-36°C Hahn et al, 1980
1.000E+7	9.000E+1	1.204E+3	6.700E-1	
2.500E+7	5.000E+1	5.033E+2	7.000E-1	
1.000E+8	3.900E+1	1.384E+2	7.700E-1	
1.000E+4	8.800E+4	4.494E+5	2.500E-1	Feline (In vivo) @ 32.1°C ±2°C Suroweic et al, 1986
1.000E+5	1.580E+4	7.190E+4	4.000E-1	
1.000E+6	1.900E+3	1.132E+4	6.300E-1	
1.000E+7	1.300E+2	1.312E+3	7.300E-1	
1.000E+8	6.000E+1	1.492E+2	8.300E-1	
1.000E+8	7.274E+1	1.276E+2	7.100E-1	Canine @ 20°C ±1°C Xu et al, 1987
1.000E+9	5.197E+1	2.031E+1	1.130E+0	
1.000E+10	3.523E+1	3.188E+2	1.951E+1	
4.000E+10	2.500E+1	3.370E+1	7.500E+1	Rat (In vivo) @ 37°C Edrich & Hardee, 1976
9.000E+10	2.000E+1	1.198E+1	6.000E+1	
5.000E+7	7.350E+1	2.193E+2	6.100E-1	Human @ 23-25°C Joines et al,1994
1.000E+8	6.300E+1	1.114E+2	6.200E-1	
5.000E+8	5.240E+1	2.588E+1	7.200E-1	

9.000E+8	5.200E+1	1.837E+1	9.200E-1	
4.000E+7	9.800E+1	3.550E+2	7.900E-1	Human Schwan, 1955
1.000E+8	6.900E+1	1.564E+2	8.700E-1	
1.000E+9	5.000E+1	2.391E+1	1.330E+0	
1.000E+10	4.000E+1	1.497E+1	8.330E+0	
1.000E+8	6.000E+1	6.651E+1	3.700E-1	Rat @ 30°C Joines et al, 1980
1.000E+9	4.300E+1	1.582E+1	8.800E-1	
2.000E+9	4.300E+1	1.052E+1	1.170E+0	
1.000E+8	7.800E+1	8.269E+1	4.600E-1	Rat (In vivo) @ 31°C Burdette et al, 1980
1.000E+9	6.400E+1	1.168E+1	6.500E-1	
2.000E+9	6.100E+1	9.617E+0	1.070E+0	
1.000E+8	6.600E+1	8.269E+1	4.600E-1	Canine (In vivo) @ 34°C Burdette et al, 1980
1.000E+9	4.900E+1	8.448E+0	4.700E-1	
2.000E+9	4.700E+1	6.651E+0	7.400E-1	
1.090E+6	3.002E+3	8.560E+3	5.200E-1	Ovine @ 37°C Gabriel et al, 1994
3.950E+6	6.060E+2	2.816E+3	6.200E-1	
1.190E+7	1.839E+2	1.027E+3	6.800E-1	
3.610E+7	9.700E+1	3.707E+2	7.400E-1	
1.090E+8	6.660E+1	1.336E+2	8.100E-1	
3.950E+8	5.430E+1	4.260E+1	9.400E-1	
1.190E+9	4.970E+1	1.880E+1	1.250E+0	
1.300E+8	6.217E+1	1.134E+2	8.200E-1	
3.940E+8	5.479E+1	4.202E+1	9.200E-1	
1.080E+9	5.113E+1	1.990E+1	1.190E+0	
3.990E+9	4.616E+1	1.539E+1	3.420E+0	
1.090E+10	3.500E+1	2.023E+1	1.230E+1	
2.000E+10	2.533E+1	2.171E+1	2.415E+1	
2.500E+7	1.030E+2	3.379E+2	4.700E-1	Porcine & Bovine @ 37°C Osswald, 1937
5.000E+7	8.500E+1	1.833E+2	5.100E-1	
1.000E+8	7.100E+1	1.007E+2	5.600E-1	
2.500E+7	1.150E+2	3.883E+2	5.400E-1	
5.000E+7	9.700E+1	2.085E+2	5.800E-1	
1.000E+8	7.600E+1	1.168E+2	6.500E-1	

Muscle

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Muscle

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivitty (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Muscle

- □ Rat Parallel (In vivo) @ 37°C ±1°C (1E1-1E5Hz) Gielen et al, 1984
- ◇ Canine Parallel @ 36-38°C (1E2-1E6Hz) Epstein & Foster, 1983
- △ Bovine Parallel @ 20°C (1E1-1E5Hz) Bodakian & Hart, 1994
- ○ Canine (In situ) (1E1-1E4Hz) Schwan 1956,57,63 (in Durney et al, 1986)
- × Rat Transverse (In vivo) @ 37°C ±1°C (1E1-1E5Hz) Gielen et al,1984
- ✳ Canine Transverse @ 36-38°C (1E2-1E6Hz) Epstein & Foster,1983
- + Bovine Transverse @ 20°C (1E1-1E5Hz) Bodakian & Hart,1994
- ■ Frog (In vivo) @ 22°C (2E8-8E9Hz) Schwartz & Mealing, 1985
- ◆ Canine @ 37°C (1E5-1E8Hz) Stoy et al,1982
- ▲ Rat @ 37°C (1E5-1E8Hz) Stoy et al, 1982
- ● Rat (In vivo) @ 31°C ±1°C (1E8-1E10Hz) Kraszewski et al, 1982
- ⊠ Feline (In vivo) @ 33°C ±1°C (1E8-8E9Hz) Kraszewski et al, 1982
- ⊠ Frog (In vivo) (1E3-1E6Hz) Hart & Dunfee, 1993
- ⊞ Canine @ 25°C (1E8-1E10Hz) Schwan & Foster, 1977
- ▣ Porcine (In vivo) @ 34-36°C (1E6-1E8Hz) Hahn et al, 1980
- ◆ Feline (In vivo) @ 32.1°C ±2°C (1E4-1E8Hz) Suroweic et al, 1986
- ▲ Canine @ 20°C ±1°C (1E8-1E10Hz) Xu et al, 1987
- ● Rat (In vivo) @ 37°C (4E10-9E10Hz) Edrich & Hardee, 1976
- ⊠ Human @ 23-25°C (5E7-9E8Hz) Joines et al,1994
- ⊠ Human (4E7-1E10Hz) Schwan, 1955
- ⊞ Rat @ 30°C (1E8-2E9Hz) Joines et al, 1980
- ▣ Porcine & Bovine @ 37°C (2E7-1E8Hz) Osswald, 1937
- ◇ Ovine @ 37°C (1E6-2E10Hz) Gabriel et al, 1994
- △ Canine (In vivo) @ 34°C (1E8-2E9Hz) Burdette et al, 1980
- ○ Rat (In vivo) @ 31°C (1E8-2E9Hz) Burdette et al, 1980
- —— Ovine @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Pancreas
	ε'	ε''	σ (S/m)	
1.000E+5	1.000E+4	5.393E+4	3.000E-1	
3.000E+5	5.800E+3	2.097E+4	3.500E-1	Canine @ 37°C
1.000E+6	2.300E+3	7.729E+3	4.300E-1	Stoy et al, 1982
1.000E+7	3.200E+2	1.079E+3	6.000E-1	
1.000E+8	8.500E+1	1.528E+2	8.500E-1	

Frequency (Hz)	Properties			Skin (Dry)
	ε′	ε″	σ (S/m)	
1.000E+8	4.880E+1	8.170E+1	4.540E-1	Human (In vivo-temple)
5.000E+8	3.700E+1	1.970E+1	5.480E-1	Grant et al, 1988
1.000E+9	3.470E+1	1.090E+1	3.030E-1	
3.000E+5	1.300E+3	5.992E+2	1.000E-2	
1.000E+6	1.000E+3	4.494E+2	2.500E-2	Human (In vivo)
1.000E+7	3.280E+2	3.595E+2	2.000E-1	Tamura et al, 1994
1.000E+8	5.900E+1	7.729E+1	4.300E-1	
1.000E+9	3.300E+1	1.240E+1	6.900E-1	
1.000E+1	6.350E+3	2.696E+4	1.500E-5	
1.000E+2	3.275E+3	3.775E+3	2.100E-5	Human (stratum corneum-
1.000E+3	2.150E+3	7.370E+2	4.100E-5	associated with dry values)
1.000E+4	1.630E+3	2.157E+2	1.200E-4	Yamamoto & Yamamoto, 1976
1.000E+5	1.370E+3	1.096E+2	6.100E-4	
1.000E+6	4.320E+2	3.595E+2	2.000E-2	
1.000E+8	5.090E+1	5.910E+1	3.290E-1	Human (In vivo-neck)
5.000E+8	3.270E+1	1.530E+1	4.260E-1	Grant et al, 1988
1.000E+9	3.020E+1	8.600E+0	2.390E-1	
1.000E+8	4.860E+1	6.090E+1	3.390E-1	Human (In vivo-abdomen)
5.000E+8	3.390E+1	1.570E+1	4.370E-1	Grant et al, 1988
1.000E+9	3.170E+1	8.900E+0	2.480E-1	

Skin (Dry)

Permittivity
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Skin (Dry)

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
1.0E-4
1.0E-5
Conductivity (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Skin (Dry)

△ Human (In vivo-temple) (1E8-1E9Hz) Grant et al, 1988

○ Human (In vivo) (3E5-1E9Hz) Tamura et al, 1994

× Human (stratum corneum) (1E1-1E6Hz) Yamamoto & Yamamoto, 1976

✱ Human (In vivo-neck) (1E8-1E9Hz) Grant et al, 1988

+ Human (In vivo-abdomen) (1E8-1E9Hz) Grant et al, 1988

—— Human (In vivo-forearm) 1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Skin (Wet)
	ε′	ε″	σ (S/m)	
1.000E+8	3.830E+1	5.033E+1	2.800E-1	Canine @20°C+/-1°C
1.000E+9	4.105E+1	1.150E+1	6.400E-1	Xu et al, 1987
1.100E+10	2.519E+1	1.686E+1	1.032E+1	
1.000E+7	1.330E+2	1.492E+3	8.300E-1	Human (excised) @ 20°C
3.160E+7	1.030E+2	5.176E+2	9.100E-1	Bhattacherjee et al, 1995
1.000E+8	6.300E+1	2.588E+2	1.440E+0	
1.000E+1	7.565E+5	3.955E+8	2.200E-1	
1.000E+2	4.037E+5	4.134E+7	2.300E-1	Human (granular associated
1.000E+3	1.874E+5	4.494E+6	2.500E-1	with wet values)
1.000E+4	1.072E+5	5.033E+5	2.800E-1	Yamamoto & Yamamoto, 1976
1.000E+5	2.656E+4	6.112E+4	3.400E-1	
1.000E+6	2.850E+3	9.347E+3	5.200E-1	
1.780E+9	4.560E+1	1.945E+1	1.926E+0	
2.980E+9	4.450E+1	1.354E+1	2.244E+0	Human (excised) @ 37°C
3.580E+9	4.425E+1	1.284E+1	2.557E+0	Cook, 1952
4.630E+9	4.153E+1	1.400E+1	3.606E+0	
9.430E+9	3.550E+1	1.600E+1	8.394E+0	Human (excised) @ 37°C
2.362E+10	2.300E+1	1.300E+1	1.708E+1	England, 1950

Skin (Wet)

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Skin (Wet)
Conductivity (S/m)
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
1.0E-4
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Skin (Wet)

□ Canine @20°C (1E8-1E10Hz) Xu et al, 1987

◇ Human (excised) @ 20°C (1E7-1E8Hz) Bhattacherjee et al, 1995

△ Human (granular associated with wet values) (1E1-1E6Hz) Yamamoto & Yamamoto, 1976

○ Human (excised) @ 37°C (2E9-5E9Hz) Cook, 1952

× Human (excised) @ 37°C (9E9-2E10Hz) England, 1950

—— Human (In vivo-forearm) (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Spleen
	ε′	ε″	σ	
5.000E+7	1.350E+2	2.373E+2	6.600E-1	Porcine & Bovine @ 37°C
5.000E+7	1.400E+2	2.804E+2	7.800E-1	Osswald,1937
1.000E+4	2.181E+4	1.618E+5	9.000E-2	
1.000E+5	5.319E+3	1.977E+4	1.100E-1	Bovine @ 25°C
1.000E+6	1.346E+3	3.236E+3	1.800E-1	Surowiec et al, 1985
1.000E+7	2.830E+2	6.112E+2	3.400E-1	
1.000E+8	5.500E+1	1.079E+2	6.000E-1	
1.000E+6	1.800E+3	3.595E+3	2.000E-1	Porcine (In vivo) @ 34-36°C
1.000E+7	3.100E+2	8.628E+2	4.800E-1	Hahn et al, 1980
1.000E+8	4.300E+1	1.348E+2	7.500E-1	
1.000E+4	1.800E+4	2.157E+5	1.200E-1	
1.000E+5	4.500E+3	2.876E+4	1.600E-1	Feline (In vivo)
1.000E+6	2.000E+3	4.314E+3	2.400E-1	@ 34.2°C +/-0.8°C
1.000E+7	4.200E+2	9.707E+2	5.400E-1	Suroweic et al, 1986
1.000E+8	6.500E+1	1.420E+2	7.900E-1	
1.000E+4	5.087E+4	2.517E+5	1.400E-1	
1.000E+5	9.200E+3	2.696E+4	1.500E-1	Human @ 36.8°C
1.000E+6	1.940E+3	4.314E+3	2.400E-1	Suroweic et al,1987
1.000E+7	4.510E+2	8.269E+2	4.600E-1	
1.000E+8	7.630E+1	1.887E+2	1.050E+0	
1.000E+8	8.870E+1	1.528E+2	8.500E-1	
9.000E+8	5.520E+1	2.417E+1	1.210E+0	Rat (In vivo) @ 32°C +/-1°C
5.000E+9	4.980E+1	1.596E+1	4.440E+0	Kraszewski et al, 1982
1.000E+10	4.070E+1	1.823E+1	1.014E+1	
1.000E+8	8.100E+1	1.438E+2	8.000E-1	
9.000E+8	5.400E+1	2.237E+1	1.120E+0	Feline (In vivo) @ 36°C
4.000E+9	5.000E+1	1.393E+1	3.100E+0	Kraszewski et al, 1982
8.000E+9	4.400E+1	1.416E+1	6.300E+0	
1.000E+3	8.600E+4	1.258E+6	7.000E-2	
1.000E+4	2.800E+4	1.618E+5	9.000E-2	Canine @ 22-24°C
1.000E+5	5.800E+3	2.157E+4	1.200E-1	Astbury et al, 1988
1.000E+6	2.300E+3	3.595E+3	2.000E-1	
1.000E+7	5.800E+2	9.527E+2	5.300E-1	
1.000E+7	3.980E+2	9.527E+2	5.300E-1	Feline @ 35°C +/-1°C
1.000E+8	7.500E+1	1.330E+2	7.400E-1	Stuchly et al, 1981
1.000E+9	4.700E+1	1.959E+1	1.090E+0	
1.000E+5	3.260E+3	2.229E+2	6.200E-1	
1.000E+6	1.450E+3	1.132E+4	6.300E-1	
1.000E+7	3.210E+2	1.510E+3	8.400E-1	Canine @ 37°C
2.500E+7	1.800E+2	6.687E+2	9.300E-1	Stoy et al, 1982
5.000E+7	1.100E+2	3.559E+2	9.900E-1	
1.000E+8	8.300E+1	1.887E+2	1.050E+0	
3.000E+5	1.630E+3	6.786E+3	1.133E-1	
1.089E+6	2.706E+3	3.456E+3	2.094E-1	

3.955E+6	9.471E+2	1.638E+3	3.605E-1	
1.089E+7	3.965E+2	8.396E+2	5.088E-1	
3.955E+7	1.355E+2	3.106E+2	6.833E-1	
1.089E+8	7.957E+1	1.291E+2	7.825E-1	
3.955E+8	6.172E+1	4.132E+1	9.090E-1	Human @ 37°C
1.089E+9	5.736E+1	1.965E+1	1.191E+0	Current study measurements
3.000E+9	5.026E+1	1.738E+1	2.901E+0	
1.300E+8	7.674E+1	1.085E+2	7.848E-1	
3.936E+8	6.364E+1	4.127E+1	9.037E-1	
1.025E+9	5.950E+1	2.037E+1	1.161E+0	
3.992E+9	5.399E+1	1.694E+1	3.761E+0	
1.039E+10	4.072E+1	2.338E+1	1.352E+1	
2.000E+10	2.861E+1	2.307E+1	2.567E+1	

Spleen
Permittivity
1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Spleen

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivitty (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Spleen

□ Porcine & Bovine @ 37°C (5E7Hz) Osswald,1937

◇ Bovine @ 25°C (1E4-1E8Hz) Surowiec et al, 1985

△ Porcine (In vivo) @ 34-36°C (1E6-1E8Hz) Hahn et al, 1980

○ Feline (In vivo) @ 34.2°C ±0.8°C (1E4-1E8Hz) Suroweic et al, 1986

× Human @ 36.8°C (1E4-1E8Hz) Suroweic et al,1987

✳ Rat (In vivo) @ 32°C ±1°C (1E8-1E10Hz Kraszewski et al, 1982

+ Feline (In vivo) @ 36°C (1E8-8E9Hz) Kraszewski et al, 1982

■ Canine @ 22-24°C (1E3-1E7Hz) Astbury et al, 1988

◆ Feline @ 35°C ±1°C (1E7-1E9Hz) Stuchly et al, 1981

▲ Canine @ 37°C (1E5-1E8Hz) Stoy et al, 1982

● Human @ 37°C (3E5-2E10Hz) Current study measurements

—— Ovine @ 37°C (1E1-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Stomach
	ε'	ε''	σ (S/m)	
1.000E+7	4.900E+2	1.384E+3	7.700E-1	Feline (In vivo-smooth muscle)
1.000E+8	8.500E+1	1.726E+2	9.600E-1	@ 35°C+/-0.5°C
1.000E+9	6.200E+1	2.391E+1	1.330E+0	Stuchly et al,1981

Stomach

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
Permittivity
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Stomach

1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
Conductivitty (S/m)
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)

Stomach

□ Feline (In vivo-smooth muscle) @ 35°C (1E7-1E9Hz) Stuchly et al,1981

—— Human @ 37°C (4E6-2E10Hz) Current study measurements

Frequency (Hz)	Properties			Vitreous Humour
	ε'	ε''	σ (S/m)	
1.000E+8	7.000E+1	3.002E+2	1.670E+0	
1.000E+9	7.000E+1	3.595E+1	2.000E+0	Bovine
3.000E+9	7.000E+1	1.798E+1	3.000E+0	Schwan, 1958
1.000E+10	6.200E+1	3.200E+1	1.780E+1	

Vitreous Humour

Vitreous Humour

Vitreous Humour

□ Bovine (1E8-1E10Hz) Schwan, 1958

—— Ovine @ 37°C (1E8-2E10Hz) Current study measurements

Frequency (Hz)	Properties			White Matter
	ε′	ε″	σ (S/m)	
3.000E+9	3.540E+1	9.587E+0	1.600E+0	
4.000E+9	3.440E+1	9.886E+0	2.200E+0	
8.000E+9	3.140E+1	1.213E+1	5.400E+0	Rabbit @ 37°C
1.000E+10	3.080E+1	1.222E+1	6.800E+0	Steel & Sheppard, 1985
1.400E+10	2.880E+1	1.271E+1	9.900E+0	
1.800E+10	1.990E+1	1.378E+1	1.380E+1	
1.000E+5	2.680E+3	2.517E+4	1.400E-1	
1.000E+6	6.850E+2	3.056E+3	1.700E-1	
1.000E+7	1.860E+2	4.494E+2	2.500E-1	Canine @ 37°C
2.500E+7	1.220E+2	2.085E+2	2.900E-1	Stoy et al, 1982
5.000E+7	8.500E+1	1.294E+2	3.600E-1	
1.000E+8	6.200E+1	7.550E+1	4.200E-1	
2.000E+8	6.600E+1	3.865E+1	4.300E-1	Canine (In situ-pia mater)
1.000E+9	5.700E+1	2.337E+1	1.300E+0	@ 36°C
4.000E+9	4.800E+1	1.308E+1	2.910E+0	Burdette et al, 1986
1.000E+8	5.986E+1	6.291E+1	3.500E-1	Canine @ 20°C +/- 1°C
1.000E+9	4.119E+1	1.420E+1	7.900E-1	Xu et al, 1987
1.100E+10	2.310E+1	1.337E+1	8.180E+0	
1.000E+5	1.400E+3	3.595E+4	2.000E-1	
1.000E+6	4.000E+2	2.157E+3	1.200E-1	Bovine @ 24-25°C
1.000E+7	1.150E+2	2.876E+2	1.600E-1	Suroweic et al, 1986
1.000E+8	5.800E+1	5.033E+1	2.800E-1	
1.000E+7	1.890E+2	4.674E+2	2.600E-1	Feline (In vivo) @ 33°C
1.000E+8	6.200E+1	8.269E+1	4.600E-1	Stuchley et al, 1981
1.000E+9	3.800E+1	1.438E+1	8.000E-1	
1.000E+7	2.000E+2	5.051E+2	2.810E-1	Canine @ 37°C
1.000E+8	6.800E+1	8.502E+1	4.730E-1	Foster et al 1979
1.000E+10	3.000E+1	1.110E+1	6.175E+0	
1.090E+6	7.893E+2	1.246E+3	8.000E-2	
3.950E+6	3.093E+2	5.047E+2	1.100E-1	
1.190E+7	1.497E+2	2.369E+2	1.600E-1	
3.610E+7	8.541E+1	1.121E+2	2.200E-1	
1.090E+8	5.266E+1	5.200E+1	3.200E-1	
3.950E+8	3.671E+1	2.036E+1	4.500E-1	Ovine @ 37°C
1.190E+9	3.237E+1	9.770E+0	6.500E-1	Current study measurements
1.300E+8	4.832E+1	5.130E+1	3.700E-1	
3.940E+8	3.760E+1	2.151E+1	4.700E-1	
1.080E+9	3.405E+1	1.059E+1	6.400E-1	
3.990E+9	3.135E+1	8.430E+0	1.870E+0	
1.090E+10	2.464E+1	1.239E+1	7.540E+0	
2.000E+10	2.067E+1	1.259E+1	1.400E+1	
3.000E+5	1.307E+3	8.293E+3	1.387E-1	
1.089E+6	7.877E+2	3.000E+3	1.817E-1	
3.955E+6	3.137E+2	1.017E+3	2.240E-1	

1.089E+7	1.673E+2	4.437E+2	2.687E-1	Human @ 37°C Current study measurements
3.955E+7	8.287E+1	1.570E+2	3.450E-1	
1.089E+8	5.477E+1	7.017E+1	4.253E-1	
3.955E+8	4.043E+1	2.497E+1	5.497E-1	
1.089E+9	3.613E+1	1.277E+1	7.723E-1	
3.000E+9	3.170E+1	1.057E+1	1.763E+0	
1.300E+8	5.120E+1	5.801E+1	4.195E-1	
3.936E+8	3.889E+1	2.414E+1	5.287E-1	
1.025E+9	3.548E+1	1.220E+1	6.955E-1	
3.992E+9	3.238E+1	8.875E+0	1.971E+0	
1.039E+10	2.593E+1	1.210E+1	6.993E+0	
2.000E+10	1.989E+1	1.206E+1	1.342E+1	

White Matter

White Matter

White Matter

□ Rabbit @ 37°C (3E9-2E10Hz) Steel & Sheppard, 1985

◇ Canine @ 37°C (1E5-1E8Hz) Stoy et al, 1982

△ Canine (In situ-pia mater) @ 36°C (2E8-4E9Hz) Burdette et al, 1986

○ Canine @ 20°C ±1°C (1E8-1E10Hz) Xu et al, 1987

× Bovine @ 24-25°C (1E5-1E8Hz) Suroweic et al, 1986b

✳ Feline (In vivo) @ 33°C (1E7-1E9Hz) Stuchley et al, 1981

+ Canine @ 37°C (1E7-1E10Hz) Foster et al 1979

■ Ovine @ 37°C (1E6-2E10Hz Current study measurements

◆ Human @ 37°C (3E5-2E10Hz) Current study measurements

—— Ovine @ 37°C (1E1-2E10Hz) Current study measurements

REFERENCES CITED

1. Alison, J.M. and Sheppard, R.J., 1993, Dielectric properties of human blood at microwave frequencies, Physics in Medicine and Biology, 38, 7, 971-978.
2. Astbury, J.C., Goldschmidt, M.H., Evans, S.M., Niebauer, G.W. and Foster, K.R., 1988, The dielectric properties of canine normal and neoplastic splenic tissues, IEEE, 107-108.
3. Bhattacherjee, A. B., Chaudhury, K. and Bajaj, M. M., 1995, The dielectric parameters of skin tissues and their change during thermal burn injuries between 1 and 100 MHz, Physica Medica, 11, 1, 27-32.
4. Bodakian, B. and Hart, F. X., 1994, The dielectric properties of meat, IEEE Transactions on Dielectrics and Electrical Insulation, 1, 2, 181-187.
5. Burdette, E. C., Cain, F. L. and Seals, J., 1980, In vivo probe measurement technique for determining dielectric properties at VHF through Microwave frequencies, IEEE Transactions on Microwave Theory and Techniques, MTT28, 4, 414-427.
6. Burdette, E. C., Friederich, P. G., Seaman, R. L. and Larsen, L. E., 1986, In situ Permittivity of Canine Brain: Regional Variations and Postmortem Changes, IEEE Transactions on Microwave Theory and Techniques, MTT34, 1, 38-49.
7. Cook, H., 1952, A comparison of the dielectric behaviour of pure water and human blood at microwave frequencies., British Journal of Applied Physics, 3, 249-255.
8. Cook, H.F., 1951, The dielectric behaviour of some types of human tissues at microwave frequencies., British Journal of Applied Physics, 2, 295-300.
9. de Mercato, G. and Garcia-Sanchez, F. J., 1988, Dielectric properties of fluid-saturated bone: A comparison between diaphysis and epiphysis, Medical and Biological Engineering and Computing, 26, 3, 313-316.
10. de Mercato, G. and Garcia-Sanchez, F. J., 1992, Correlation between low-frequency electric conductivity and permittivity in the diaphysis of bovine femoral bone, IEEE Transactions on Biomedical Engineering, 39, 5, 523-526.
11. Duck, F. A., 1990, Physical properties of tissue:A comprehensive reference book, Academic Press, Harcourt Brace Jovanovich, Publishers.
12. Durney, C.H., Massoudi, H. and Iskander, M.F., 1986, Radiofrequency radiation dosimetry handbook, Brooks Air Force Base- USAFSAM-TR-85-73 , .
13. Edrich, J. and Hardee, P.C., 1976, Complex permittivity and penetration depth of muscle and fat tissues between 40 and 90 GHz, IEEE Transactions on Microwave Theory and Techniques, 273-275.
14. England, T. S., 1950, Dielectric Properties of the Human Body for Wavelengths in the 1-10 cm range, Nature, 166, 480-481.
15. Epstein, B. R. and Foster, K. R., 1983, Anisotropy in the dielecric properties of skeletal muscle, Medical and Biological Engineering and Computing, 21, 51-55.
16. Foster, K. R. and Schwan, H. P., 1989, Dielectric properties of tissues and biological materials: A critical review, Critical Reviews in Biomedical Engineering, 17, 1, 25-104.
17. Gabriel, C., Chan, T. Y. A. and Grant, E. H., 1994, Admittance models for open ended coaxial probes and their place in dielectric spectroscopy, Physics in Medicine and Biology, 39, 12, 2183-2200.

18. Gabriel, C., Grant, E.H. and Young, I.R., 1986, Use of time domain spectroscopy for measuring dielectric properties with a coaxial probe, Phys. E. Sci.. Instrum., 19, 843.
19. Gabriel, C., Sheppard, R. J. and Grant, E. H., 1983, Dielectric properties of ocular tissues at 37°C, Physics in Medicine and Biology, 28, 43-49.
20. Gabriel, S., Lau, R. W. and Gabriel, C., 1995, The Dielectric Properties of Biological Tissues: 2. Measurements in the frequency range 10 Hz to 20 GHz, To be submitted to Physics in Medicine and Biology, .
21. Gabriel, S., Lau, R. W. and Gabriel, C., 1995, The Dielectric Properties of Biological Tissues: 3. Models for the frequency dependence, To be submitted to Physics in Medicine and Biology, .
22. Geddes, L. A. and Barker, L. E., 1967, The specific resistance of biological material - a compendium of data for the biomedical engineer and physiologist., Medical and Biological Engineering, 5, 271-293.
23. Gielen, F. L. H., Wallinga-de Jonge, W. and Boon, K. L., 1984, Electrical conductivity of skeletal muscle tissue: Experimental results from different muscles in vivo, Medical and Biologiacal Engineering, 22, 569-577.
24. Grant, J. P., Clarke, R. N., Symm, G. T. and Spyrou, N. M., 1988, In vivo dielectric properties of human skin from 50 MHz to 2.0 GHz, Physics in Medicine and Biology, 33, 5, 607-612.
25. Hahn, G. M., Kernahan, P., Martinez, A., Pounds, D. and Prionas, S., 1980, Some heat transfer problems associated with heating by ultrasound, microwaves or radio frequency, Annals of the New York Academy of Sciences, 327-345.
26. Hart, F. X. and Dunfee, W. R., 1993, In vivo measurement of the low-frequency dielectric spectra of frog skeletal muscle, Physics in Medicine and Biology, 38, 1099-1112.
27. Joines, W. T., Jirtle, R. L., Rafal, M. D. and Schaefer, D. J., 1980, Microwave power absorption differences between normal and malignant tissue., Radiation Oncology in Biology Physics, 6, 681-687.
28. Joines, W.T., Zhang, Y., Li, C. and Jirtle, R.L., 1994, The measured electrical properties of normal and malignant human tissues from 50 to 900 MHz, Medical Physics, 21, 4, 547-550.
29. Kosterich, J. D., Foster, K. R. and Pollack, S. R., 1983, Dielectric permittivity and electrical conductivity of fluid saturated bone, IEEE Transactions on Biomedical Engineering, 30, 2, 81-86.
30. Kraszewski, A., Stuchly, S. S., Stuchly, M. A. and Smith, A. M., 1982, In vivo and in vitro dielectric properties on animal tissues at radio frequencies., Bioelectromagnetics, 3, 421-432.
31. Kyber, J.; Hangsen, H. and Piquett, F., 1992, Dielectric properties of biological tissue at low temperatures demonstrated on fatty tissue, Physics in Medicine and Biology, 37, 8, 1675-1688.
32. Land, D.V. and Campbell, A.M., 1992, A quick accurate method for measuring the microwave dielectric properties of small tissue samples, Physics in Medicine and Biology, 37, 1, 183-192.
33. Osswald, K., 1937, Messung der Leitfahigkeit und Dielektrizitatkonstante biologischer Gewebe und Flussigkeiten bei kurzen Wellen, Hochfrequenz Tech Elektroakustik, 49, 40-50.

34. Pethig, R., 1984, Dielectric properties of biologicl materials: Biophysical and medical applications., IEEE transactions on electrical insulation., EI-19, 5, 453-473.
35. Pethig, R. and Kell, D. B., 1987, The Passive electrical properties of biological systems: their significance in physiology, biophysics, and biotechnology, Physics in Medicine and Biology, 32, 8, 933-970.
36. Pfutzner, H., 1984, Dielectric analysis of blood by means of a raster-electrode technique, Medical and Biological Engineering and Computing, 22, 2, 142-146.
37. Reddy, G. N. and Saha, S., 1984, Electrical and Dielectric Properties of Wet Bone as a function of frequency, IEEE Transactions on Biomedical Engineering, 31, 3, 296-302 .
38. Rigaud, B., Hamzaoui, L., Chauveau, N., Granie, M., Di Rinaldi, J. S. and Morucci, J., 1994, Tissue characterization by impedance: A multifrequency approach, Physiological Measurements, 15, A13-A20.
39. Saha, S. and Williams, P. A., 1989, Electric and dielectric properties of wet human cancellous bone as a function of frequency, Annals of Biomedical Engineering, 17, 2, 143-158.
40. Schwan, H. P., 1955, Application of UHF impedance measuring techniques in biophysics, IRE Transactions on Instrumentation, PGI4, 75-83 .
41. Schwan, H. P., 1956, Electrical properties measured with alternating currents; body tissues., In W. S. Spector (ed.) Handbook of Biological Data, Philadelphia, W. B. Saunders Co., .
42. Schwan, H. P., 1957, Electrical Properties of Tissue And Cell Suspensions, Biol. Med. Phys., 5, 147-209.
43. Schwan, H. P., 1957, Electrical properties of tissues and cell suspensions., Advanced Physics in Medicine and Biology, 5, 147-209.
44. Schwan, H. P., 1963, Electrical characteristics of tissues: A survey., Biophysik, 1, 198-208.
45. Schwan, H. P. and Foster, K. R., 1977, Microwave dielectric properties of tissue. Some comments on the rotational mobility of tissue water, Biophysical Journal, 17, 193-197.
46. Schwan, H. P. and Foster, K. R., 1980, RF-Field interactions with biological systems: Electrical properties and biophysical mechanisms., Proceedings of the IEEE, 68, 1, 104-113.
47. Schwan, H.P. and Kay, C.F., 1957, Capacitive properties of body tissues, Circulation Research, 5, 439-443.
48. Schwartz, J.L. and Mealing, G.A.R., 1985, Dielectric properties of frog tissues in vivo and in vitro, Physics in Medicine and Biology, 30, 2, 117-124.
49. Smith, S. R., and Foster, K. R., 1985, Dielectric properties of low-water-content tissues, Physics in Medicine and Biology, 30, 9, 965-973.
50. Smith, S. R., Foster, R. and Wolf, G. L., 1986, Dielectric properties of VX-2 Carcinoma versus normal liver tissue, IEEE Transactions on Biomedical Engineering, 33, 5, 522-524.
51. Steel, M. C. and Sheppard, R. J., 1985, Dielectric properties of mammalian brain tissue between 1 and 18 GHz., Physics in Medicine and Biology, 30, 7, 621-630.
52. Stoy, D., Foster, K. R. and Schwan, H. P., 1982, Dielectric properties of mammalian tissues from 0.1 to 100MHz: a summary of recent data, Physics in Medicine and Biology, 27, 4, 501-513.

53. Stuchley, M. A. , et al., 1981, Dielectric properties of animal tissues in vivoat frequencies 10MHz-1GHz, Bioelectromagnetics, 1, 93-103.
54. Stuchly, M. A. and Stuchly, S. S., 1980, Dielectric properties of biological substances - tabulated, Journal of Microwave Power, 15, 1, 19-26.
55. Surowiec, A. J., Stuchly, S. S., Keaney, M. and Swarup, A., 1987, Dielectric polarization of animal lung at radio frequencies, IEEE Transactions on Biomedical Engineering, 34, 1, 62-67.
56. Surowiec, A., Stuchly, S. and Swarup, A., 1986, Postmortem changes of the dielectric properties of bovine brain tissues at low radiofrequencies, Bioelectromagnetics, 7, 31-43.
57. Surowiec, A., Stuchly, S. S. and Swarup, A., 1985, Radiofrequency dielectric properties of animal tissues as a function of time following death, Physics in Medicine and Biology, 30, 10, 1131-1141.
58. Surowiec, A., Stuchly, S. S., Eidus, L. and Swarup, A., 1987, In vitro dielectric properties of human tissues at radiofrequencies, Physics in Medicine and Biology, 32, 5, 615-621.
59. Surowiec, A., Stuchly, S. S., Keaney, M. and Swarup, A., 1986, In vivo and in vitro dielectric properties of feline tissues at low radiofrequencies, Physics in Medicine and Biology, 31, 8, 901-909.
60. Tamura, T., Tenhunen, M., Lahtinen, T., Repo, T. and Schwan, H. P., 1994, Modelling of the dielectric properties of normal and irradiated skin, Physics in Medicine and Biology, 39, 6, 927-936.
61. Thurai, M., Goodridge, V. D., Sheppard, R. J. and Grant, E. H., 1984, Variation with age of the dielectric properties of mouse brain cerebrum, Physics in Medicine and Biology, 29, 9, 1133-1136.
62. Thurai, M., Steel, M. C., Sheppard, R. J. and Grant, E. H., 1985, Dielectric properties of developing rabbit brain at 37°C, Bioelectromagnetics, 6, 235-242.
63. Wei, Yan-Zen, Chiang, Ping, and Sridhar, S., 1992, Ion size effects on the dynamic and static properties of aqueous alkali solutions., Journal of Chemistry in Physics, 96, 6, 4569.
64. Xu, D., Liu, L. and Jiang, Z., 1987, Measurement of the Dielectric Properties of Biological Substances Using an Improved Open-ended Coaxial Line Resonator method, IEEE Transactions on Microwave Theory and Techniques, MTT35, 12, 1424-1428.
65. Yamamoto, T. and Yamamoto, Y., 1976, Electrical properties of the epidermal stratum corneum, Medical and Biological Engineering, 151-158 .

APPENDIX C: Modelling the frequency dependence of the dielectric properties to a 4 dispersions spectrum.

The 4-Cole-Cole analysis was carried out on the following tissues:

1. Aorta
2. Bladder
3. Blood
4. Bone -Cancellous (contains red bone marrow)
5. Bone -Cortical
6. Bone -Marrow (infiltrated with blood)
7. Bone -Marrow (not infiltrated)
8. Breast fat
9. Cartilage
10. Cerebellum
11. Cerebro Spinal Fluid
12. Cervix
13. Colon (lower and upper large intestine)
14. Cornea
15. Dura
16. Eye (Sclera)
17. Fat (mean value provided)
18. Fat (not infiltrated)
19. Gall Bladder
20. Gall Bladder Bile
21. Grey Matter
22. Heart
23. Kidney
24. Lens Cortex
25. Lens Nucleus (for lens use average of cortex and nucleus)
26. Liver
27. Lung -Deflated
28. Lung -Inflated
29. Muscle -Parallel (provided for comparison purposes)
30. Muscle -Transverse (Radial field direction was along then across the fibre)
31. Nerve (spinal chord)
32. Ovary
33. Skin -Dry
34. Skin -Wet
35. Small Intestine
36. Spleen
37. Stomach (also oesophagus, duodenum and all upper digestive track)
38. Tendon
39. Testis (prostate has a similar composition, expect similar dielectric properties)
40. Thyroid (thymus has a similar water content, expect similar properties)
41. Tongue
42. Trachea
43. Uterus
44. Vitreous Humour
45. White Matter

Aorta

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 4.000E+01
tau1 8.842E-12
alf1 1.000E-01
del2 5.000E+01
tau2 3.183E-09
alf2 1.000E-01
sig 2.500E-01
del3 1.000E+05
tau3 1.592E-04
alf3 2.000E-01
del4 1.000E+07
tau4 1.592E-03
alf4 0.000E+00

Bladder

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 2.500E+00
del1 1.600E+01
tau1 8.842E-12
alf1 1.000E-01
del2 4.000E+02
tau2 1.592E-07
alf2 1.000E-01
sig 2.000E-01
del3 1.000E+05
tau3 1.592E-04
alf3 2.000E-01
del4 1.000E+07
tau4 1.592E-02
alf4 0.000E+00

Blood

1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 5.600E+01
tau1 8.377E-12
alf1 1.000E-01
del2 5.200E+03
tau2 1.326E-07
alf2 1.000E-01
sig 7.000E-01
del3 0.000E+00
tau3 1.592E-04
alf3 2.000E-01
del4 0.000E+00
tau4 1.592E-02
alf4 0.000E+00

Bone Cancellous

Bone Cortical

Bone Marrow (Infiltrated)

Bone Marrow (Not Infiltrated)

Bone Marrow

1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
1.0E-4
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 2.500E+00
del1 3.000E+00
tau1 7.958E-12
alf1 2.000E-01
del2 2.500E+01
tau2 1.592E-08
alf2 1.000E-01
sig 5.000E-04
del3 5.000E+03
tau3 1.592E-03
alf3 1.000E-01
del4 2.000E+06
tau4 1.592E-02
alf4 1.000E-01

Breast Fat

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 2.500E+00
del1 3.000E+00
tau1 1.768E-11
alf1 1.000E-01
del2 1.500E+01
tau2 6.366E-08
alf2 1.000E-01
sig 1.000E-02
del3 5.000E+04
tau3 4.547E-04
alf3 1.000E-01
del4 2.000E+07
tau4 1.326E-02
alf4 0.000E+00

Cartilage

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 3.800E+01
tau1 1.326E-11
alf1 1.500E-01
del2 2.500E+03
tau2 1.447E-07
alf2 1.500E-01
sig 1.500E-01
del3 1.000E+05
tau3 3.183E-04
alf3 1.000E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Cerebellum

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 4.000E+01
tau1 7.958E-12
alf1 1.000E-01
del2 7.000E+02
tau2 1.592E-08
alf2 1.500E-01
sig 4.000E-02
del3 2.000E+05
tau3 1.061E-04
alf3 2.200E-01
del4 4.500E+07
tau4 5.305E-03
alf4 0.000E+00

Cerebro Spinal Fluid

Cervix

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 4.500E+01
tau1 7.958E-12
alf1 1.000E-01
del2 2.000E+02
tau2 1.592E-08
alf2 1.000E-01
sig 3.000E-01
del3 1.500E+05
tau3 1.061E-04
alf3 1.800E-01
del4 4.000E+07
tau4 1.592E-03
alf4 0.000E+00

Colon

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 5.000E+01
tau1 7.958E-12
alf1 1.000E-01
del2 3.000E+03
tau2 1.592E-07
alf2 2.000E-01
sig 1.000E-02
del3 1.000E+05
tau3 1.592E-04
alf3 2.000E-01
del4 4.000E+07
tau4 1.592E-03
alf4 0.000E+00

Cornea

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 4.800E+01
tau1 7.958E-12
alf1 1.000E-01
del2 4.000E+03
tau2 1.592E-07
alf2 5.000E-02
sig 4.000E-01
del3 1.000E+05
tau3 1.592E-05
alf3 2.000E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Dura

1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 4.000E+01
tau1 7.958E-12
alf1 1.500E-01
del2 2.000E+02
tau2 7.958E-09
alf2 1.000E-01
sig 5.000E-01
del3 1.000E+04
tau3 1.592E-04
alf3 2.000E-01
del4 1.000E+06
tau4 1.592E-02
alf4 0.000E+00

Eye Tissues (Sclera)

Fat (Average Infiltrated)

Fat (Not Infiltrated)

Fat

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 2.500E+00
del1 3.000E+00
tau1 7.958E-12
alf1 2.000E-01
del2 1.500E+01
tau2 1.592E-08
alf2 1.000E-01
sig 1.000E-02
del3 3.300E+04
tau3 1.592E-04
alf3 5.000E-02
del4 1.000E+07
tau4 7.958E-03
alf4 1.000E-02

Gall Bladder

Gall Bladder Bile

Grey Matter

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 4.500E+01
tau1 7.958E-12
alf1 1.000E-01
del2 4.000E+02
tau2 1.592E-08
alf2 1.500E-01
sig 2.000E-02
del3 2.000E+05
tau3 1.061E-04
alf3 2.200E-01
del4 4.500E+07
tau4 5.305E-03
alf4 0.000E+00

Heart

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 5.000E+01
tau1 7.958E-12
alf1 1.000E-01
del2 1.200E+03
tau2 1.592E-07
alf2 5.000E-02
sig 5.000E-02
del3 4.500E+05
tau3 7.234E-05
alf3 2.200E-01
del4 2.500E+07
tau4 4.547E-03
alf4 0.000E+00

Kidney

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 4.700E+01
tau1 7.958E-12
alf1 1.000E-01
del2 3.500E+03
tau2 1.989E-07
alf2 2.200E-01
sig 5.000E-02
del3 2.500E+05
tau3 7.958E-05
alf3 2.200E-01
del4 3.000E+07
tau4 4.547E-03
alf4 0.000E+00

Lens Cortex

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 4.200E+01
tau1 7.958E-12
alf1 1.000E-01
del2 1.500E+03
tau2 7.958E-08
alf2 1.000E-01
sig 3.000E-01
del3 2.000E+05
tau3 1.592E-04
alf3 1.000E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Lens Nucleus

Liver

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 3.900E+01
tau1 8.842E-12
alf1 1.000E-01
del2 6.000E+03
tau2 5.305E-07
alf2 2.000E-01
sig 2.000E-02
del3 5.000E+04
tau3 2.274E-05
alf3 2.000E-01
del4 3.000E+07
tau4 1.592E-02
alf4 5.000E-02

Lung Deflated

Lung Inflated

Muscle

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 5.000E+01
tau1 7.234E-12
alf1 1.000E-01
del2 7.000E+03
tau2 3.537E-07
alf2 1.000E-01
sig 2.000E-01
del3 1.200E+06
tau3 3.183E-04
alf3 1.000E-01
del4 2.500E+07
tau4 2.274E-03
alf4 0.000E+00

Nerve

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 2.600E+01
tau1 7.958E-12
alf1 1.000E-01
del2 5.000E+02
tau2 1.061E-07
alf2 1.500E-01
sig 6.000E-03
del3 7.000E+04
tau3 1.592E-05
alf3 2.000E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Ovary

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 4.000E+01
tau1 8.842E-12
alf1 1.500E-01
del2 4.000E+02
tau2 1.592E-08
alf2 2.500E-01
sig 3.000E-01
del3 1.000E+05
tau3 1.592E-04
alf3 2.700E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Skin (Dry)

1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
1.0E-4
1.0E-5
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ef 4.000E+00
del1 3.200E+01
tau1 7.234E-12
alf1 0.000E+00
del2 1.100E+03
tau2 3.248E-08
alf2 2.000E-01
sig 2.000E-04
del3 0.000E+00
tau3 1.592E-04
alf3 2.000E-01
del4 0.000E+00
tau4 1.592E-02
alf4 2.000E-01
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit

Skin (Wet)

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E-3
1.0E-4
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 3.900E+01
tau1 7.958E-12
alf1 1.000E-01
del2 2.800E+02
tau2 7.958E-08
alf2 0.000E+00
sig 4.000E-04
del3 3.000E+04
tau3 1.592E-06
alf3 1.600E-01
del4 3.000E+04
tau4 1.592E-03
alf4 2.000E-01

Small Intestine

Spleen

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E-2
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 4.800E+01
tau1 7.958E-12
alf1 1.000E-01
del2 2.500E+03
tau2 6.366E-08
alf2 1.500E-01
sig 3.000E-02
del3 2.000E+05
tau3 2.653E-04
alf3 2.500E-01
del4 5.000E+07
tau4 6.366E-03
alf4 0.000E+00

Stomach

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 6.000E+01
tau1 7.958E-12
alf1 1.000E-01
del2 2.000E+03
tau2 7.958E-08
alf2 1.000E-01
sig 5.000E-01
del3 1.000E+05
tau3 1.592E-04
alf3 2.000E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Tendon

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 4.200E+01
tau1 1.224E-11
alf1 1.000E-01
del2 6.000E+01
tau2 6.366E-09
alf2 1.000E-01
sig 2.500E-01
del3 6.000E+04
tau3 3.183E-04
alf3 2.200E-01
del4 2.000E+07
tau4 1.326E-03
alf4 0.000E+00

Testis

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 5.500E+01
tau1 7.958E-12
alf1 1.000E-01
del2 5.000E+03
tau2 1.592E-07
alf2 1.000E-01
sig 4.000E-01
del3 1.000E+05
tau3 1.592E-04
alf3 2.000E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Thyroid

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 5.500E+01
tau1 7.958E-12
alf1 1.000E-01
del2 2.500E+03
tau2 1.592E-07
alf2 1.000E-01
sig 5.000E-01
del3 1.000E+05
tau3 1.592E-04
alf3 2.000E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Tongue

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ed Lit
cond Lit
ef 4.000E+00
del1 5.000E+01
tau1 7.958E-12
alf1 1.000E-01
del2 4.000E+03
tau2 1.592E-07
alf2 1.000E-01
sig 2.500E-01
del3 1.000E+05
tau3 1.592E-04
alf3 2.000E-01
del4 4.000E+07
tau4 1.592E-02
alf4 0.000E+00

Trachea

1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 2.500E+00
del1 3.800E+01
tau1 7.958E-12
alf1 1.000E-01
del2 4.000E+02
tau2 6.366E-08
alf2 1.000E-01
sig 3.000E-01
del3 5.000E+04
tau3 1.592E-05
alf3 2.000E-01
del4 1.000E+06
tau4 1.592E-02
alf4 0.000E+00

Uterus

1.0E+8
1.0E+7
1.0E+6
1.0E+5
1.0E+4
1.0E+3
1.0E+2
1.0E+1
1.0E+0
1.0E-1
1.0E+1
1.0E+2
1.0E+3
1.0E+4
1.0E+5
1.0E+6
1.0E+7
1.0E+8
1.0E+9
1.0E+10
1.0E+11
Frequency (Hz)
ed 4cc
cond 4cc
ed Data
cond Data
ef 4.000E+00
del1 5.500E+01
tau1 7.958E-12
alf1 1.000E-01
del2 8.000E+02
tau2 3.183E-08
alf2 1.000E-01
sig 2.000E-01
del3 3.000E+05
tau3 1.592E-04
alf3 2.000E-01
del4 3.500E+07
tau4 1.061E-03
alf4 0.000E+00

Vitreous Humour

White Matter

APPENDIX D: Tabulation of the experimental data referred to in Appendix C.

1. Aorta
2. Bladder
3. Blood
4. Bone -Cancellous (contains red bone marrow)
5. Bone -Cortical
6. Bone -Marrow (not infiltrated)
7. Breast fat
8. Cartilage
9. Cerebellum
10. Cerebro Spinal Fluid
11. Cervix
12. Colon (lower and upper large intestine)
13. Cornea
14. Dura
15. Eye (Sclera)
16. Fat (not infiltrated)
17. Gall Bladder
18. Gall Bladder Bile
19. Grey Matter
20. Heart
21. Kidney
22. Lens Cortex
23. Lens Nucleus (for lens use average of cortex and nucleus)
24. Liver
25. Lung -Deflated
26. Lung -Inflated
27. Muscle -Transverse (Radial field direction was along then across the fibre)
28. Nerve (spinal chord)
29. Ovary
30. Skin -Dry
31. Skin -Wet
32. Small Intestine
33. Spleen
34. Stomach (also oesophagus, duodenum and all upper digestive track)
35. Tendon
36. Testis (prostate has a similar composition, expect similar dielectric properties)
37. Thyroid (thymus has a similar water content, expect similar properties)
38. Tongue
39. Trachea
40. Uterus
41. Vitreous Humour
42. White Matter

Aorta

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+2	4.190E+6	3.417E+7	1.900E-1
1.122E+2	3.877E+6	3.090E+7	1.930E-1
1.259E+2	3.563E+6	2.793E+7	1.953E-1
1.413E+2	3.217E+6	2.527E+7	1.983E-1
1.585E+2	2.870E+6	2.283E+7	2.013E-1
1.778E+2	2.540E+6	2.063E+7	2.040E-1
1.995E+2	2.223E+6	1.860E+7	2.067E-1
2.239E+2	1.933E+6	1.680E+7	2.093E-1
2.512E+2	1.673E+6	1.513E+7	2.117E-1
2.818E+2	1.453E+6	1.363E+7	2.137E-1
3.162E+2	1.243E+6	1.223E+7	2.157E-1
3.548E+2	1.063E+6	1.100E+7	2.173E-1
3.981E+2	9.030E+5	9.877E+6	2.187E-1
4.467E+2	7.660E+5	8.870E+6	2.203E-1
5.012E+2	6.473E+5	7.953E+6	2.220E-1
5.623E+2	5.450E+5	7.130E+6	2.230E-1
6.310E+2	4.587E+5	6.390E+6	2.240E-1
7.079E+2	3.853E+5	5.720E+6	2.253E-1
7.943E+2	3.203E+5	5.120E+6	2.263E-1
8.913E+2	2.673E+5	4.583E+6	2.273E-1
1.000E+3	2.227E+5	4.097E+6	2.280E-1
1.122E+3	1.857E+5	3.663E+6	2.290E-1
1.259E+3	1.543E+5	3.273E+6	2.293E-1
1.413E+3	1.283E+5	2.927E+6	2.300E-1
1.585E+3	1.067E+5	2.613E+6	2.307E-1
1.778E+3	8.817E+4	2.337E+6	2.310E-1
1.995E+3	7.310E+4	2.083E+6	2.313E-1
2.239E+3	6.070E+4	1.863E+6	2.323E-1
2.512E+3	5.057E+4	1.663E+6	2.323E-1
2.818E+3	4.190E+4	1.483E+6	2.323E-1
3.162E+3	3.500E+4	1.323E+6	2.330E-1
3.548E+3	2.927E+4	1.183E+6	2.333E-1
3.981E+3	2.467E+4	1.053E+6	2.337E-1
4.467E+3	2.060E+4	9.410E+5	2.340E-1
5.012E+3	1.743E+4	8.397E+5	2.340E-1
5.623E+3	1.470E+4	7.493E+5	2.343E-1
6.310E+3	1.253E+4	6.683E+5	2.347E-1
7.079E+3	1.080E+4	5.967E+5	2.350E-1
7.943E+3	9.157E+3	5.320E+5	2.350E-1
8.913E+3	7.973E+3	4.753E+5	2.353E-1
1.000E+4	6.857E+3	4.237E+5	2.357E-1
1.122E+4	5.967E+3	3.780E+5	2.363E-1
1.259E+4	5.220E+3	3.373E+5	2.363E-1
1.413E+4	4.547E+3	3.007E+5	2.363E-1
1.585E+4	4.003E+3	2.683E+5	2.367E-1
1.778E+4	3.540E+3	2.393E+5	2.370E-1
1.995E+4	3.147E+3	2.140E+5	2.373E-1
2.239E+4	2.777E+3	1.907E+5	2.377E-1
2.512E+4	2.490E+3	1.700E+5	2.377E-1
2.818E+4	2.237E+3	1.520E+5	2.377E-1
3.162E+4	2.000E+3	1.353E+5	2.380E-1
3.548E+4	1.800E+3	1.207E+5	2.383E-1
3.981E+4	1.623E+3	1.077E+5	2.387E-1
4.467E+4	1.487E+3	9.607E+4	2.387E-1
5.012E+4	1.353E+3	8.570E+4	2.387E-1
5.623E+4	1.247E+3	7.647E+4	2.390E-1
6.310E+4	1.143E+3	6.820E+4	2.393E-1
7.079E+4	1.053E+3	6.087E+4	2.397E-1
7.943E+4	9.837E+2	5.430E+4	2.400E-1
8.913E+4	9.187E+2	4.840E+4	2.400E-1

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+5	8.437E+2	4.320E+4	2.407E-1
1.122E+5	7.973E+2	3.857E+4	2.407E-1
1.259E+5	7.483E+2	3.440E+4	2.407E-1
1.413E+5	7.057E+2	3.073E+4	2.417E-1
1.585E+5	6.643E+2	2.740E+4	2.417E-1
1.778E+5	6.280E+2	2.447E+4	2.420E-1
1.995E+5	5.963E+2	2.183E+4	2.420E-1
2.239E+5	5.650E+2	1.947E+4	2.427E-1
2.512E+5	5.353E+2	1.737E+4	2.430E-1
2.818E+5	5.073E+2	1.553E+4	2.433E-1
3.162E+5	4.820E+2	1.387E+4	2.440E-1
3.548E+5	4.607E+2	1.240E+4	2.447E-1
3.981E+5	4.377E+2	1.110E+4	2.453E-1
4.467E+5	4.150E+2	9.900E+3	2.457E-1
5.012E+5	3.950E+2	8.843E+3	2.467E-1
5.623E+5	3.750E+2	7.900E+3	2.470E-1
6.310E+5	3.550E+2	7.063E+3	2.480E-1
7.079E+5	3.367E+2	6.317E+3	2.487E-1
7.943E+5	3.193E+2	5.643E+3	2.493E-1
8.913E+5	3.023E+2	5.047E+3	2.500E-1
1.000E+6	2.850E+2	4.513E+3	2.510E-1
1.122E+6	2.687E+2	4.040E+3	2.523E-1
1.259E+6	2.537E+2	3.617E+3	2.533E-1
1.413E+6	2.387E+2	3.233E+3	2.543E-1
1.585E+6	2.240E+2	2.897E+3	2.553E-1
1.778E+6	2.110E+2	2.593E+3	2.563E-1
1.995E+6	1.997E+2	2.313E+3	2.570E-1
2.239E+6	2.033E+2	2.073E+3	2.583E-1
2.512E+6	1.893E+2	1.870E+3	2.613E-1
2.818E+6	1.727E+2	1.677E+3	2.630E-1
3.162E+6	1.607E+2	1.503E+3	2.640E-1
3.548E+6	1.497E+2	1.343E+3	2.657E-1
3.981E+6	1.403E+2	1.207E+3	2.670E-1
4.467E+6	1.327E+2	1.080E+3	2.680E-1
5.012E+6	1.243E+2	9.680E+2	2.700E-1
5.623E+6	1.177E+2	8.667E+2	2.710E-1
6.310E+6	1.110E+2	7.767E+2	2.723E-1
7.079E+6	1.063E+2	6.950E+2	2.737E-1
7.943E+6	1.010E+2	6.247E+2	2.757E-1
8.913E+6	9.563E+1	5.580E+2	2.767E-1
1.000E+7	9.217E+1	4.987E+2	2.777E-1
1.089E+7	1.295E+2	6.750E+2	4.090E-1
1.194E+7	1.255E+2	6.220E+2	4.130E-1
1.310E+7	1.195E+2	5.705E+2	4.155E-1
1.436E+7	1.155E+2	5.235E+2	4.180E-1
1.574E+7	1.110E+2	4.800E+2	4.205E-1
1.726E+7	1.070E+2	4.415E+2	4.235E-1
1.893E+7	1.039E+2	4.070E+2	4.285E-1
2.075E+7	1.001E+2	3.735E+2	4.315E-1
2.276E+7	9.605E+1	3.435E+2	4.355E-1
2.495E+7	9.395E+1	3.160E+2	4.390E-1
2.736E+7	9.025E+1	2.920E+2	4.445E-1
3.000E+7	8.765E+1	2.680E+2	4.480E-1
3.289E+7	8.490E+1	2.470E+2	4.525E-1
3.607E+7	8.290E+1	2.280E+2	4.570E-1
3.955E+7	8.070E+1	2.105E+2	4.635E-1
4.336E+7	7.840E+1	1.940E+2	4.685E-1
4.755E+7	7.595E+1	1.790E+2	4.745E-1
5.213E+7	7.335E+1	1.655E+2	4.805E-1
5.716E+7	7.125E+1	1.530E+2	4.860E-1

Aorta

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
6.268E+7	6.920E+1	1.415E+2	4.930E-1
6.873E+7	6.710E+1	1.310E+2	4.995E-1
7.536E+7	6.530E+1	1.210E+2	5.070E-1
8.263E+7	6.335E+1	1.115E+2	5.130E-1
9.060E+7	6.170E+1	1.032E+2	5.200E-1
9.934E+7	6.010E+1	9.555E+1	5.285E-1
1.089E+8	5.855E+1	8.835E+1	5.350E-1
1.194E+8	5.730E+1	8.170E+1	5.425E-1
1.310E+8	5.590E+1	7.560E+1	5.510E-1
1.436E+8	5.465E+1	6.985E+1	5.580E-1
1.574E+8	5.350E+1	6.460E+1	5.655E-1
1.726E+8	5.250E+1	5.965E+1	5.735E-1
1.893E+8	5.160E+1	5.520E+1	5.815E-1
2.075E+8	5.060E+1	5.110E+1	5.900E-1
2.151E+8	5.540E+1	5.400E+1	6.460E-1
2.262E+8	5.495E+1	5.235E+1	6.585E-1
2.379E+8	5.380E+1	4.975E+1	6.585E-1
2.502E+8	5.385E+1	4.795E+1	6.675E-1
2.631E+8	5.330E+1	4.570E+1	6.695E-1
2.767E+8	5.280E+1	4.410E+1	6.790E-1
2.910E+8	5.230E+1	4.260E+1	6.900E-1
3.060E+8	5.180E+1	4.080E+1	6.945E-1
3.218E+8	5.145E+1	3.915E+1	7.005E-1
3.384E+8	5.080E+1	3.720E+1	7.000E-1
3.559E+8	5.045E+1	3.575E+1	7.085E-1
3.743E+8	5.015E+1	3.455E+1	7.200E-1
3.936E+8	5.005E+1	3.325E+1	7.290E-1
4.140E+8	4.965E+1	3.190E+1	7.345E-1
4.354E+8	4.915E+1	3.050E+1	7.395E-1
4.578E+8	4.945E+1	2.970E+1	7.555E-1
4.815E+8	4.875E+1	2.850E+1	7.640E-1
5.064E+8	4.850E+1	2.730E+1	7.690E-1
5.325E+8	4.845E+1	2.620E+1	7.760E-1
5.600E+8	4.830E+1	2.545E+1	7.935E-1
5.889E+8	4.810E+1	2.450E+1	8.025E-1
6.194E+8	4.760E+1	2.370E+1	8.175E-1
6.513E+8	4.750E+1	2.280E+1	8.275E-1
6.850E+8	4.730E+1	2.210E+1	8.405E-1
7.204E+8	4.690E+1	2.170E+1	8.700E-1
7.576E+8	4.665E+1	2.080E+1	8.750E-1
7.967E+8	4.650E+1	2.020E+1	8.935E-1
8.378E+8	4.650E+1	1.935E+1	9.005E-1
8.811E+8	4.625E+1	1.905E+1	9.325E-1
9.266E+8	4.605E+1	1.840E+1	9.480E-1
9.745E+8	4.585E+1	1.780E+1	9.670E-1
1.025E+9	4.570E+1	1.745E+1	9.995E-1
1.078E+9	4.540E+1	1.705E+1	1.020E+0
1.133E+9	4.535E+1	1.655E+1	1.045E+0
1.192E+9	4.525E+1	1.615E+1	1.075E+0
1.254E+9	4.500E+1	1.585E+1	1.105E+0
1.318E+9	4.495E+1	1.550E+1	1.140E+0
1.386E+9	4.445E+1	1.535E+1	1.180E+0
1.458E+9	4.435E+1	1.505E+1	1.220E+0
1.533E+9	4.415E+1	1.490E+1	1.270E+0
1.612E+9	4.380E+1	1.470E+1	1.315E+0
1.696E+9	4.380E+1	1.450E+1	1.370E+0
1.783E+9	4.365E+1	1.425E+1	1.415E+0
1.875E+9	4.345E+1	1.430E+1	1.490E+0
1.972E+9	4.315E+1	1.420E+1	1.555E+0
2.074E+9	4.295E+1	1.405E+1	1.625E+0

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
2.181E+9	4.280E+1	1.400E+1	1.705E+0
2.294E+9	4.255E+1	1.405E+1	1.795E+0
2.412E+9	4.225E+1	1.400E+1	1.885E+0
2.537E+9	4.195E+1	1.405E+1	1.985E+0
2.668E+9	4.180E+1	1.400E+1	2.075E+0
2.806E+9	4.155E+1	1.405E+1	2.190E+0
2.951E+9	4.130E+1	1.400E+1	2.300E+0
3.103E+9	4.100E+1	1.415E+1	2.445E+0
3.263E+9	4.070E+1	1.420E+1	2.580E+0
3.432E+9	4.050E+1	1.425E+1	2.725E+0
3.609E+9	4.015E+1	1.455E+1	2.920E+0
3.796E+9	3.980E+1	1.460E+1	3.080E+0
3.992E+9	3.955E+1	1.480E+1	3.285E+0
4.198E+9	3.930E+1	1.500E+1	3.510E+0
4.415E+9	3.875E+1	1.525E+1	3.740E+0
4.643E+9	3.845E+1	1.555E+1	4.015E+0
4.883E+9	3.795E+1	1.585E+1	4.300E+0
5.135E+9	3.760E+1	1.615E+1	4.615E+0
5.400E+9	3.700E+1	1.640E+1	4.930E+0
5.679E+9	3.655E+1	1.670E+1	5.275E+0
5.972E+9	3.575E+1	1.685E+1	5.600E+0
6.281E+9	3.520E+1	1.700E+1	5.935E+0
6.605E+9	3.455E+1	1.735E+1	6.390E+0
6.946E+9	3.400E+1	1.750E+1	6.765E+0
7.305E+9	3.330E+1	1.770E+1	7.200E+0
7.682E+9	3.285E+1	1.770E+1	7.580E+0
8.079E+9	3.190E+1	1.790E+1	8.035E+0
8.496E+9	3.125E+1	1.790E+1	8.470E+0
8.935E+9	3.070E+1	1.820E+1	9.050E+0
9.397E+9	2.990E+1	1.820E+1	9.510E+0
9.882E+9	2.925E+1	1.835E+1	1.010E+1
1.039E+10	2.855E+1	1.820E+1	1.055E+1
1.093E+10	2.785E+1	1.870E+1	1.135E+1
1.149E+10	2.710E+1	1.855E+1	1.185E+1
1.209E+10	2.645E+1	1.855E+1	1.245E+1
1.271E+10	2.570E+1	1.845E+1	1.305E+1
1.337E+10	2.510E+1	1.900E+1	1.410E+1
1.406E+10	2.425E+1	1.865E+1	1.460E+1
1.478E+10	2.355E+1	1.840E+1	1.510E+1
1.555E+10	2.280E+1	1.865E+1	1.615E+1
1.635E+10	2.210E+1	1.845E+1	1.680E+1
1.720E+10	2.140E+1	1.830E+1	1.750E+1
1.808E+10	2.060E+1	1.845E+1	1.855E+1
1.902E+10	1.995E+1	1.820E+1	1.930E+1
2.000E+10	1.900E+1	1.830E+1	2.035E+1

Bladder

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.089E+6	4.927E+2	3.514E+3	2.129E-1
1.194E+6	4.275E+2	3.291E+3	2.187E-1
1.310E+6	5.802E+2	3.049E+3	2.221E-1
1.436E+6	4.562E+2	2.614E+3	2.088E-1
1.574E+6	3.762E+2	2.538E+3	2.223E-1
1.726E+6	3.379E+2	2.386E+3	2.292E-1
1.893E+6	3.417E+2	2.105E+3	2.217E-1
2.075E+6	2.634E+2	1.872E+3	2.162E-1
2.276E+6	3.157E+2	1.828E+3	2.314E-1
2.495E+6	2.167E+2	1.708E+3	2.371E-1
2.736E+6	1.853E+2	1.480E+3	2.252E-1
3.000E+6	1.852E+2	1.458E+3	2.433E-1
3.289E+6	1.920E+2	1.243E+3	2.275E-1
3.607E+6	1.532E+2	1.240E+3	2.489E-1
3.955E+6	1.213E+2	1.078E+3	2.372E-1
4.336E+6	8.735E+1	1.009E+3	2.433E-1
4.755E+6	9.281E+1	9.025E+2	2.387E-1
5.213E+6	8.271E+1	8.202E+2	2.379E-1
5.716E+6	8.353E+1	7.815E+2	2.485E-1
6.268E+6	8.062E+1	7.049E+2	2.458E-1
6.873E+6	7.722E+1	6.524E+2	2.494E-1
7.536E+6	6.542E+1	5.843E+2	2.450E-1
8.263E+6	5.407E+1	5.303E+2	2.438E-1
9.060E+6	5.173E+1	4.831E+2	2.435E-1
9.934E+6	4.827E+1	4.526E+2	2.501E-1
1.089E+7	4.811E+1	4.130E+2	2.503E-1
1.194E+7	4.671E+1	3.743E+2	2.487E-1
1.310E+7	4.062E+1	3.450E+2	2.514E-1
1.436E+7	3.702E+1	3.156E+2	2.521E-1
1.574E+7	3.852E+1	2.894E+2	2.535E-1
1.726E+7	3.437E+1	2.655E+2	2.550E-1
1.893E+7	3.363E+1	2.423E+2	2.551E-1
2.075E+7	3.114E+1	2.221E+2	2.564E-1
2.276E+7	2.926E+1	2.034E+2	2.575E-1
2.495E+7	2.905E+1	1.856E+2	2.576E-1
2.736E+7	2.815E+1	1.715E+2	2.610E-1
3.000E+7	2.762E+1	1.560E+2	2.604E-1
3.289E+7	2.635E+1	1.436E+2	2.628E-1
3.607E+7	2.552E+1	1.307E+2	2.622E-1
3.955E+7	2.487E+1	1.202E+2	2.644E-1
4.336E+7	2.386E+1	1.107E+2	2.672E-1
4.755E+7	2.337E+1	1.005E+2	2.659E-1
5.213E+7	2.284E+1	9.223E+1	2.675E-1
5.716E+7	2.227E+1	8.433E+1	2.682E-1
6.268E+7	2.194E+1	7.714E+1	2.690E-1
6.873E+7	2.172E+1	7.054E+1	2.697E-1
7.536E+7	2.122E+1	6.460E+1	2.708E-1
8.263E+7	2.100E+1	5.909E+1	2.716E-1
9.060E+7	2.066E+1	5.398E+1	2.721E-1
9.934E+7	2.046E+1	4.945E+1	2.733E-1
1.089E+8	1.997E+1	4.540E+1	2.751E-1
1.194E+8	1.971E+1	4.170E+1	2.771E-1
1.310E+8	1.940E+1	3.823E+1	2.785E-1
1.436E+8	1.908E+1	3.509E+1	2.803E-1
1.574E+8	1.905E+1	3.215E+1	2.816E-1
1.726E+8	1.902E+1	2.948E+1	2.832E-1
1.893E+8	1.888E+1	2.714E+1	2.858E-1
2.075E+8	1.867E+1	2.482E+1	2.866E-1
2.151E+8	1.771E+1	2.385E+1	2.854E-1
2.262E+8	1.815E+1	2.324E+1	2.925E-1

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
2.379E+8	1.768E+1	2.221E+1	2.939E-1
2.502E+8	1.763E+1	2.072E+1	2.884E-1
2.631E+8	1.778E+1	2.027E+1	2.966E-1
2.767E+8	1.790E+1	1.913E+1	2.945E-1
2.910E+8	1.793E+1	1.816E+1	2.940E-1
3.060E+8	1.805E+1	1.707E+1	2.906E-1
3.218E+8	1.811E+1	1.682E+1	3.011E-1
3.384E+8	1.780E+1	1.600E+1	3.012E-1
3.559E+8	1.774E+1	1.522E+1	3.014E-1
3.743E+8	1.753E+1	1.483E+1	3.088E-1
3.936E+8	1.773E+1	1.401E+1	3.069E-1
4.140E+8	1.768E+1	1.310E+1	3.018E-1
4.354E+8	1.767E+1	1.292E+1	3.128E-1
4.578E+8	1.754E+1	1.239E+1	3.157E-1
4.815E+8	1.768E+1	1.185E+1	3.175E-1
5.064E+8	1.767E+1	1.108E+1	3.121E-1
5.325E+8	1.766E+1	1.058E+1	3.135E-1
5.600E+8	1.745E+1	1.030E+1	3.209E-1
5.889E+8	1.712E+1	1.005E+1	3.293E-1
6.194E+8	1.742E+1	9.496E+0	3.272E-1
6.513E+8	1.723E+1	9.284E+0	3.364E-1
6.850E+8	1.730E+1	8.881E+0	3.384E-1
7.204E+8	1.709E+1	8.482E+0	3.399E-1
7.576E+8	1.722E+1	8.196E+0	3.454E-1
7.967E+8	1.737E+1	7.796E+0	3.455E-1
8.378E+8	1.719E+1	7.594E+0	3.540E-1
8.811E+8	1.726E+1	7.376E+0	3.615E-1
9.266E+8	1.716E+1	7.032E+0	3.625E-1
9.745E+8	1.716E+1	6.786E+0	3.679E-1
1.025E+9	1.706E+1	6.756E+0	3.852E-1
1.078E+9	1.698E+1	6.436E+0	3.859E-1
1.133E+9	1.704E+1	6.237E+0	3.932E-1
1.192E+9	1.702E+1	6.052E+0	4.013E-1
1.254E+9	1.706E+1	5.921E+0	4.129E-1
1.318E+9	1.694E+1	5.837E+0	4.280E-1
1.386E+9	1.687E+1	5.743E+0	4.430E-1
1.458E+9	1.680E+1	5.517E+0	4.475E-1
1.533E+9	1.683E+1	5.348E+0	4.562E-1
1.612E+9	1.677E+1	5.249E+0	4.709E-1
1.696E+9	1.674E+1	5.170E+0	4.877E-1
1.783E+9	1.664E+1	5.043E+0	5.003E-1
1.875E+9	1.667E+1	4.981E+0	5.197E-1
1.972E+9	1.661E+1	4.837E+0	5.307E-1
2.074E+9	1.655E+1	4.831E+0	5.575E-1
2.181E+9	1.650E+1	4.749E+0	5.763E-1
2.294E+9	1.641E+1	4.712E+0	6.014E-1
2.412E+9	1.637E+1	4.699E+0	6.306E-1
2.537E+9	1.636E+1	4.676E+0	6.599E-1
2.668E+9	1.633E+1	4.655E+0	6.909E-1
2.806E+9	1.623E+1	4.637E+0	7.238E-1
2.951E+9	1.619E+1	4.619E+0	7.583E-1
3.103E+9	1.612E+1	4.659E+0	8.043E-1
3.263E+9	1.603E+1	4.673E+0	8.483E-1
3.432E+9	1.597E+1	4.706E+0	8.986E-1
3.609E+9	1.587E+1	4.708E+0	9.453E-1
3.796E+9	1.583E+1	4.738E+0	1.001E+0
3.992E+9	1.569E+1	4.798E+0	1.065E+0
4.198E+9	1.563E+1	4.897E+0	1.144E+0
4.415E+9	1.552E+1	4.928E+0	1.210E+0
4.643E+9	1.545E+1	5.077E+0	1.311E+0

Bladder

Frequency (Hz)	Human @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
4.883E+9	1.533E+1	5.181E+0	1.407E+0
5.135E+9	1.517E+1	5.247E+0	1.499E+0
5.400E+9	1.498E+1	5.354E+0	1.608E+0
5.679E+9	1.482E+1	5.462E+0	1.726E+0
5.972E+9	1.461E+1	5.497E+0	1.826E+0
6.281E+9	1.443E+1	5.612E+0	1.961E+0
6.605E+9	1.425E+1	5.703E+0	2.096E+0
6.946E+9	1.402E+1	5.760E+0	2.226E+0
7.305E+9	1.379E+1	5.852E+0	2.378E+0
7.682E+9	1.353E+1	5.928E+0	2.533E+0
8.079E+9	1.332E+1	5.985E+0	2.690E+0
8.496E+9	1.305E+1	6.065E+0	2.867E+0
8.935E+9	1.278E+1	6.103E+0	3.033E+0
9.397E+9	1.245E+1	6.121E+0	3.200E+0
9.882E+9	1.216E+1	6.129E+0	3.369E+0
1.039E+10	1.190E+1	6.106E+0	3.530E+0
1.093E+10	1.162E+1	6.086E+0	3.700E+0
1.149E+10	1.134E+1	6.106E+0	3.904E+0
1.209E+10	1.111E+1	5.994E+0	4.030E+0
1.271E+10	1.080E+1	5.963E+0	4.217E+0
1.337E+10	1.050E+1	5.894E+0	4.384E+0
1.406E+10	1.024E+1	5.797E+0	4.534E+0
1.478E+10	1.003E+1	5.685E+0	4.676E+0
1.555E+10	9.731E+0	5.578E+0	4.824E+0
1.635E+10	9.567E+0	5.503E+0	5.006E+0
1.720E+10	9.356E+0	5.438E+0	5.203E+0
1.808E+10	9.127E+0	5.297E+0	5.329E+0
1.902E+10	8.880E+0	5.168E+0	5.467E+0
2.000E+10	8.717E+0	5.049E+0	5.618E+0

Blood

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.090E+6	3.662E+3	2.063E+4	1.250E+0
1.310E+6	3.112E+3	1.765E+4	1.290E+0
1.570E+6	2.475E+3	1.537E+4	1.350E+0
1.890E+6	2.012E+3	1.290E+4	1.360E+0
2.280E+6	1.633E+3	1.065E+4	1.350E+0
2.740E+6	1.253E+3	8.902E+3	1.350E+0
3.290E+6	1.005E+3	7.445E+3	1.360E+0
3.950E+6	8.556E+2	6.229E+3	1.370E+0
4.750E+6	7.030E+2	5.257E+3	1.390E+0
5.720E+6	5.560E+2	4.453E+3	1.420E+0
6.870E+6	4.455E+2	3.776E+3	1.440E+0
8.260E+6	3.632E+2	3.183E+3	1.460E+0
9.930E+6	3.020E+2	2.664E+3	1.470E+0
1.190E+7	2.480E+2	2.235E+3	1.480E+0
1.440E+7	2.041E+2	1.877E+3	1.500E+0
1.730E+7	1.734E+2	1.572E+3	1.510E+0
2.080E+7	1.497E+2	1.315E+3	1.520E+0
2.500E+7	1.288E+2	1.099E+3	1.530E+0
3.000E+7	1.125E+2	9.197E+2	1.530E+0
3.610E+7	1.015E+2	7.690E+2	1.540E+0
4.340E+7	9.300E+1	6.426E+2	1.550E+0
5.210E+7	8.630E+1	5.374E+2	1.560E+0
6.270E+7	8.120E+1	4.490E+2	1.570E+0
7.540E+7	7.760E+1	3.750E+2	1.570E+0
9.060E+7	7.490E+1	3.131E+2	1.580E+0
1.090E+8	7.000E+1	2.614E+2	1.580E+0
1.300E+8	6.800E+1	2.271E+2	1.640E+0
1.440E+8	6.600E+1	2.052E+2	1.640E+0
1.590E+8	6.400E+1	1.861E+2	1.650E+0
1.760E+8	6.200E+1	1.690E+2	1.650E+0
1.940E+8	6.070E+1	1.531E+2	1.660E+0
2.150E+8	5.980E+1	1.390E+2	1.660E+0
2.380E+8	5.930E+1	1.263E+2	1.670E+0
2.630E+8	5.900E+1	1.148E+2	1.680E+0
2.910E+8	5.860E+1	1.044E+2	1.690E+0
3.220E+8	5.790E+1	9.440E+1	1.690E+0
3.560E+8	5.750E+1	8.570E+1	1.700E+0
3.940E+8	5.750E+1	7.800E+1	1.710E+0
4.350E+8	5.730E+1	7.100E+1	1.720E+0
4.810E+8	5.700E+1	6.480E+1	1.730E+0
5.330E+8	5.680E+1	5.920E+1	1.750E+0
5.890E+8	5.650E+1	5.400E+1	1.770E+0
6.510E+8	5.630E+1	4.920E+1	1.780E+0
7.200E+8	5.600E+1	4.510E+1	1.810E+0
7.970E+8	5.570E+1	4.140E+1	1.830E+0
8.810E+8	5.550E+1	3.800E+1	1.860E+0
9.740E+8	5.540E+1	3.500E+1	1.900E+0
1.080E+9	5.520E+1	3.230E+1	1.940E+0
1.190E+9	5.500E+1	2.990E+1	1.980E+0
1.320E+9	5.480E+1	2.780E+1	2.040E+0
1.460E+9	5.460E+1	2.590E+1	2.100E+0
1.610E+9	5.440E+1	2.430E+1	2.180E+0
1.780E+9	5.420E+1	2.290E+1	2.270E+0
1.970E+9	5.400E+1	2.180E+1	2.390E+0
2.180E+9	5.360E+1	2.090E+1	2.530E+0
2.410E+9	5.330E+1	2.010E+1	2.690E+0
2.670E+9	5.310E+1	1.940E+1	2.870E+0
2.950E+9	5.280E+1	1.890E+1	3.100E+0
3.260E+9	5.250E+1	1.860E+1	3.380E+0
3.610E+9	5.210E+1	1.870E+1	3.750E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.990E+9	5.150E+1	1.880E+1	4.170E+0
4.410E+9	5.080E+1	1.880E+1	4.610E+0
4.880E+9	5.010E+1	1.910E+1	5.180E+0
5.400E+9	4.930E+1	1.960E+1	5.880E+0
5.970E+9	4.830E+1	2.000E+1	6.660E+0
6.600E+9	4.710E+1	2.050E+1	7.530E+0
7.300E+9	4.570E+1	2.090E+1	8.510E+0
8.080E+9	4.430E+1	2.140E+1	9.620E+0
8.940E+9	4.280E+1	2.180E+1	1.083E+1
9.880E+9	4.120E+1	2.200E+1	1.209E+1
1.090E+10	3.970E+1	2.220E+1	1.352E+1
1.210E+10	3.800E+1	2.250E+1	1.516E+1
1.340E+10	3.630E+1	2.280E+1	1.697E+1
1.480E+10	3.450E+1	2.310E+1	1.901E+1
1.640E+10	3.270E+1	2.300E+1	2.088E+1
1.810E+10	3.090E+1	2.220E+1	2.230E+1
2.000E+10	2.920E+1	2.110E+1	2.353E+1

Bone (Cancellous)

Frequency (Hz)	Human @ 23°C Current study measurements ε′	ε″	σ (S/m)
9.934E+5	3.348E+2	6.840E+2	3.780E-2
1.089E+6	3.089E+2	6.179E+2	3.745E-2
1.194E+6	2.950E+2	5.969E+2	3.966E-2
1.310E+6	3.144E+2	5.483E+2	3.995E-2
1.436E+6	2.710E+2	4.845E+2	3.870E-2
1.574E+6	2.572E+2	4.825E+2	4.226E-2
1.726E+6	2.458E+2	4.643E+2	4.459E-2
1.893E+6	2.350E+2	4.146E+2	4.366E-2
2.075E+6	2.107E+2	3.811E+2	4.400E-2
2.276E+6	2.181E+2	3.756E+2	4.756E-2
2.495E+6	1.905E+2	3.618E+2	5.022E-2
2.736E+6	1.740E+2	3.193E+2	4.860E-2
3.000E+6	1.727E+2	3.221E+2	5.376E-2
3.289E+6	1.613E+2	2.794E+2	5.113E-2
3.607E+6	1.534E+2	2.863E+2	5.745E-2
3.955E+6	1.356E+2	2.535E+2	5.577E-2
4.336E+6	1.233E+2	2.436E+2	5.877E-2
4.755E+6	1.191E+2	2.218E+2	5.866E-2
5.213E+6	1.102E+2	2.058E+2	5.970E-2
5.716E+6	1.086E+2	1.991E+2	6.333E-2
6.268E+6	1.028E+2	1.830E+2	6.382E-2
6.873E+6	9.860E+1	1.735E+2	6.632E-2
7.536E+6	9.084E+1	1.588E+2	6.659E-2
8.263E+6	8.342E+1	1.471E+2	6.760E-2
9.060E+6	8.020E+1	1.352E+2	6.814E-2
9.934E+6	7.777E+1	1.284E+2	7.098E-2
1.089E+7	7.529E+1	1.202E+2	7.282E-2
1.194E+7	7.241E+1	1.111E+2	7.384E-2
1.310E+7	6.783E+1	1.049E+2	7.639E-2
1.436E+7	6.497E+1	9.869E+1	7.884E-2
1.574E+7	6.289E+1	9.184E+1	8.045E-2
1.726E+7	6.016E+1	8.621E+1	8.279E-2
1.893E+7	5.827E+1	8.009E+1	8.434E-2
2.075E+7	5.553E+1	7.538E+1	8.703E-2
2.276E+7	5.356E+1	7.073E+1	8.955E-2
2.495E+7	5.166E+1	6.613E+1	9.181E-2
2.736E+7	4.991E+1	6.296E+1	9.584E-2
3.000E+7	4.856E+1	5.874E+1	9.803E-2
3.289E+7	4.674E+1	5.565E+1	1.018E-1
3.607E+7	4.489E+1	5.195E+1	1.042E-1
3.955E+7	4.333E+1	4.922E+1	1.083E-1
4.336E+7	4.134E+1	4.669E+1	1.126E-1
4.755E+7	4.001E+1	4.366E+1	1.155E-1
5.213E+7	3.874E+1	4.115E+1	1.193E-1
5.716E+7	3.714E+1	3.876E+1	1.233E-1
6.268E+7	3.591E+1	3.656E+1	1.275E-1
6.873E+7	3.475E+1	3.436E+1	1.314E-1
7.536E+7	3.340E+1	3.234E+1	1.356E-1
8.263E+7	3.248E+1	3.039E+1	1.397E-1
9.060E+7	3.132E+1	2.855E+1	1.439E-1
9.934E+7	3.034E+1	2.681E+1	1.482E-1
1.089E+8	2.917E+1	2.530E+1	1.533E-1
1.194E+8	2.824E+1	2.388E+1	1.587E-1
1.310E+8	2.731E+1	2.240E+1	1.632E-1
1.436E+8	2.643E+1	2.104E+1	1.681E-1
1.574E+8	2.586E+1	1.965E+1	1.721E-1
1.726E+8	2.535E+1	1.838E+1	1.765E-1
1.893E+8	2.472E+1	1.723E+1	1.815E-1
2.075E+8	2.410E+1	1.607E+1	1.855E-1
2.276E+8	2.343E+1	1.502E+1	1.901E-1

Frequency (Hz)	Human @ 23°C Current study measurements ε′	ε″	σ (S/m)
2.495E+8	2.295E+1	1.402E+1	1.946E-1
2.736E+8	2.262E+1	1.313E+1	1.998E-1
3.000E+8	2.223E+1	1.232E+1	2.056E-1
3.289E+8	2.184E+1	1.144E+1	2.093E-1
3.607E+8	2.154E+1	1.071E+1	2.150E-1
3.955E+8	2.127E+1	1.007E+1	2.216E-1
4.336E+8	2.108E+1	9.429E+0	2.275E-1
4.755E+8	2.078E+1	8.862E+0	2.344E-1
5.213E+8	2.063E+1	8.406E+0	2.438E-1
5.716E+8	2.040E+1	7.940E+0	2.525E-1
6.268E+8	2.025E+1	7.543E+0	2.630E-1
6.873E+8	2.004E+1	7.220E+0	2.760E-1
7.536E+8	1.990E+1	6.929E+0	2.905E-1
7.576E+8	1.871E+1	6.846E+0	2.885E-1
7.967E+8	1.884E+1	6.602E+0	2.926E-1
8.378E+8	1.859E+1	6.322E+0	2.947E-1
8.811E+8	1.867E+1	6.278E+0	3.078E-1
9.266E+8	1.856E+1	5.966E+0	3.075E-1
9.745E+8	1.843E+1	5.817E+0	3.154E-1
1.025E+9	1.844E+1	5.924E+0	3.377E-1
1.078E+9	1.835E+1	5.608E+0	3.362E-1
1.133E+9	1.841E+1	5.461E+0	3.443E-1
1.192E+9	1.831E+1	5.406E+0	3.585E-1
1.254E+9	1.833E+1	5.242E+0	3.655E-1
1.318E+9	1.818E+1	5.220E+0	3.828E-1
1.386E+9	1.804E+1	5.165E+0	3.984E-1
1.458E+9	1.802E+1	4.955E+0	4.019E-1
1.533E+9	1.802E+1	4.892E+0	4.172E-1
1.612E+9	1.798E+1	4.822E+0	4.326E-1
1.696E+9	1.788E+1	4.750E+0	4.481E-1
1.783E+9	1.779E+1	4.685E+0	4.648E-1
1.875E+9	1.779E+1	4.653E+0	4.855E-1
1.972E+9	1.772E+1	4.540E+0	4.982E-1
2.074E+9	1.767E+1	4.572E+0	5.276E-1
2.181E+9	1.760E+1	4.501E+0	5.462E-1
2.294E+9	1.750E+1	4.515E+0	5.762E-1
2.412E+9	1.746E+1	4.488E+0	6.023E-1
2.537E+9	1.738E+1	4.495E+0	6.345E-1
2.668E+9	1.734E+1	4.525E+0	6.716E-1
2.806E+9	1.726E+1	4.513E+0	7.045E-1
2.951E+9	1.721E+1	4.528E+0	7.432E-1
3.103E+9	1.715E+1	4.585E+0	7.915E-1
3.263E+9	1.705E+1	4.614E+0	8.377E-1
3.432E+9	1.698E+1	4.641E+0	8.862E-1
3.609E+9	1.687E+1	4.662E+0	9.360E-1
3.796E+9	1.685E+1	4.727E+0	9.982E-1
3.992E+9	1.670E+1	4.800E+0	1.066E+0
4.198E+9	1.663E+1	4.912E+0	1.147E+0
4.415E+9	1.654E+1	4.950E+0	1.216E+0
4.643E+9	1.646E+1	5.135E+0	1.326E+0
4.883E+9	1.635E+1	5.250E+0	1.426E+0
5.135E+9	1.621E+1	5.349E+0	1.528E+0
5.400E+9	1.603E+1	5.480E+0	1.646E+0
5.679E+9	1.587E+1	5.624E+0	1.777E+0
5.972E+9	1.566E+1	5.686E+0	1.889E+0
6.281E+9	1.548E+1	5.840E+0	2.040E+0
6.605E+9	1.529E+1	5.962E+0	2.191E+0
6.946E+9	1.505E+1	6.061E+0	2.342E+0
7.305E+9	1.484E+1	6.189E+0	2.515E+0
7.682E+9	1.458E+1	6.281E+0	2.684E+0

Bone (Cancellous)

Frequency (Hz)	Human @ 23°C Current study measurements		
	ε′	ε″	σ (S/m)
8.079E+9	1.437E+1	6.406E+0	2.879E+0
8.496E+9	1.408E+1	6.492E+0	3.069E+0
8.935E+9	1.381E+1	6.560E+0	3.261E+0
9.397E+9	1.348E+1	6.624E+0	3.463E+0
9.882E+9	1.318E+1	6.672E+0	3.668E+0
1.039E+10	1.293E+1	6.696E+0	3.871E+0
1.093E+10	1.264E+1	6.700E+0	4.074E+0
1.149E+10	1.233E+1	6.764E+0	4.325E+0
1.209E+10	1.211E+1	6.703E+0	4.508E+0
1.271E+10	1.182E+1	6.746E+0	4.771E+0
1.337E+10	1.149E+1	6.721E+0	4.998E+0
1.406E+10	1.123E+1	6.685E+0	5.228E+0
1.478E+10	1.098E+1	6.634E+0	5.457E+0
1.555E+10	1.069E+1	6.583E+0	5.694E+0
1.635E+10	1.049E+1	6.578E+0	5.984E+0
1.720E+10	1.024E+1	6.575E+0	6.289E+0
1.808E+10	9.991E+0	6.511E+0	6.550E+0
1.902E+10	9.713E+0	6.445E+0	6.819E+0
2.000E+10	9.509E+0	6.403E+0	7.124E+0

Bone (Cortical)

Frequency (Hz)	Ovine (Skull) @ 37°C Gabriel et al, 94		
	ε′	ε″	σ (S/m)
1.090E+6	2.086E+2	5.030E+2	3.050E-2
1.310E+6	1.609E+2	4.336E+2	3.160E-2
1.570E+6	1.245E+2	3.687E+2	3.220E-2
1.890E+6	1.168E+2	3.177E+2	3.340E-2
2.280E+6	1.077E+2	2.807E+2	3.560E-2
2.740E+6	8.780E+1	2.362E+2	3.600E-2
3.290E+6	7.525E+1	2.000E+2	3.660E-2
3.950E+6	6.520E+1	1.725E+2	3.790E-2
4.750E+6	5.598E+1	1.495E+2	3.950E-2
5.720E+6	4.830E+1	1.295E+2	4.120E-2
6.870E+6	4.120E+1	1.102E+2	4.210E-2
8.260E+6	3.577E+1	9.227E+1	4.240E-2
9.930E+6	3.389E+1	7.784E+1	4.300E-2
1.190E+7	3.206E+1	6.767E+1	4.480E-2
1.440E+7	2.938E+1	5.867E+1	4.700E-2
1.730E+7	2.773E+1	5.060E+1	4.870E-2
2.080E+7	2.608E+1	4.373E+1	5.060E-2
2.500E+7	2.459E+1	3.782E+1	5.260E-2
3.000E+7	2.333E+1	3.289E+1	5.490E-2
3.610E+7	2.207E+1	2.863E+1	5.750E-2
4.340E+7	2.087E+1	2.493E+1	6.020E-2
5.210E+7	1.967E+1	2.149E+1	6.230E-2
6.270E+7	1.864E+1	1.823E+1	6.360E-2
7.540E+7	1.802E+1	1.552E+1	6.510E-2
9.060E+7	1.742E+1	1.339E+1	6.750E-2
1.090E+8	1.663E+1	1.181E+1	7.160E-2
1.310E+8	1.593E+1	1.040E+1	7.580E-2
1.570E+8	1.548E+1	9.102E+0	7.950E-2
1.890E+8	1.503E+1	7.932E+0	8.340E-2
2.280E+8	1.462E+1	6.954E+0	8.820E-2
2.740E+8	1.426E+1	6.127E+0	9.340E-2
3.290E+8	1.391E+1	5.436E+0	9.950E-2
3.950E+8	1.362E+1	4.892E+0	1.075E-1
4.750E+8	1.333E+1	4.375E+0	1.156E-1
5.720E+8	1.309E+1	3.956E+0	1.259E-1
6.870E+8	1.288E+1	3.616E+0	1.382E-1
7.200E+8	1.285E+1	3.799E+0	1.522E-1
7.970E+8	1.276E+1	3.606E+0	1.599E-1
8.810E+8	1.264E+1	3.457E+0	1.694E-1
9.740E+8	1.248E+1	3.364E+0	1.823E-1
1.080E+9	1.244E+1	3.283E+0	1.973E-1
1.190E+9	1.241E+1	3.181E+0	2.106E-1
1.320E+9	1.227E+1	3.093E+0	2.271E-1
1.460E+9	1.215E+1	3.046E+0	2.474E-1
1.610E+9	1.206E+1	3.030E+0	2.714E-1
1.780E+9	1.194E+1	3.016E+0	2.987E-1
1.970E+9	1.185E+1	3.009E+0	3.297E-1
2.180E+9	1.178E+1	3.029E+0	3.674E-1
2.410E+9	1.167E+1	3.053E+0	4.093E-1
2.670E+9	1.155E+1	3.092E+0	4.593E-1
2.950E+9	1.142E+1	3.157E+0	5.182E-1
3.260E+9	1.130E+1	3.253E+0	5.900E-1
3.610E+9	1.114E+1	3.375E+0	6.778E-1
3.990E+9	1.096E+1	3.513E+0	7.797E-1
4.410E+9	1.077E+1	3.662E+0	8.983E-1
4.880E+9	1.052E+1	3.825E+0	1.039E+0
5.400E+9	1.021E+1	3.964E+0	1.191E+0
5.970E+9	9.873E+0	4.066E+0	1.350E+0
6.600E+9	9.521E+0	4.145E+0	1.522E+0
7.300E+9	9.158E+0	4.191E+0	1.702E+0

Frequency (Hz)	Ovine (Skull) @ 37°C Gabriel et al, 94		
	ε′	ε″	σ (S/m)
8.080E+9	8.807E+0	4.198E+0	1.887E+0
8.940E+9	8.441E+0	4.157E+0	2.068E+0
9.880E+9	8.115E+0	4.066E+0	2.235E+0
1.090E+10	7.851E+0	3.960E+0	2.402E+0
1.210E+10	7.589E+0	3.836E+0	2.582E+0
1.340E+10	7.349E+0	3.614E+0	2.694E+0
1.480E+10	7.203E+0	3.383E+0	2.785E+0
1.640E+10	7.036E+0	3.288E+0	3.000E+0
1.810E+10	6.840E+0	3.237E+0	3.259E+0
2.000E+10	6.687E+0	3.151E+0	3.505E+0

Bone Marrow

Frequency (Hz)	Bovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	8.474E+5	2.479E+6	1.379E-3
1.122E+1	7.235E+5	2.272E+6	1.418E-3
1.259E+1	6.897E+5	2.047E+6	1.434E-3
1.350E+1	6.149E+5	1.853E+6	1.456E-3
1.585E+1	5.436E+5	1.691E+6	1.491E-3
1.778E+1	4.700E+5	1.495E+6	1.479E-3
1.995E+1	4.415E+5	1.377E+6	1.528E-3
2.239E+1	3.909E+5	1.255E+6	1.563E-3
2.512E+1	3.481E+5	1.137E+6	1.589E-3
2.818E+1	3.090E+5	1.029E+6	1.613E-3
3.162E+1	2.748E+5	9.313E+5	1.638E-3
3.548E+1	2.438E+5	8.435E+5	1.665E-3
3.981E+1	2.162E+5	7.636E+5	1.691E-3
4.467E+1	1.918E+5	6.912E+5	1.718E-3
5.012E+1	1.716E+5	6.252E+5	1.743E-3
5.623E+1	1.495E+5	5.660E+5	1.771E-3
6.310E+1	1.322E+5	5.122E+5	1.798E-3
7.079E+1	1.165E+5	4.633E+5	1.825E-3
7.943E+1	1.026E+5	4.189E+5	1.851E-3
8.913E+1	9.024E+4	3.787E+5	1.878E-3
1.000E+2	7.922E+4	3.422E+5	1.904E-3
1.122E+2	6.951E+4	3.092E+5	1.930E-3
1.259E+2	6.085E+4	2.790E+5	1.954E-3
1.413E+2	5.330E+4	2.518E+5	1.979E-3
1.585E+2	4.668E+4	2.271E+5	2.002E-3
1.778E+2	4.086E+4	2.048E+5	2.026E-3
1.995E+2	3.576E+4	1.847E+5	2.050E-3
2.239E+2	3.131E+4	1.664E+5	2.072E-3
2.512E+2	2.744E+4	1.499E+5	2.095E-3
2.818E+2	2.404E+4	1.350E+5	2.116E-3
3.162E+2	2.108E+4	1.215E+5	2.137E-3
3.548E+2	1.848E+4	1.093E+5	2.158E-3
3.981E+2	1.622E+4	9.835E+4	2.178E-3
4.467E+2	1.426E+4	8.847E+4	2.199E-3
5.012E+2	1.253E+4	7.958E+4	2.219E-3
5.623E+2	1.104E+4	7.156E+4	2.239E-3
6.310E+2	9.705E+3	6.435E+4	2.259E-3
7.079E+2	8.546E+3	5.786E+4	2.279E-3
7.943E+2	7.527E+3	5.202E+4	2.299E-3
8.913E+2	6.633E+3	4.675E+4	2.318E-3
1.000E+3	5.846E+3	4.202E+4	2.338E-3
1.122E+3	5.155E+3	3.777E+4	2.358E-3
1.259E+3	4.547E+3	3.394E+4	2.377E-3
1.413E+3	4.011E+3	3.050E+4	2.397E-3
1.585E+3	3.539E+3	2.741E+4	2.417E-3
1.778E+3	3.123E+3	2.463E+4	2.437E-3
1.995E+3	2.757E+3	2.213E+4	2.457E-3
2.239E+3	2.431E+3	1.988E+4	2.476E-3
2.512E+3	2.146E+3	1.786E+4	2.495E-3
2.818E+3	1.893E+3	1.603E+4	2.514E-3
3.162E+3	1.670E+3	1.440E+4	2.533E-3
3.548E+3	1.472E+3	1.293E+4	2.551E-3
3.981E+3	1.299E+3	1.160E+4	2.569E-3
4.467E+3	1.145E+3	1.042E+4	2.588E-3
5.012E+3	1.011E+3	9.344E+3	2.605E-3
5.623E+3	8.913E+2	8.385E+3	2.623E-3
6.310E+3	7.861E+2	7.522E+3	2.640E-3
7.079E+3	6.939E+2	6.747E+3	2.657E-3
7.943E+3	6.131E+2	6.050E+3	2.673E-3
8.913E+3	5.421E+2	5.423E+3	2.689E-3

Frequency (Hz)	Bovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	4.800E+2	4.861E+3	2.704E-3
1.122E+4	4.258E+2	4.356E+3	2.719E-3
1.259E+4	3.783E+2	3.904E+3	2.735E-3
1.413E+4	3.370E+2	3.497E+3	2.748E-3
1.585E+4	3.009E+2	3.132E+3	2.761E-3
1.778E+4	2.695E+2	2.804E+3	2.774E-3
1.995E+4	2.421E+2	2.510E+3	2.786E-3
2.239E+4	2.181E+2	2.247E+3	2.799E-3
2.512E+4	1.982E+2	2.008E+3	2.806E-3
2.818E+4	1.798E+2	1.797E+3	2.818E-3
3.162E+4	1.638E+2	1.609E+3	2.830E-3
3.548E+4	1.499E+2	1.440E+3	2.842E-3
3.981E+4	1.375E+2	1.289E+3	2.856E-3
4.467E+4	1.269E+2	1.154E+3	2.867E-3
5.012E+4	1.177E+2	1.033E+3	2.879E-3
5.623E+4	1.097E+2	9.238E+2	2.890E-3
6.310E+4	1.028E+2	8.265E+2	2.901E-3
7.079E+4	9.668E+1	7.396E+2	2.913E-3
7.943E+4	9.145E+1	6.617E+2	2.924E-3
8.913E+4	8.670E+1	5.925E+2	2.938E-3
1.000E+5	8.268E+1	5.303E+2	2.950E-3
1.122E+5	7.893E+1	4.749E+2	2.964E-3
1.259E+5	7.570E+1	4.254E+2	2.979E-3
1.413E+5	7.278E+1	3.810E+2	2.994E-3
1.585E+5	7.038E+1	3.414E+2	3.010E-3
1.778E+5	6.798E+1	3.060E+2	3.028E-3
1.995E+5	6.573E+1	2.744E+2	3.045E-3
2.239E+5	6.381E+1	2.463E+2	3.068E-3
2.512E+5	6.203E+1	2.214E+2	3.094E-3
2.818E+5	6.041E+1	1.992E+2	3.123E-3
3.162E+5	5.886E+1	1.790E+2	3.149E-3
3.548E+5	5.736E+1	1.612E+2	3.182E-3
3.981E+5	5.601E+1	1.455E+2	3.222E-3
4.467E+5	5.466E+1	1.315E+2	3.268E-3
5.012E+5	5.334E+1	1.191E+2	3.321E-3
5.623E+5	5.204E+1	1.079E+2	3.376E-3
6.310E+5	5.070E+1	9.800E+1	3.440E-3
7.079E+5	4.946E+1	8.924E+1	3.515E-3
7.943E+5	4.811E+1	8.142E+1	3.598E-3
8.913E+5	4.675E+1	7.447E+1	3.692E-3
1.000E+6	4.541E+1	6.826E+1	3.797E-3
1.122E+6	4.406E+1	6.273E+1	3.915E-3
1.259E+6	4.270E+1	5.774E+1	4.044E-3
1.413E+6	4.128E+1	5.331E+1	4.190E-3
1.585E+6	3.987E+1	4.928E+1	4.345E-3
1.778E+6	3.847E+1	4.569E+1	4.520E-3
1.995E+6	3.682E+1	4.254E+1	4.722E-3
2.239E+6	3.562E+1	3.964E+1	4.937E-3
2.512E+6	3.421E+1	3.668E+1	5.126E-3
2.818E+6	3.290E+1	3.443E+1	5.399E-3
3.162E+6	3.153E+1	3.184E+1	5.602E-3
3.548E+6	3.031E+1	2.971E+1	5.864E-3
3.981E+6	2.908E+1	2.773E+1	6.141E-3
4.467E+6	2.797E+1	2.596E+1	6.451E-3
5.012E+6	2.686E+1	2.420E+1	6.746E-3
5.623E+6	2.591E+1	2.252E+1	7.046E-3
6.310E+6	2.500E+1	2.092E+1	7.344E-3
7.079E+6	2.421E+1	1.943E+1	7.653E-3
7.943E+6	2.355E+1	1.802E+1	7.963E-3
8.913E+6	2.300E+1	1.671E+1	8.283E-3

Bone Marrow

Frequency (Hz)	Bovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+7	2.200E+1	1.528E+1	8.500E-3
1.089E+7	2.000E+1	1.436E+1	8.700E-3
1.194E+7	1.800E+1	1.339E+1	8.900E-3
1.310E+7	1.600E+1	1.249E+1	9.100E-3
1.436E+7	1.427E+1	1.164E+1	9.300E-3
1.574E+7	1.401E+1	1.054E+1	9.500E-3
1.726E+7	1.319E+1	9.456E+0	9.700E-3
1.893E+7	1.272E+1	9.708E+0	1.022E-2
2.075E+7	1.198E+1	9.440E+0	1.090E-2
2.276E+7	1.136E+1	8.860E+0	1.122E-2
2.495E+7	1.083E+1	8.334E+0	1.157E-2
2.736E+7	1.069E+1	8.062E+0	1.227E-2
3.000E+7	9.966E+0	7.652E+0	1.277E-2
3.289E+7	9.646E+0	7.403E+0	1.355E-2
3.607E+7	9.502E+0	7.011E+0	1.407E-2
3.955E+7	8.946E+0	6.520E+0	1.434E-2
4.336E+7	8.869E+0	6.382E+0	1.540E-2
4.755E+7	8.335E+0	5.871E+0	1.553E-2
5.213E+7	8.243E+0	5.677E+0	1.647E-2
5.716E+7	7.840E+0	5.353E+0	1.702E-2
6.268E+7	7.723E+0	5.025E+0	1.752E-2
6.873E+7	7.398E+0	4.773E+0	1.825E-2
7.536E+7	7.175E+0	4.549E+0	1.907E-2
8.263E+7	7.043E+0	4.254E+0	1.955E-2
9.060E+7	6.810E+0	4.084E+0	2.059E-2
9.934E+7	6.582E+0	3.838E+0	2.121E-2
1.089E+8	6.572E+0	3.530E+0	2.139E-2
1.194E+8	6.414E+0	3.352E+0	2.227E-2
1.310E+8	6.223E+0	3.182E+0	2.319E-2
1.436E+8	6.064E+0	2.932E+0	2.342E-2
1.574E+8	5.995E+0	2.862E+0	2.507E-2
1.726E+8	5.812E+0	2.689E+0	2.582E-2
1.893E+8	5.779E+0	2.525E+0	2.659E-2
2.075E+8	5.721E+0	2.402E+0	2.773E-2
2.276E+8	5.560E+0	2.225E+0	2.817E-2
2.495E+8	5.487E+0	2.077E+0	2.883E-2
2.736E+8	5.441E+0	1.960E+0	2.984E-2
3.000E+8	5.347E+0	1.887E+0	3.149E-2
3.289E+8	5.287E+0	1.717E+0	3.143E-2
3.607E+8	5.232E+0	1.622E+0	3.255E-2
3.955E+8	5.210E+0	1.551E+0	3.413E-2
4.336E+8	5.137E+0	1.482E+0	3.575E-2
4.755E+8	5.099E+0	1.393E+0	3.684E-2
5.213E+8	5.032E+0	1.314E+0	3.811E-2
5.716E+8	5.030E+0	1.242E+0	3.951E-2
6.268E+8	4.973E+0	1.199E+0	4.182E-2
6.873E+8	4.930E+0	1.102E+0	4.214E-2
7.536E+8	4.946E+0	1.104E+0	4.627E-2
8.263E+8	4.897E+0	1.083E+0	4.979E-2
9.060E+8	4.851E+0	1.052E+0	5.304E-2
9.934E+8	4.799E+0	1.011E+0	5.587E-2
1.089E+9	4.825E+0	9.598E-1	5.816E-2
1.194E+9	4.800E+0	1.011E+0	6.720E-2
1.254E+9	4.900E+0	1.004E+0	7.000E-2
1.318E+9	5.000E+0	9.954E-1	7.300E-2
1.386E+9	5.010E+0	9.854E-1	7.600E-2
1.458E+9	5.011E+0	9.617E-1	7.800E-2
1.533E+9	5.062E+0	9.376E-1	7.997E-2
1.612E+9	5.030E+0	8.982E-1	8.057E-2
1.696E+9	5.011E+0	8.436E-1	7.958E-2

Frequency (Hz)	Bovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.783E+9	5.074E+0	8.745E-1	8.676E-2
1.875E+9	5.083E+0	8.020E-1	8.367E-2
1.972E+9	5.017E+0	8.610E-1	9.447E-2
2.074E+9	5.032E+0	8.520E-1	9.832E-2
2.181E+9	4.999E+0	7.917E-1	9.607E-2
2.294E+9	5.014E+0	8.005E-1	1.022E-1
2.412E+9	4.947E+0	8.027E-1	1.077E-1
2.537E+9	4.950E+0	7.655E-1	1.080E-1
2.668E+9	5.021E+0	8.092E-1	1.201E-1
2.806E+9	4.948E+0	7.674E-1	1.198E-1
2.951E+9	4.991E+0	7.967E-1	1.308E-1
3.103E+9	4.980E+0	7.684E-1	1.327E-1
3.263E+9	4.956E+0	7.713E-1	1.400E-1
3.432E+9	4.941E+0	7.787E-1	1.487E-1
3.609E+9	4.934E+0	7.794E-1	1.565E-1
3.796E+9	4.917E+0	7.913E-1	1.671E-1
3.992E+9	4.894E+0	7.984E-1	1.773E-1
4.198E+9	4.911E+0	7.996E-1	1.867E-1
4.415E+9	4.891E+0	8.348E-1	2.050E-1
4.643E+9	4.894E+0	8.741E-1	2.258E-1
4.883E+9	4.865E+0	8.777E-1	2.384E-1
5.135E+9	4.840E+0	9.054E-1	2.586E-1
5.400E+9	4.834E+0	9.267E-1	2.784E-1
5.679E+9	4.792E+0	9.488E-1	2.997E-1
5.972E+9	4.749E+0	9.772E-1	3.247E-1
6.281E+9	4.744E+0	1.001E+0	3.497E-1
6.605E+9	4.701E+0	1.038E+0	3.813E-1
6.946E+9	4.665E+0	1.048E+0	4.049E-1
7.305E+9	4.652E+0	1.087E+0	4.418E-1
7.682E+9	4.618E+0	1.136E+0	4.854E-1
8.079E+9	4.576E+0	1.123E+0	5.047E-1
8.496E+9	4.515E+0	1.157E+0	5.470E-1
8.935E+9	4.467E+0	1.170E+0	5.817E-1
9.397E+9	4.406E+0	1.205E+0	6.299E-1
9.882E+9	4.348E+0	1.219E+0	6.703E-1
1.039E+10	4.290E+0	1.224E+0	7.077E-1
1.093E+10	4.247E+0	1.240E+0	7.540E-1
1.149E+10	4.196E+0	1.246E+0	7.968E-1
1.209E+10	4.147E+0	1.231E+0	8.275E-1
1.271E+10	4.075E+0	1.246E+0	8.814E-1
1.337E+10	4.018E+0	1.243E+0	9.241E-1
1.406E+10	3.975E+0	1.237E+0	9.678E-1
1.478E+10	3.900E+0	1.232E+0	1.013E+0
1.555E+10	3.856E+0	1.242E+0	1.074E+0
1.635E+10	3.803E+0	1.217E+0	1.107E+0
1.720E+10	3.756E+0	1.216E+0	1.163E+0
1.808E+10	3.699E+0	1.218E+0	1.225E+0
1.902E+10	3.640E+0	1.201E+0	1.270E+0
2.000E+10	3.601E+0	1.192E+0	1.326E+0

Breast Fat

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	1.307E+7	2.820E+7	1.567E-2
1.122E+1	1.129E+7	2.593E+7	1.620E-2
1.259E+1	9.497E+6	2.370E+7	1.663E-2
1.350E+1	8.110E+6	2.173E+7	1.707E-2
1.585E+1	6.927E+6	1.983E+7	1.750E-2
1.778E+1	5.873E+6	1.817E+7	1.797E-2
1.995E+1	4.980E+6	1.650E+7	1.830E-2
2.239E+1	4.227E+6	1.497E+7	1.863E-2
2.512E+1	3.567E+6	1.357E+7	1.897E-2
2.818E+1	3.010E+6	1.227E+7	1.927E-2
3.162E+1	2.537E+6	1.110E+7	1.953E-2
3.548E+1	2.130E+6	1.004E+7	1.980E-2
3.981E+1	1.793E+6	9.040E+6	2.003E-2
4.467E+1	1.523E+6	8.200E+6	2.033E-2
5.012E+1	1.270E+6	7.377E+6	2.057E-2
5.623E+1	1.068E+6	6.637E+6	2.073E-2
6.310E+1	8.943E+5	5.963E+6	2.090E-2
7.079E+1	7.490E+5	5.353E+6	2.107E-2
7.943E+1	6.257E+5	4.800E+6	2.120E-2
8.913E+1	5.233E+5	4.307E+6	2.133E-2
1.000E+2	4.370E+5	3.860E+6	2.147E-2
1.122E+2	3.657E+5	3.460E+6	2.163E-2
1.259E+2	3.057E+5	3.100E+6	2.167E-2
1.413E+2	2.550E+5	2.777E+6	2.180E-2
1.585E+2	2.127E+5	2.487E+6	2.190E-2
1.778E+2	1.783E+5	2.227E+6	2.200E-2
1.995E+2	1.487E+5	1.990E+6	2.207E-2
2.239E+2	1.238E+5	1.777E+6	2.217E-2
2.512E+2	1.028E+5	1.587E+6	2.220E-2
2.818E+2	8.723E+4	1.423E+6	2.230E-2
3.162E+2	7.137E+4	1.267E+6	2.227E-2
3.548E+2	6.003E+4	1.130E+6	2.230E-2
3.981E+2	5.000E+4	1.012E+6	2.243E-2
4.467E+2	4.217E+4	9.080E+5	2.260E-2
5.012E+2	3.553E+4	8.127E+5	2.267E-2
5.623E+2	2.917E+4	7.257E+5	2.273E-2
6.310E+2	2.457E+4	6.490E+5	2.280E-2
7.079E+2	2.037E+4	5.797E+5	2.283E-2
7.943E+2	1.700E+4	5.170E+5	2.283E-2
8.913E+2	1.433E+4	4.610E+5	2.287E-2
1.000E+3	1.188E+4	4.110E+5	2.287E-2
1.122E+3	1.000E+4	3.663E+5	2.287E-2
1.259E+3	8.387E+3	3.270E+5	2.287E-2
1.413E+3	7.040E+3	2.913E+5	2.290E-2
1.585E+3	5.950E+3	2.600E+5	2.290E-2
1.778E+3	4.980E+3	2.317E+5	2.293E-2
1.995E+3	4.223E+3	2.067E+5	2.293E-2
2.239E+3	3.550E+3	1.840E+5	2.293E-2
2.512E+3	3.037E+3	1.643E+5	2.297E-2
2.818E+3	2.583E+3	1.467E+5	2.300E-2
3.162E+3	2.190E+3	1.307E+5	2.300E-2
3.548E+3	1.847E+3	1.167E+5	2.303E-2
3.981E+3	1.657E+3	1.041E+5	2.303E-2
4.467E+3	1.380E+3	9.280E+4	2.303E-2
5.012E+3	1.177E+3	8.267E+4	2.307E-2
5.623E+3	1.042E+3	7.383E+4	2.310E-2
6.310E+3	9.200E+2	6.583E+4	2.313E-2
7.079E+3	8.000E+2	5.870E+4	2.313E-2
7.943E+3	6.810E+2	5.227E+4	2.310E-2
8.913E+3	6.110E+2	4.663E+4	2.313E-2

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	5.293E+2	4.157E+4	2.310E-2
1.122E+4	4.753E+2	3.710E+4	2.317E-2
1.259E+4	4.230E+2	3.303E+4	2.317E-2
1.413E+4	3.753E+2	2.947E+4	2.320E-2
1.585E+4	3.020E+2	2.637E+4	2.323E-2
1.778E+4	2.857E+2	2.353E+4	2.330E-2
1.995E+4	2.537E+2	2.107E+4	2.333E-2
2.239E+4	2.343E+2	1.877E+4	2.340E-2
2.512E+4	2.123E+2	1.677E+4	2.340E-2
2.818E+4	2.043E+2	1.493E+4	2.340E-2
3.162E+4	1.730E+2	1.327E+4	2.333E-2
3.548E+4	1.447E+2	1.187E+4	2.337E-2
3.981E+4	1.270E+2	1.062E+4	2.353E-2
4.467E+4	1.240E+2	9.423E+3	2.347E-2
5.012E+4	1.133E+2	8.413E+3	2.347E-2
5.623E+4	9.790E+1	7.497E+3	2.347E-2
6.310E+4	8.967E+1	6.680E+3	2.343E-2
7.079E+4	8.387E+1	5.963E+3	2.347E-2
7.943E+4	7.617E+1	5.317E+3	2.347E-2
8.913E+4	6.890E+1	4.743E+3	2.350E-2
1.000E+5	6.287E+1	4.220E+3	2.347E-2
1.122E+5	5.723E+1	3.757E+3	2.347E-2
1.259E+5	5.517E+1	3.347E+3	2.343E-2
1.413E+5	4.947E+1	2.967E+3	2.333E-2
1.585E+5	4.323E+1	2.637E+3	2.327E-2
1.778E+5	4.253E+1	2.360E+3	2.333E-2
1.995E+5	3.927E+1	2.107E+3	2.337E-2
2.239E+5	3.633E+1	1.877E+3	2.340E-2
2.512E+5	3.377E+1	1.673E+3	2.337E-2
2.818E+5	3.147E+1	1.490E+3	2.337E-2
3.162E+5	2.920E+1	1.330E+3	2.337E-2
3.548E+5	2.707E+1	1.183E+3	2.337E-2
3.981E+5	2.533E+1	1.057E+3	2.337E-2
4.467E+5	2.367E+1	9.427E+2	2.340E-2
5.012E+5	2.227E+1	8.393E+2	2.340E-2
5.623E+5	2.087E+1	7.483E+2	2.340E-2
6.310E+5	1.950E+1	6.670E+2	2.340E-2
7.079E+5	1.827E+1	5.950E+2	2.340E-2
7.943E+5	1.737E+1	5.303E+2	2.340E-2
8.913E+5	1.633E+1	4.720E+2	2.340E-2
1.000E+6	1.563E+1	4.203E+2	2.337E-2
1.122E+6	1.497E+1	3.737E+2	2.333E-2
1.259E+6	1.440E+1	3.323E+2	2.330E-2
1.413E+6	1.390E+1	2.950E+2	2.320E-2
1.585E+6	1.390E+1	2.617E+2	2.310E-2
1.778E+6	1.407E+1	2.310E+2	2.287E-2
1.995E+6	1.510E+1	2.020E+2	2.240E-2
2.075E+6	1.770E+1	2.460E+2	2.837E-2
2.075E+6	1.770E+1	2.460E+2	2.837E-2
2.495E+6	1.577E+1	1.990E+2	2.760E-2
2.736E+6	1.467E+1	1.730E+2	2.627E-2
3.000E+6	1.763E+1	1.670E+2	2.783E-2
3.289E+6	1.288E+1	1.507E+2	2.760E-2
3.607E+6	1.287E+1	1.447E+2	2.903E-2
3.955E+6	1.680E+1	1.337E+2	2.943E-2
4.336E+6	1.453E+1	1.170E+2	2.827E-2
4.755E+6	1.177E+1	1.063E+2	2.813E-2
5.213E+6	1.210E+1	9.983E+1	2.893E-2
5.716E+6	1.223E+1	8.887E+1	2.823E-2
6.268E+6	1.183E+1	8.297E+1	2.893E-2

Breast Fat

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
6.873E+6	1.101E+1	7.537E+1	2.883E-2
7.536E+6	1.110E+1	6.850E+1	2.870E-2
8.263E+6	9.953E+0	6.533E+1	3.003E-2
9.060E+6	1.207E+1	5.827E+1	2.937E-2
9.934E+6	9.730E+0	5.353E+1	2.957E-2
1.089E+7	1.022E+1	4.937E+1	2.990E-2
1.194E+7	1.006E+1	4.450E+1	2.957E-2
1.310E+7	8.867E+0	4.107E+1	2.990E-2
1.436E+7	9.110E+0	3.780E+1	3.023E-2
1.574E+7	9.187E+0	3.420E+1	2.997E-2
1.726E+7	9.403E+0	3.210E+1	3.083E-2
1.893E+7	9.067E+0	2.870E+1	3.023E-2
2.075E+7	8.527E+0	2.640E+1	3.053E-2
2.276E+7	8.840E+0	2.473E+1	3.130E-2
2.495E+7	8.573E+0	2.237E+1	3.107E-2
2.736E+7	8.333E+0	2.070E+1	3.150E-2
3.000E+7	8.207E+0	1.947E+1	3.253E-2
3.289E+7	7.577E+0	1.777E+1	3.247E-2
3.607E+7	7.813E+0	1.643E+1	3.293E-2
3.955E+7	7.440E+0	1.520E+1	3.343E-2
4.336E+7	7.473E+0	1.403E+1	3.390E-2
4.755E+7	7.337E+0	1.283E+1	3.397E-2
5.213E+7	7.413E+0	1.167E+1	3.387E-2
5.716E+7	7.070E+0	1.074E+1	3.413E-2
6.268E+7	7.040E+0	9.920E+0	3.463E-2
6.873E+7	6.903E+0	9.173E+0	3.507E-2
7.536E+7	6.953E+0	8.423E+0	3.530E-2
8.263E+7	6.883E+0	7.640E+0	3.513E-2
9.060E+7	6.733E+0	7.167E+0	3.610E-2
9.934E+7	6.577E+0	6.657E+0	3.677E-2
1.089E+8	6.473E+0	6.080E+0	3.683E-2
1.194E+8	6.403E+0	5.630E+0	3.740E-2
1.310E+8	6.217E+0	5.290E+0	3.853E-2
1.436E+8	6.223E+0	4.850E+0	3.873E-2
1.574E+8	6.127E+0	4.530E+0	3.967E-2
1.726E+8	6.143E+0	4.130E+0	3.967E-2
1.893E+8	6.143E+0	3.933E+0	4.140E-2
2.075E+8	6.097E+0	3.557E+0	4.107E-2
2.276E+8	5.887E+0	3.313E+0	4.193E-2
2.495E+8	5.860E+0	3.087E+0	4.283E-2
2.736E+8	5.850E+0	2.927E+0	4.453E-2
3.000E+8	5.820E+0	2.703E+0	4.513E-2
3.289E+8	5.700E+0	2.493E+0	4.563E-2
3.607E+8	5.713E+0	2.293E+0	4.603E-2
3.955E+8	5.670E+0	2.190E+0	4.817E-2
4.336E+8	5.620E+0	2.053E+0	4.953E-2
4.755E+8	5.663E+0	1.867E+0	4.930E-2
5.213E+8	5.577E+0	1.817E+0	5.273E-2
5.716E+8	5.533E+0	1.657E+0	5.260E-2
6.268E+8	5.553E+0	1.647E+0	5.740E-2
6.873E+8	5.530E+0	1.503E+0	5.757E-2
7.536E+8	5.523E+0	1.517E+0	6.353E-2
8.263E+8	5.450E+0	1.480E+0	6.813E-2
9.060E+8	5.413E+0	1.423E+0	7.177E-2
9.934E+8	5.377E+0	1.387E+0	7.660E-2
1.089E+9	5.357E+0	1.350E+0	8.210E-2
1.194E+9	5.323E+0	1.323E+0	8.800E-2
1.192E+9	5.230E+0	1.322E+0	8.740E-2
1.254E+9	5.250E+0	1.256E+0	8.757E-2
1.318E+9	5.127E+0	1.243E+0	9.113E-2

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.386E+9	5.357E+0	1.169E+0	8.993E-2
1.458E+9	5.237E+0	1.177E+0	9.547E-2
1.533E+9	5.263E+0	1.120E+0	9.580E-2
1.612E+9	5.227E+0	1.077E+0	9.657E-2
1.696E+9	5.183E+0	1.066E+0	1.005E-1
1.783E+9	5.167E+0	1.099E+0	1.088E-1
1.875E+9	5.247E+0	1.100E+0	1.148E-1
1.972E+9	5.157E+0	1.067E+0	1.169E-1
2.074E+9	5.140E+0	1.025E+0	1.184E-1
2.181E+9	5.160E+0	9.900E-1	1.199E-1
2.294E+9	5.120E+0	9.280E-1	1.184E-1
2.412E+9	5.103E+0	1.021E+0	1.374E-1
2.537E+9	5.143E+0	9.657E-1	1.362E-1
2.668E+9	5.097E+0	9.867E-1	1.462E-1
2.806E+9	5.097E+0	1.000E+0	1.558E-1
2.951E+9	5.047E+0	9.820E-1	1.614E-1
3.103E+9	5.013E+0	9.410E-1	1.622E-1
3.263E+9	5.027E+0	9.763E-1	1.775E-1
3.432E+9	5.050E+0	9.917E-1	1.893E-1
3.609E+9	5.037E+0	1.003E+0	2.010E-1
3.796E+9	5.040E+0	9.963E-1	2.110E-1
3.992E+9	4.987E+0	1.031E+0	2.290E-1
4.198E+9	5.000E+0	1.029E+0	2.400E-1
4.415E+9	4.953E+0	1.057E+0	2.600E-1
4.643E+9	4.963E+0	1.066E+0	2.747E-1
4.883E+9	4.917E+0	1.102E+0	2.990E-1
5.135E+9	4.883E+0	1.120E+0	3.197E-1
5.400E+9	4.873E+0	1.144E+0	3.427E-1
5.679E+9	4.840E+0	1.174E+0	3.710E-1
5.972E+9	4.803E+0	1.192E+0	3.960E-1
6.281E+9	4.733E+0	1.231E+0	4.300E-1
6.605E+9	4.707E+0	1.257E+0	4.617E-1
6.946E+9	4.650E+0	1.291E+0	4.990E-1
7.305E+9	4.620E+0	1.301E+0	5.277E-1
7.682E+9	4.577E+0	1.305E+0	5.583E-1
8.079E+9	4.523E+0	1.330E+0	5.980E-1
8.496E+9	4.450E+0	1.356E+0	6.417E-1
8.935E+9	4.393E+0	1.365E+0	6.770E-1
9.397E+9	4.303E+0	1.385E+0	7.237E-1
9.882E+9	4.270E+0	1.384E+0	7.603E-1
1.039E+10	4.183E+0	1.388E+0	8.030E-1
1.093E+10	4.117E+0	1.390E+0	8.470E-1
1.149E+10	4.050E+0	1.374E+0	8.813E-1
1.209E+10	3.997E+0	1.372E+0	9.240E-1
1.271E+10	3.927E+0	1.372E+0	9.700E-1
1.337E+10	3.877E+0	1.328E+0	9.870E-1
1.406E+10	3.807E+0	1.338E+0	1.046E+0
1.478E+10	3.750E+0	1.296E+0	1.066E+0
1.555E+10	3.687E+0	1.291E+0	1.117E+0
1.635E+10	3.647E+0	1.270E+0	1.156E+0
1.720E+10	3.597E+0	1.254E+0	1.201E+0
1.808E+10	3.520E+0	1.220E+0	1.228E+0
1.902E+10	3.483E+0	1.195E+0	1.264E+0
2.000E+10	3.417E+0	1.187E+0	1.317E+0

Cartilage

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.090E+6	1.538E+3	4.388E+3	2.700E-1
1.310E+6	1.205E+3	3.830E+3	2.800E-1
1.570E+6	9.542E+2	3.303E+3	2.900E-1
1.890E+6	7.885E+2	2.823E+3	3.000E-1
2.280E+6	6.577E+2	2.419E+3	3.100E-1
2.740E+6	5.261E+2	2.047E+3	3.100E-1
3.290E+6	4.313E+2	1.729E+3	3.200E-1
3.950E+6	3.625E+2	1.469E+3	3.200E-1
4.750E+6	3.061E+2	1.251E+3	3.300E-1
5.720E+6	2.582E+2	1.062E+3	3.400E-1
6.870E+6	2.172E+2	8.979E+2	3.400E-1
8.260E+6	1.863E+2	7.592E+2	3.500E-1
9.930E+6	1.647E+2	6.423E+2	3.500E-1
1.190E+7	1.475E+2	5.441E+2	3.600E-1
1.440E+7	1.329E+2	4.614E+2	3.700E-1
1.730E+7	1.208E+2	3.915E+2	3.800E-1
2.080E+7	1.100E+2	3.331E+2	3.800E-1
2.500E+7	1.006E+2	2.836E+2	3.900E-1
3.000E+7	9.278E+1	2.417E+2	4.000E-1
3.610E+7	8.601E+1	2.062E+2	4.100E-1
4.340E+7	8.003E+1	1.761E+2	4.200E-1
5.210E+7	7.468E+1	1.506E+2	4.400E-1
6.270E+7	6.995E+1	1.290E+2	4.500E-1
7.540E+7	6.584E+1	1.104E+2	4.600E-1
9.060E+7	6.216E+1	9.467E+1	4.800E-1
1.090E+8	5.885E+1	8.129E+1	4.900E-1
1.310E+8	5.600E+1	6.985E+1	5.100E-1
1.570E+8	5.359E+1	6.005E+1	5.300E-1
1.890E+8	5.144E+1	5.161E+1	5.400E-1
1.940E+8	4.935E+1	5.084E+1	5.500E-1
2.150E+8	4.870E+1	4.703E+1	5.600E-1
2.380E+8	4.785E+1	4.338E+1	5.700E-1
2.630E+8	4.698E+1	3.991E+1	5.800E-1
2.910E+8	4.621E+1	3.684E+1	6.000E-1
3.220E+8	4.547E+1	3.406E+1	6.100E-1
3.560E+8	4.482E+1	3.140E+1	6.200E-1
3.940E+8	4.423E+1	2.908E+1	6.400E-1
4.350E+8	4.364E+1	2.700E+1	6.500E-1
4.810E+8	4.302E+1	2.505E+1	6.700E-1
5.330E+8	4.253E+1	2.320E+1	6.900E-1
5.890E+8	4.217E+1	2.161E+1	7.100E-1
6.510E+8	4.178E+1	2.023E+1	7.300E-1
7.200E+8	4.143E+1	1.895E+1	7.600E-1
7.970E+8	4.103E+1	1.773E+1	7.900E-1
8.810E+8	4.069E+1	1.671E+1	8.200E-1
9.740E+8	4.034E+1	1.582E+1	8.600E-1
1.080E+9	4.000E+1	1.497E+1	9.000E-1
1.190E+9	3.968E+1	1.427E+1	9.500E-1
1.320E+9	3.934E+1	1.368E+1	1.000E+0
1.460E+9	3.905E+1	1.314E+1	1.070E+0
1.610E+9	3.871E+1	1.268E+1	1.140E+0
1.780E+9	3.828E+1	1.236E+1	1.230E+0
1.970E+9	3.792E+1	1.210E+1	1.330E+0
2.180E+9	3.757E+1	1.190E+1	1.440E+0
2.410E+9	3.716E+1	1.176E+1	1.580E+0
2.670E+9	3.671E+1	1.170E+1	1.740E+0
2.950E+9	3.624E+1	1.168E+1	1.920E+0
3.260E+9	3.577E+1	1.175E+1	2.130E+0
3.610E+9	3.533E+1	1.190E+1	2.390E+0
3.990E+9	3.478E+1	1.214E+1	2.700E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
4.410E+9	3.413E+1	1.242E+1	3.050E+0
4.880E+9	3.337E+1	1.274E+1	3.460E+0
5.400E+9	3.244E+1	1.303E+1	3.920E+0
5.970E+9	3.145E+1	1.327E+1	4.410E+0
6.600E+9	3.047E+1	1.349E+1	4.960E+0
7.300E+9	2.936E+1	1.370E+1	5.570E+0
8.080E+9	2.812E+1	1.381E+1	6.210E+0
8.940E+9	2.691E+1	1.386E+1	6.890E+0
9.880E+9	2.570E+1	1.378E+1	7.580E+0
1.090E+10	2.441E+1	1.365E+1	8.300E+0
1.210E+10	2.310E+1	1.339E+1	9.010E+0
1.340E+10	2.179E+1	1.306E+1	9.710E+0
1.480E+10	2.065E+1	1.263E+1	1.039E+1
1.640E+10	1.957E+1	1.211E+1	1.101E+1
1.810E+10	1.848E+1	1.167E+1	1.174E+1
2.000E+10	1.741E+1	1.115E+1	1.240E+1

Cerebellum

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.090E+6	1.618E+3	2.338E+3	1.400E-1
1.310E+6	1.437E+3	2.078E+3	1.500E-1
1.570E+6	1.288E+3	1.911E+3	1.700E-1
1.890E+6	1.201E+3	1.709E+3	1.800E-1
2.280E+6	1.100E+3	1.496E+3	1.900E-1
2.740E+6	9.501E+2	1.325E+3	2.000E-1
3.290E+6	8.368E+2	1.173E+3	2.100E-1
3.950E+6	7.544E+2	1.039E+3	2.300E-1
4.750E+6	6.777E+2	9.325E+2	2.500E-1
5.720E+6	6.018E+2	8.465E+2	2.700E-1
6.870E+6	5.306E+2	7.659E+2	2.900E-1
8.260E+6	4.683E+2	6.911E+2	3.200E-1
9.930E+6	4.134E+2	6.147E+2	3.400E-1
1.190E+7	3.647E+2	5.480E+2	3.600E-1
1.440E+7	3.213E+2	4.914E+2	3.900E-1
1.730E+7	2.852E+2	4.385E+2	4.200E-1
2.080E+7	2.517E+2	3.905E+2	4.500E-1
2.500E+7	2.215E+2	3.467E+2	4.800E-1
3.000E+7	1.949E+2	3.080E+2	5.100E-1
3.610E+7	1.718E+2	2.729E+2	5.500E-1
4.340E+7	1.515E+2	2.406E+2	5.800E-1
5.210E+7	1.339E+2	2.117E+2	6.100E-1
6.270E+7	1.189E+2	1.854E+2	6.500E-1
7.540E+7	1.061E+2	1.616E+2	6.800E-1
9.060E+7	9.530E+1	1.405E+2	7.100E-1
1.090E+8	8.620E+1	1.220E+2	7.400E-1
1.300E+8	7.170E+1	1.051E+2	7.600E-1
1.440E+8	6.880E+1	9.700E+1	7.800E-1
1.590E+8	6.610E+1	8.930E+1	7.900E-1
1.760E+8	6.360E+1	8.210E+1	8.000E-1
1.940E+8	6.190E+1	7.530E+1	8.200E-1
2.150E+8	6.040E+1	6.910E+1	8.300E-1
2.380E+8	5.890E+1	6.340E+1	8.400E-1
2.630E+8	5.750E+1	5.810E+1	8.500E-1
2.910E+8	5.630E+1	5.330E+1	8.600E-1
3.220E+8	5.520E+1	4.880E+1	8.700E-1
3.560E+8	5.440E+1	4.470E+1	8.800E-1
3.940E+8	5.360E+1	4.100E+1	9.000E-1
4.350E+8	5.290E+1	3.760E+1	9.100E-1
4.810E+8	5.220E+1	3.450E+1	9.200E-1
5.330E+8	5.160E+1	3.170E+1	9.400E-1
5.890E+8	5.120E+1	2.920E+1	9.600E-1
6.510E+8	5.090E+1	2.700E+1	9.800E-1
7.200E+8	5.050E+1	2.510E+1	1.000E+0
7.970E+8	5.010E+1	2.320E+1	1.030E+0
8.810E+8	4.980E+1	2.150E+1	1.060E+0
9.740E+8	4.950E+1	2.010E+1	1.090E+0
1.080E+9	4.920E+1	1.880E+1	1.130E+0
1.190E+9	4.900E+1	1.760E+1	1.170E+0
1.320E+9	4.870E+1	1.660E+1	1.220E+0
1.460E+9	4.850E+1	1.580E+1	1.280E+0
1.610E+9	4.820E+1	1.510E+1	1.350E+0
1.780E+9	4.800E+1	1.450E+1	1.430E+0
1.970E+9	4.780E+1	1.400E+1	1.530E+0
2.180E+9	4.750E+1	1.360E+1	1.660E+0
2.410E+9	4.730E+1	1.340E+1	1.800E+0
2.670E+9	4.700E+1	1.330E+1	1.970E+0
2.950E+9	4.670E+1	1.330E+1	2.180E+0
3.260E+9	4.640E+1	1.330E+1	2.420E+0
3.610E+9	4.600E+1	1.350E+1	2.720E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.990E+9	4.570E+1	1.390E+1	3.090E+0
4.410E+9	4.520E+1	1.430E+1	3.520E+0
4.880E+9	4.460E+1	1.490E+1	4.040E+0
5.400E+9	4.380E+1	1.550E+1	4.650E+0
5.970E+9	4.300E+1	1.620E+1	5.370E+0
6.600E+9	4.200E+1	1.680E+1	6.180E+0
7.300E+9	4.090E+1	1.750E+1	7.100E+0
8.080E+9	3.970E+1	1.800E+1	8.110E+0
8.940E+9	3.850E+1	1.850E+1	9.200E+0
9.880E+9	3.710E+1	1.890E+1	1.040E+1
1.090E+10	3.580E+1	1.940E+1	1.180E+1
1.210E+10	3.460E+1	2.000E+1	1.346E+1
1.340E+10	3.330E+1	2.060E+1	1.533E+1
1.480E+10	3.190E+1	2.120E+1	1.743E+1
1.640E+10	3.010E+1	2.210E+1	2.006E+1
1.810E+10	2.820E+1	2.300E+1	2.315E+1
2.000E+10	2.640E+1	2.380E+1	2.651E+1

Cerebro Spinal Fluid

Frequency (Hz)	Human @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
1.300E+8	7.240E+1	3.145E+2	2.270E+0
1.440E+8	7.339E+1	2.847E+2	2.280E+0
1.590E+8	7.406E+1	2.585E+2	2.290E+0
1.760E+8	7.284E+1	2.343E+2	2.290E+0
1.940E+8	7.133E+1	2.113E+2	2.290E+0
2.150E+8	7.053E+1	1.904E+2	2.280E+0
2.380E+8	7.014E+1	1.727E+2	2.290E+0
2.630E+8	6.967E+1	1.567E+2	2.290E+0
2.910E+8	6.922E+1	1.420E+2	2.300E+0
3.220E+8	6.920E+1	1.285E+2	2.300E+0
3.560E+8	6.908E+1	1.163E+2	2.300E+0
3.940E+8	6.902E+1	1.055E+2	2.310E+0
4.350E+8	6.897E+1	9.567E+1	2.320E+0
4.810E+8	6.873E+1	8.675E+1	2.320E+0
5.330E+8	6.859E+1	7.872E+1	2.330E+0
5.890E+8	6.853E+1	7.159E+1	2.350E+0
6.510E+8	6.851E+1	6.511E+1	2.360E+0
7.200E+8	6.841E+1	5.926E+1	2.370E+0
7.970E+8	6.837E+1	5.410E+1	2.400E+0
8.810E+8	6.833E+1	4.942E+1	2.420E+0
9.740E+8	6.815E+1	4.521E+1	2.450E+0
1.080E+9	6.794E+1	4.149E+1	2.490E+0
1.190E+9	6.773E+1	3.814E+1	2.530E+0
1.320E+9	6.767E+1	3.526E+1	2.590E+0
1.460E+9	6.771E+1	3.272E+1	2.650E+0
1.610E+9	6.766E+1	3.047E+1	2.730E+0
1.780E+9	6.742E+1	2.857E+1	2.830E+0
1.970E+9	6.714E+1	2.680E+1	2.940E+0
2.180E+9	6.701E+1	2.526E+1	3.070E+0
2.410E+9	6.686E+1	2.404E+1	3.230E+0
2.670E+9	6.660E+1	2.303E+1	3.420E+0
2.950E+9	6.639E+1	2.226E+1	3.650E+0
3.260E+9	6.617E+1	2.177E+1	3.950E+0
3.610E+9	6.575E+1	2.150E+1	4.320E+0
3.990E+9	6.513E+1	2.135E+1	4.740E+0
4.410E+9	6.448E+1	2.139E+1	5.250E+0
4.880E+9	6.377E+1	2.153E+1	5.850E+0
5.400E+9	6.304E+1	2.187E+1	6.570E+0
5.970E+9	6.214E+1	2.246E+1	7.460E+0
6.600E+9	6.087E+1	2.293E+1	8.430E+0
7.300E+9	5.936E+1	2.322E+1	9.440E+0
8.080E+9	5.767E+1	2.343E+1	1.053E+1
8.940E+9	5.583E+1	2.373E+1	1.180E+1
9.880E+9	5.400E+1	2.432E+1	1.337E+1
1.090E+10	5.209E+1	2.489E+1	1.513E+1
1.210E+10	4.973E+1	2.477E+1	1.666E+1
1.340E+10	4.756E+1	2.485E+1	1.848E+1
1.480E+10	4.541E+1	2.525E+1	2.077E+1
1.640E+10	4.293E+1	2.481E+1	2.257E+1
1.810E+10	4.090E+1	2.474E+1	2.489E+1
2.000E+10	3.920E+1	2.558E+1	2.846E+1

Cervix

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	4.013E+7	3.657E+8	2.033E-1
1.122E+1	3.753E+7	3.227E+8	2.013E-1
1.259E+1	3.547E+7	2.860E+8	2.003E-1
1.350E+1	3.390E+7	2.540E+8	1.997E-1
1.585E+1	3.300E+7	2.263E+8	1.993E-1
1.778E+1	3.217E+7	2.017E+8	1.993E-1
1.995E+1	3.147E+7	1.803E+8	2.003E-1
2.239E+1	3.090E+7	1.617E+8	2.013E-1
2.512E+1	3.037E+7	1.450E+8	2.027E-1
2.818E+1	2.977E+7	1.310E+8	2.050E-1
3.162E+1	2.917E+7	1.180E+8	2.077E-1
3.548E+1	2.843E+7	1.067E+8	2.107E-1
3.981E+1	2.753E+7	9.700E+7	2.150E-1
4.467E+1	2.653E+7	8.827E+7	2.197E-1
5.012E+1	2.530E+7	8.053E+7	2.247E-1
5.623E+1	2.400E+7	7.360E+7	2.303E-1
6.310E+1	2.260E+7	6.747E+7	2.367E-1
7.079E+1	2.107E+7	6.187E+7	2.437E-1
7.943E+1	1.947E+7	5.680E+7	2.510E-1
8.913E+1	1.780E+7	5.223E+7	2.590E-1
1.000E+2	1.613E+7	4.800E+7	2.667E-1
1.122E+2	1.450E+7	4.410E+7	2.753E-1
1.259E+2	1.293E+7	4.047E+7	2.833E-1
1.413E+2	1.143E+7	3.710E+7	2.917E-1
1.585E+2	1.004E+7	3.400E+7	2.993E-1
1.778E+2	8.743E+6	3.107E+7	3.070E-1
1.995E+2	7.567E+6	2.830E+7	3.143E-1
2.239E+2	6.503E+6	2.577E+7	3.213E-1
2.512E+2	5.567E+6	2.343E+7	3.273E-1
2.818E+2	4.743E+6	2.127E+7	3.333E-1
3.162E+2	4.023E+6	1.923E+7	3.390E-1
3.548E+2	3.403E+6	1.740E+7	3.437E-1
3.981E+2	2.870E+6	1.573E+7	3.480E-1
4.467E+2	2.413E+6	1.417E+7	3.523E-1
5.012E+2	2.023E+6	1.277E+7	3.560E-1
5.623E+2	1.693E+6	1.150E+7	3.593E-1
6.310E+2	1.417E+6	1.033E+7	3.627E-1
7.079E+2	1.183E+6	9.277E+6	3.653E-1
7.943E+2	9.857E+5	8.320E+6	3.680E-1
8.913E+2	8.217E+5	7.463E+6	3.700E-1
1.000E+3	6.830E+5	6.693E+6	3.723E-1
1.122E+3	5.677E+5	5.997E+6	3.743E-1
1.259E+3	4.707E+5	5.367E+6	3.760E-1
1.413E+3	3.903E+5	4.807E+6	3.777E-1
1.585E+3	3.237E+5	4.300E+6	3.790E-1
1.778E+3	2.680E+5	3.843E+6	3.803E-1
1.995E+3	2.220E+5	3.440E+6	3.813E-1
2.239E+3	1.837E+5	3.077E+6	3.830E-1
2.512E+3	1.520E+5	2.743E+6	3.837E-1
2.818E+3	1.260E+5	2.453E+6	3.847E-1
3.162E+3	1.048E+5	2.187E+6	3.857E-1
3.548E+3	8.667E+4	1.957E+6	3.863E-1
3.981E+3	7.203E+4	1.750E+6	3.867E-1
4.467E+3	5.987E+4	1.557E+6	3.877E-1
5.012E+3	4.993E+4	1.393E+6	3.880E-1
5.623E+3	4.163E+4	1.243E+6	3.887E-1
6.310E+3	3.487E+4	1.110E+6	3.887E-1
7.079E+3	2.923E+4	9.907E+5	3.897E-1
7.943E+3	2.460E+4	8.827E+5	3.897E-1
8.913E+3	2.080E+4	7.877E+5	3.907E-1

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	1.757E+4	7.027E+5	3.907E-1
1.122E+4	1.493E+4	6.267E+5	3.913E-1
1.259E+4	1.270E+4	5.590E+5	3.917E-1
1.413E+4	1.083E+4	4.987E+5	3.920E-1
1.585E+4	9.273E+3	4.450E+5	3.927E-1
1.778E+4	7.983E+3	3.970E+5	3.927E-1
1.995E+4	6.877E+3	3.543E+5	3.930E-1
2.239E+4	5.940E+3	3.160E+5	3.933E-1
2.512E+4	5.153E+3	2.817E+5	3.937E-1
2.818E+4	4.487E+3	2.510E+5	3.940E-1
3.162E+4	3.920E+3	2.240E+5	3.940E-1
3.548E+4	3.427E+3	1.997E+5	3.950E-1
3.981E+4	3.017E+3	1.783E+5	3.950E-1
4.467E+4	2.673E+3	1.590E+5	3.950E-1
5.012E+4	2.363E+3	1.420E+5	3.953E-1
5.623E+4	2.107E+3	1.267E+5	3.960E-1
6.310E+4	1.883E+3	1.127E+5	3.960E-1
7.079E+4	1.687E+3	1.005E+5	3.960E-1
7.943E+4	1.527E+3	8.977E+4	3.967E-1
8.913E+4	1.377E+3	8.003E+4	3.970E-1
1.000E+5	1.263E+3	7.143E+4	3.973E-1
1.122E+5	1.147E+3	6.367E+4	3.973E-1
1.259E+5	1.040E+3	5.680E+4	3.977E-1
1.413E+5	9.657E+2	5.067E+4	3.983E-1
1.585E+5	8.907E+2	4.517E+4	3.983E-1
1.778E+5	8.260E+2	4.030E+4	3.987E-1
1.995E+5	7.687E+2	3.593E+4	3.990E-1
2.239E+5	7.170E+2	3.203E+4	3.993E-1
2.512E+5	6.723E+2	2.860E+4	4.000E-1
2.818E+5	6.307E+2	2.553E+4	4.000E-1
3.162E+5	5.943E+2	2.277E+4	4.007E-1
3.548E+5	5.603E+2	2.030E+4	4.010E-1
3.981E+5	5.297E+2	1.813E+4	4.017E-1
4.467E+5	5.010E+2	1.617E+4	4.020E-1
5.012E+5	4.753E+2	1.443E+4	4.030E-1
5.623E+5	4.507E+2	1.287E+4	4.033E-1
6.310E+5	4.273E+2	1.150E+4	4.043E-1
7.079E+5	4.057E+2	1.027E+4	4.053E-1
7.943E+5	3.853E+2	9.183E+3	4.057E-1
8.913E+5	3.663E+2	8.200E+3	4.067E-1
1.000E+6	3.473E+2	7.330E+3	4.077E-1
1.122E+6	3.293E+2	6.553E+3	4.087E-1
1.259E+6	3.123E+2	5.857E+3	4.103E-1
1.413E+6	2.953E+2	5.237E+3	4.117E-1
1.585E+6	2.793E+2	4.687E+3	4.130E-1
1.574E+6	4.137E+2	7.673E+3	6.723E-1
1.726E+6	3.893E+2	7.003E+3	6.727E-1
1.893E+6	3.800E+2	6.417E+3	6.757E-1
2.075E+6	3.640E+2	5.857E+3	6.760E-1
2.276E+6	3.607E+2	5.370E+3	6.797E-1
2.495E+6	3.347E+2	4.907E+3	6.817E-1
2.736E+6	3.143E+2	4.487E+3	6.830E-1
3.000E+6	3.063E+2	4.113E+3	6.867E-1
3.289E+6	2.907E+2	3.763E+3	6.890E-1
3.607E+6	2.737E+2	3.440E+3	6.900E-1
3.955E+6	2.583E+2	3.143E+3	6.917E-1
4.336E+6	2.553E+2	2.887E+3	6.960E-1
4.755E+6	2.367E+2	2.643E+3	6.990E-1
5.213E+6	2.297E+2	2.420E+3	7.017E-1
5.716E+6	2.107E+2	2.217E+3	7.050E-1

Cervix

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
6.268E+6	2.113E+2	2.030E+3	7.077E-1
6.873E+6	1.960E+2	1.863E+3	7.127E-1
7.536E+6	1.880E+2	1.707E+3	7.150E-1
8.263E+6	1.803E+2	1.557E+3	7.163E-1
9.060E+6	1.697E+2	1.437E+3	7.233E-1
9.934E+6	1.650E+2	1.317E+3	7.270E-1
1.089E+7	1.563E+2	1.203E+3	7.297E-1
1.194E+7	1.497E+2	1.107E+3	7.353E-1
1.310E+7	1.440E+2	1.013E+3	7.393E-1
1.436E+7	1.390E+2	9.297E+2	7.427E-1
1.574E+7	1.307E+2	8.523E+2	7.463E-1
1.726E+7	1.280E+2	7.810E+2	7.500E-1
1.893E+7	1.220E+2	7.183E+2	7.563E-1
2.075E+7	1.173E+2	6.590E+2	7.610E-1
2.276E+7	1.113E+2	6.043E+2	7.650E-1
2.495E+7	1.083E+2	5.557E+2	7.710E-1
2.736E+7	1.033E+2	5.113E+2	7.783E-1
3.000E+7	9.967E+1	4.693E+2	7.830E-1
3.289E+7	9.620E+1	4.313E+2	7.890E-1
3.607E+7	9.367E+1	3.960E+2	7.950E-1
3.955E+7	9.050E+1	3.663E+2	8.063E-1
4.336E+7	8.680E+1	3.367E+2	8.127E-1
4.755E+7	8.343E+1	3.100E+2	8.197E-1
5.213E+7	7.923E+1	2.857E+2	8.280E-1
5.716E+7	7.637E+1	2.630E+2	8.357E-1
6.268E+7	7.360E+1	2.420E+2	8.433E-1
6.873E+7	7.060E+1	2.230E+2	8.523E-1
7.536E+7	6.810E+1	2.053E+2	8.597E-1
8.263E+7	6.547E+1	1.887E+2	8.680E-1
9.060E+7	6.327E+1	1.740E+2	8.763E-1
9.934E+7	6.120E+1	1.600E+2	8.847E-1
1.089E+8	5.907E+1	1.473E+2	8.927E-1
1.194E+8	5.750E+1	1.353E+2	9.000E-1
1.310E+8	5.600E+1	1.247E+2	9.090E-1
1.436E+8	5.447E+1	1.147E+2	9.170E-1
1.574E+8	5.297E+1	1.053E+2	9.237E-1
1.726E+8	5.183E+1	9.693E+1	9.307E-1
1.893E+8	5.083E+1	8.917E+1	9.383E-1
2.075E+8	4.967E+1	8.193E+1	9.463E-1
2.276E+8	4.863E+1	7.553E+1	9.560E-1
2.495E+8	4.780E+1	6.947E+1	9.643E-1
2.736E+8	4.707E+1	6.387E+1	9.723E-1
3.000E+8	4.643E+1	5.883E+1	9.820E-1
3.289E+8	4.573E+1	5.410E+1	9.903E-1
3.607E+8	4.513E+1	4.980E+1	1.000E+0
3.955E+8	4.460E+1	4.593E+1	1.010E+0
4.336E+8	4.417E+1	4.237E+1	1.020E+0
4.755E+8	4.367E+1	3.903E+1	1.033E+0
5.213E+8	4.333E+1	3.610E+1	1.047E+0
5.716E+8	4.287E+1	3.337E+1	1.060E+0
6.268E+8	4.253E+1	3.100E+1	1.080E+0
6.873E+8	4.213E+1	2.860E+1	1.097E+0
7.536E+8	4.180E+1	2.660E+1	1.117E+0
8.263E+8	4.137E+1	2.473E+1	1.137E+0
8.378E+8	5.497E+1	3.380E+1	1.577E+0
8.811E+8	5.463E+1	3.277E+1	1.607E+0
9.266E+8	5.447E+1	3.140E+1	1.620E+0
9.745E+8	5.430E+1	3.023E+1	1.640E+0
1.025E+9	5.423E+1	2.910E+1	1.657E+0
1.078E+9	5.387E+1	2.817E+1	1.687E+0

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.133E+9	5.383E+1	2.713E+1	1.713E+0
1.192E+9	5.380E+1	2.647E+1	1.753E+0
1.254E+9	5.347E+1	2.547E+1	1.777E+0
1.318E+9	5.337E+1	2.467E+1	1.807E+0
1.386E+9	5.293E+1	2.383E+1	1.840E+0
1.458E+9	5.293E+1	2.323E+1	1.887E+0
1.533E+9	5.273E+1	2.267E+1	1.933E+0
1.612E+9	5.247E+1	2.207E+1	1.977E+0
1.696E+9	5.247E+1	2.157E+1	2.030E+0
1.783E+9	5.227E+1	2.097E+1	2.087E+0
1.875E+9	5.200E+1	2.060E+1	2.150E+0
1.972E+9	5.187E+1	2.020E+1	2.217E+0
2.074E+9	5.163E+1	1.983E+1	2.290E+0
2.181E+9	5.143E+1	1.960E+1	2.377E+0
2.294E+9	5.113E+1	1.923E+1	2.457E+0
2.412E+9	5.097E+1	1.897E+1	2.547E+0
2.537E+9	5.067E+1	1.873E+1	2.643E+0
2.668E+9	5.053E+1	1.853E+1	2.750E+0
2.806E+9	5.027E+1	1.840E+1	2.873E+0
2.951E+9	5.000E+1	1.820E+1	2.983E+0
3.103E+9	4.973E+1	1.810E+1	3.133E+0
3.263E+9	4.943E+1	1.797E+1	3.263E+0
3.432E+9	4.920E+1	1.790E+1	3.420E+0
3.609E+9	4.900E+1	1.807E+1	3.627E+0
3.796E+9	4.860E+1	1.800E+1	3.807E+0
3.992E+9	4.833E+1	1.807E+1	4.010E+0
4.198E+9	4.807E+1	1.820E+1	4.247E+0
4.415E+9	4.753E+1	1.833E+1	4.503E+0
4.643E+9	4.713E+1	1.850E+1	4.773E+0
4.883E+9	4.663E+1	1.870E+1	5.073E+0
5.135E+9	4.620E+1	1.887E+1	5.400E+0
5.400E+9	4.560E+1	1.903E+1	5.713E+0
5.679E+9	4.510E+1	1.927E+1	6.083E+0
5.972E+9	4.437E+1	1.930E+1	6.407E+0
6.281E+9	4.367E+1	1.923E+1	6.733E+0
6.605E+9	4.313E+1	1.957E+1	7.190E+0
6.946E+9	4.260E+1	1.950E+1	7.543E+0
7.305E+9	4.177E+1	1.967E+1	7.997E+0
7.682E+9	4.133E+1	1.967E+1	8.400E+0
8.079E+9	4.047E+1	1.973E+1	8.880E+0
8.496E+9	3.983E+1	1.970E+1	9.300E+0
8.935E+9	3.927E+1	1.983E+1	9.840E+0
9.397E+9	3.847E+1	1.973E+1	1.030E+1
9.882E+9	3.783E+1	1.973E+1	1.090E+1
1.039E+10	3.723E+1	1.953E+1	1.127E+1
1.093E+10	3.660E+1	1.987E+1	1.207E+1
1.149E+10	3.593E+1	1.953E+1	1.247E+1
1.209E+10	3.543E+1	1.957E+1	1.317E+1
1.271E+10	3.493E+1	1.940E+1	1.370E+1
1.337E+10	3.460E+1	1.997E+1	1.483E+1
1.406E+10	3.387E+1	1.973E+1	1.540E+1
1.478E+10	3.343E+1	1.940E+1	1.593E+1
1.555E+10	3.293E+1	1.977E+1	1.710E+1
1.635E+10	3.237E+1	1.973E+1	1.793E+1
1.720E+10	3.207E+1	1.983E+1	1.897E+1
1.808E+10	3.130E+1	2.020E+1	2.033E+1
1.902E+10	3.093E+1	2.030E+1	2.150E+1
2.000E+10	3.020E+1	2.073E+1	2.310E+1

Colon

Frequency (Hz)	Ovine @ 30°C Current study measurements ε′	ε″	σ (S/m)
2.239E+1	3.156E+7	1.701E+7	2.119E-2
2.512E+1	3.093E+7	1.663E+7	2.324E-2
2.818E+1	3.003E+7	1.622E+7	2.544E-2
3.162E+1	2.888E+7	1.611E+7	2.835E-2
3.548E+1	2.756E+7	1.603E+7	3.164E-2
3.981E+1	2.607E+7	1.606E+7	3.558E-2
4.467E+1	2.450E+7	1.608E+7	3.996E-2
5.012E+1	2.290E+7	1.613E+7	4.496E-2
5.623E+1	2.120E+7	1.616E+7	5.054E-2
6.310E+1	1.945E+7	1.611E+7	5.656E-2
7.079E+1	1.768E+7	1.599E+7	6.298E-2
7.943E+1	1.586E+7	1.571E+7	6.941E-2
8.913E+1	1.416E+7	1.541E+7	7.639E-2
1.000E+2	1.250E+7	1.495E+7	8.315E-2
1.122E+2	1.088E+7	1.442E+7	9.002E-2
1.259E+2	9.462E+6	1.372E+7	9.611E-2
1.413E+2	8.125E+6	1.299E+7	1.021E-1
1.585E+2	6.927E+6	1.221E+7	1.077E-1
1.778E+2	5.865E+6	1.141E+7	1.128E-1
1.995E+2	4.936E+6	1.058E+7	1.174E-1
2.239E+2	4.116E+6	9.743E+6	1.213E-1
2.512E+2	3.427E+6	8.978E+6	1.255E-1
2.818E+2	2.852E+6	8.194E+6	1.285E-1
3.162E+2	2.357E+6	7.462E+6	1.313E-1
3.548E+2	1.944E+6	6.775E+6	1.337E-1
3.981E+2	1.599E+6	6.137E+6	1.359E-1
4.467E+2	1.315E+6	5.546E+6	1.378E-1
5.012E+2	1.079E+6	5.002E+6	1.395E-1
5.623E+2	8.879E+5	4.510E+6	1.411E-1
6.310E+2	7.264E+5	4.054E+6	1.423E-1
7.079E+2	5.989E+5	3.648E+6	1.437E-1
7.943E+2	4.906E+5	3.277E+6	1.448E-1
8.913E+2	4.019E+5	2.936E+6	1.456E-1
1.000E+3	3.306E+5	2.633E+6	1.465E-1
1.122E+3	2.719E+5	2.359E+6	1.472E-1
1.259E+3	2.219E+5	2.114E+6	1.480E-1
1.413E+3	1.839E+5	1.892E+6	1.487E-1
1.585E+3	1.510E+5	1.693E+6	1.493E-1
1.778E+3	1.244E+5	1.515E+6	1.498E-1
1.995E+3	1.020E+5	1.355E+6	1.504E-1
2.239E+3	8.429E+4	1.211E+6	1.508E-1
2.512E+3	6.933E+4	1.082E+6	1.512E-1
2.818E+3	5.714E+4	9.666E+5	1.516E-1
3.162E+3	4.729E+4	8.630E+5	1.518E-1
3.548E+3	3.921E+4	7.700E+5	1.520E-1
3.981E+3	3.278E+4	6.869E+5	1.521E-1
4.467E+3	2.771E+4	6.125E+5	1.522E-1
5.012E+3	2.359E+4	5.458E+5	1.522E-1
5.623E+3	2.066E+4	4.864E+5	1.522E-1
6.310E+3	1.834E+4	4.331E+5	1.520E-1
7.079E+3	1.674E+4	3.857E+5	1.519E-1
7.943E+3	1.563E+4	3.435E+5	1.518E-1
8.913E+3	1.494E+4	3.059E+5	1.517E-1
1.000E+4	1.456E+4	2.725E+5	1.516E-1
1.122E+4	1.443E+4	2.429E+5	1.516E-1
1.259E+4	1.446E+4	2.167E+5	1.518E-1
1.413E+4	1.453E+4	1.937E+5	1.522E-1
1.585E+4	1.455E+4	1.735E+5	1.530E-1
1.778E+4	1.438E+4	1.557E+5	1.540E-1
1.995E+4	1.396E+4	1.400E+5	1.554E-1

Frequency (Hz)	Ovine @ 30°C Current study measurements ε′	ε″	σ (S/m)
2.239E+4	1.349E+4	1.263E+5	1.572E-1
2.512E+4	1.223E+4	1.136E+5	1.588E-1
2.818E+4	1.115E+4	1.022E+5	1.602E-1
3.162E+4	1.012E+4	9.172E+4	1.614E-1
3.548E+4	9.161E+3	8.223E+4	1.623E-1
3.981E+4	8.358E+3	7.361E+4	1.630E-1
4.467E+4	7.718E+3	6.577E+4	1.634E-1
5.012E+4	7.241E+3	5.872E+4	1.637E-1
5.623E+4	6.931E+3	5.235E+4	1.638E-1
6.310E+4	6.838E+3	4.665E+4	1.638E-1
7.079E+4	6.968E+3	4.171E+4	1.643E-1
7.943E+4	7.172E+3	3.761E+4	1.662E-1
8.913E+4	7.118E+3	3.430E+4	1.701E-1
1.000E+5	6.689E+3	3.134E+4	1.750E-1
1.122E+5	6.129E+3	2.850E+4	1.800E-1
1.259E+5	5.605E+3	2.584E+4	1.850E-1
1.413E+5	5.121E+3	2.337E+4	1.900E-1
1.585E+5	4.709E+3	2.111E+4	1.950E-1
1.778E+5	4.353E+3	1.906E+4	2.000E-1
1.995E+5	4.037E+3	1.720E+4	2.100E-1
2.239E+5	3.764E+3	1.766E+4	2.200E-1
2.512E+5	3.523E+3	1.646E+4	2.300E-1
2.818E+5	3.312E+3	1.531E+4	2.400E-1
3.162E+5	3.300E+3	1.421E+4	2.500E-1
3.289E+5	3.150E+3	1.421E+4	2.600E-1
3.607E+5	3.100E+3	1.346E+4	2.700E-1
3.955E+5	3.060E+3	1.273E+4	2.800E-1
4.336E+5	2.981E+3	1.202E+4	2.900E-1
4.755E+5	2.869E+3	1.134E+4	3.000E-1
5.213E+5	2.773E+3	1.069E+4	3.100E-1
5.716E+5	2.690E+3	1.006E+4	3.200E-1
6.268E+5	2.602E+3	9.626E+3	3.356E-1
6.873E+5	2.494E+3	8.913E+3	3.408E-1
7.536E+5	2.380E+3	8.265E+3	3.465E-1
8.263E+5	2.276E+3	7.675E+3	3.528E-1
9.060E+5	2.166E+3	7.124E+3	3.591E-1
9.934E+5	2.042E+3	6.625E+3	3.661E-1
1.089E+6	1.952E+3	6.155E+3	3.729E-1
1.194E+6	1.830E+3	5.726E+3	3.804E-1
1.310E+6	1.738E+3	5.344E+3	3.893E-1
1.436E+6	1.647E+3	4.973E+3	3.973E-1
1.574E+6	1.536E+3	4.629E+3	4.054E-1
1.726E+6	1.446E+3	4.317E+3	4.146E-1
1.893E+6	1.349E+3	4.025E+3	4.238E-1
2.075E+6	1.262E+3	3.745E+3	4.324E-1
2.276E+6	1.173E+3	3.490E+3	4.418E-1
2.495E+6	1.105E+3	3.256E+3	4.519E-1
2.736E+6	1.002E+3	3.028E+3	4.608E-1
3.000E+6	9.336E+2	2.829E+3	4.722E-1
3.289E+6	8.655E+2	2.629E+3	4.811E-1
3.607E+6	8.041E+2	2.450E+3	4.916E-1
3.955E+6	7.412E+2	2.276E+3	5.008E-1
4.336E+6	6.795E+2	2.116E+3	5.106E-1
4.755E+6	6.307E+2	1.965E+3	5.197E-1
5.213E+6	5.799E+2	1.831E+3	5.311E-1
5.716E+6	5.335E+2	1.692E+3	5.382E-1
6.268E+6	4.954E+2	1.579E+3	5.505E-1
6.873E+6	4.547E+2	1.464E+3	5.596E-1
7.536E+6	4.156E+2	1.359E+3	5.696E-1
8.263E+6	3.831E+2	1.262E+3	5.799E-1

Colon

Frequency (Hz)	Ovine @ 30°C Current study measurements ε′	ε″	σ (S/m)
9.060E+6	3.558E+2	1.164E+3	5.869E-1
9.934E+6	3.279E+2	1.083E+3	5.988E-1
1.089E+7	3.047E+2	1.000E+3	6.060E-1
1.194E+7	2.824E+2	9.288E+2	6.171E-1
1.310E+7	2.595E+2	8.585E+2	6.254E-1
1.436E+7	2.408E+2	7.964E+2	6.362E-1
1.574E+7	2.282E+2	7.355E+2	6.442E-1
1.726E+7	2.079E+2	6.783E+2	6.515E-1
1.893E+7	1.903E+2	6.264E+2	6.596E-1
2.075E+7	1.804E+2	5.788E+2	6.683E-1
2.276E+7	1.697E+2	5.354E+2	6.778E-1
2.495E+7	1.600E+2	4.940E+2	6.858E-1
2.736E+7	1.508E+2	4.548E+2	6.923E-1
3.000E+7	1.403E+2	4.211E+2	7.028E-1
3.289E+7	1.326E+2	3.883E+2	7.105E-1
3.607E+7	1.260E+2	3.576E+2	7.176E-1
3.955E+7	1.204E+2	3.295E+2	7.251E-1
4.336E+7	1.143E+2	3.056E+2	7.371E-1
4.755E+7	1.092E+2	2.819E+2	7.457E-1
5.213E+7	1.039E+2	2.595E+2	7.525E-1
5.716E+7	1.004E+2	2.396E+2	7.619E-1
6.268E+7	9.627E+1	2.210E+2	7.708E-1
6.873E+7	9.217E+1	2.037E+2	7.788E-1
7.536E+7	8.887E+1	1.878E+2	7.872E-1
8.263E+7	8.573E+1	1.732E+2	7.962E-1
9.060E+7	8.311E+1	1.593E+2	8.028E-1
9.934E+7	8.031E+1	1.474E+2	8.145E-1
1.089E+8	7.766E+1	1.356E+2	8.215E-1
1.194E+8	7.554E+1	1.249E+2	8.298E-1
1.310E+8	7.339E+1	1.149E+2	8.373E-1
1.436E+8	7.197E+1	1.060E+2	8.471E-1
1.574E+8	7.046E+1	9.763E+1	8.552E-1
1.726E+8	6.891E+1	8.970E+1	8.615E-1
1.893E+8	6.781E+1	8.254E+1	8.692E-1
2.075E+8	6.670E+1	7.592E+1	8.766E-1
2.276E+8	6.556E+1	7.014E+1	8.880E-1
2.495E+8	6.463E+1	6.453E+1	8.958E-1
2.736E+8	6.381E+1	5.960E+1	9.071E-1
3.000E+8	6.323E+1	5.484E+1	9.152E-1
3.289E+8	6.244E+1	5.051E+1	9.244E-1
3.607E+8	6.180E+1	4.663E+1	9.357E-1
3.955E+8	6.128E+1	4.315E+1	9.493E-1
4.336E+8	6.088E+1	3.980E+1	9.600E-1
4.755E+8	6.038E+1	3.688E+1	9.755E-1
5.213E+8	6.001E+1	3.422E+1	9.925E-1
5.716E+8	5.960E+1	3.172E+1	1.009E+0
6.268E+8	5.936E+1	2.961E+1	1.033E+0
6.873E+8	5.895E+1	2.768E+1	1.058E+0
7.536E+8	5.868E+1	2.587E+1	1.085E+0
8.263E+8	5.834E+1	2.446E+1	1.124E+0
9.060E+8	5.794E+1	2.300E+1	1.159E+0
9.934E+8	5.755E+1	2.177E+1	1.203E+0
1.089E+9	5.727E+1	2.081E+1	1.261E+0
1.194E+9	5.679E+1	1.975E+1	1.312E+0
1.310E+9	5.619E+1	1.891E+1	1.378E+0
1.436E+9	5.566E+1	1.791E+1	1.430E+0
1.574E+9	5.537E+1	1.691E+1	1.481E+0
1.726E+9	5.513E+1	1.608E+1	1.545E+0
1.893E+9	5.524E+1	1.555E+1	1.637E+0
2.075E+9	5.544E+1	1.552E+1	1.792E+0

Frequency (Hz)	Ovine @ 30°C Current study measurements ε′	ε″	σ (S/m)
2.181E+9	5.791E+1	1.598E+1	1.939E+0
2.294E+9	5.769E+1	1.590E+1	2.029E+0
2.412E+9	5.752E+1	1.591E+1	2.136E+0
2.537E+9	5.739E+1	1.584E+1	2.236E+0
2.668E+9	5.722E+1	1.583E+1	2.350E+0
2.806E+9	5.706E+1	1.580E+1	2.467E+0
2.951E+9	5.683E+1	1.587E+1	2.606E+0
3.103E+9	5.664E+1	1.608E+1	2.776E+0
3.263E+9	5.630E+1	1.619E+1	2.939E+0
3.432E+9	5.601E+1	1.630E+1	3.112E+0
3.609E+9	5.588E+1	1.645E+1	3.303E+0
3.796E+9	5.558E+1	1.662E+1	3.510E+0
3.992E+9	5.532E+1	1.695E+1	3.764E+0
4.198E+9	5.509E+1	1.727E+1	4.032E+0
4.415E+9	5.471E+1	1.763E+1	4.329E+0
4.643E+9	5.443E+1	1.797E+1	4.642E+0
4.883E+9	5.394E+1	1.844E+1	5.008E+0
5.135E+9	5.343E+1	1.894E+1	5.410E+0
5.400E+9	5.273E+1	1.934E+1	5.810E+0
5.679E+9	5.228E+1	1.972E+1	6.231E+0
5.972E+9	5.161E+1	2.005E+1	6.662E+0
6.281E+9	5.104E+1	2.045E+1	7.144E+0
6.605E+9	5.044E+1	2.073E+1	7.619E+0
6.946E+9	4.977E+1	2.131E+1	8.236E+0
7.305E+9	4.909E+1	2.168E+1	8.811E+0
7.682E+9	4.834E+1	2.216E+1	9.471E+0
8.079E+9	4.748E+1	2.266E+1	1.019E+1
8.496E+9	4.663E+1	2.312E+1	1.093E+1
8.935E+9	4.563E+1	2.355E+1	1.171E+1
9.397E+9	4.478E+1	2.387E+1	1.248E+1
9.882E+9	4.360E+1	2.421E+1	1.331E+1
1.039E+10	4.239E+1	2.440E+1	1.411E+1
1.093E+10	4.144E+1	2.468E+1	1.501E+1
1.149E+10	4.038E+1	2.476E+1	1.583E+1
1.209E+10	3.933E+1	2.518E+1	1.693E+1
1.271E+10	3.812E+1	2.511E+1	1.776E+1
1.337E+10	3.708E+1	2.527E+1	1.879E+1
1.406E+10	3.584E+1	2.533E+1	1.981E+1
1.478E+10	3.477E+1	2.522E+1	2.074E+1
1.555E+10	3.364E+1	2.510E+1	2.171E+1
1.635E+10	3.256E+1	2.495E+1	2.269E+1
1.720E+10	3.132E+1	2.489E+1	2.381E+1
1.808E+10	3.004E+1	2.477E+1	2.492E+1
1.902E+10	2.910E+1	2.446E+1	2.587E+1
2.000E+10	2.796E+1	2.421E+1	2.694E+1

Cornea

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.090E+6	4.743E+3	8.795E+3	5.300E-1
1.310E+6	3.703E+3	7.998E+3	5.800E-1
1.570E+6	2.900E+3	7.132E+3	6.200E-1
1.890E+6	2.271E+3	6.199E+3	6.500E-1
2.280E+6	1.830E+3	5.352E+3	6.800E-1
2.740E+6	1.388E+3	4.549E+3	6.900E-1
3.290E+6	1.085E+3	3.870E+3	7.100E-1
3.950E+6	8.846E+2	3.327E+3	7.300E-1
4.750E+6	7.138E+2	2.878E+3	7.600E-1
5.720E+6	5.572E+2	2.459E+3	7.800E-1
6.870E+6	4.120E+2	2.075E+3	7.900E-1
8.260E+6	3.194E+2	1.747E+3	8.000E-1
9.930E+6	2.623E+2	1.468E+3	8.100E-1
1.190E+7	2.194E+2	1.236E+3	8.200E-1
1.440E+7	1.836E+2	1.041E+3	8.300E-1
1.730E+7	1.551E+2	8.750E+2	8.400E-1
2.080E+7	1.336E+2	7.367E+2	8.500E-1
2.500E+7	1.172E+2	6.191E+2	8.600E-1
3.000E+7	1.048E+2	5.214E+2	8.700E-1
3.610E+7	9.550E+1	4.391E+2	8.800E-1
4.340E+7	8.750E+1	3.685E+2	8.900E-1
5.210E+7	8.100E+1	3.093E+2	9.000E-1
6.270E+7	7.600E+1	2.596E+2	9.100E-1
7.540E+7	7.200E+1	2.177E+2	9.100E-1
9.060E+7	6.870E+1	1.830E+2	9.200E-1
1.090E+8	6.570E+1	1.542E+2	9.300E-1
1.310E+8	6.310E+1	1.302E+2	9.500E-1
1.570E+8	6.130E+1	1.099E+2	9.600E-1
1.890E+8	5.950E+1	9.270E+1	9.800E-1
2.280E+8	5.800E+1	7.840E+1	9.900E-1
2.740E+8	5.660E+1	6.640E+1	1.010E+0
2.910E+8	5.660E+1	6.330E+1	1.020E+0
3.220E+8	5.600E+1	5.780E+1	1.040E+0
3.560E+8	5.540E+1	5.290E+1	1.050E+0
3.940E+8	5.490E+1	4.840E+1	1.060E+0
4.350E+8	5.440E+1	4.440E+1	1.070E+0
4.810E+8	5.400E+1	4.070E+1	1.090E+0
5.330E+8	5.360E+1	3.730E+1	1.110E+0
5.890E+8	5.330E+1	3.430E+1	1.120E+0
6.510E+8	5.310E+1	3.170E+1	1.150E+0
7.200E+8	5.280E+1	2.930E+1	1.180E+0
7.970E+8	5.250E+1	2.710E+1	1.200E+0
8.810E+8	5.210E+1	2.520E+1	1.230E+0
9.740E+8	5.180E+1	2.340E+1	1.270E+0
1.080E+9	5.160E+1	2.200E+1	1.320E+0
1.190E+9	5.140E+1	2.060E+1	1.370E+0
1.320E+9	5.110E+1	1.940E+1	1.430E+0
1.460E+9	5.080E+1	1.840E+1	1.490E+0
1.610E+9	5.050E+1	1.750E+1	1.570E+0
1.780E+9	5.020E+1	1.680E+1	1.670E+0
1.970E+9	5.000E+1	1.620E+1	1.780E+0
2.180E+9	4.970E+1	1.590E+1	1.930E+0
2.410E+9	4.940E+1	1.560E+1	2.100E+0
2.670E+9	4.900E+1	1.560E+1	2.310E+0
2.950E+9	4.840E+1	1.540E+1	2.540E+0
3.260E+9	4.790E+1	1.530E+1	2.780E+0
3.610E+9	4.750E+1	1.530E+1	3.080E+0
3.990E+9	4.700E+1	1.550E+1	3.440E+0
4.410E+9	4.650E+1	1.590E+1	3.900E+0
4.880E+9	4.580E+1	1.640E+1	4.440E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
5.400E+9	4.500E+1	1.690E+1	5.070E+0
5.970E+9	4.410E+1	1.740E+1	5.780E+0
6.600E+9	4.300E+1	1.790E+1	6.590E+0
7.300E+9	4.190E+1	1.850E+1	7.520E+0
8.080E+9	4.060E+1	1.900E+1	8.550E+0
8.940E+9	3.930E+1	1.940E+1	9.650E+0
9.880E+9	3.790E+1	1.970E+1	1.083E+1
1.090E+10	3.650E+1	2.000E+1	1.216E+1
1.210E+10	3.530E+1	2.050E+1	1.376E+1
1.340E+10	3.400E+1	2.070E+1	1.540E+1
1.480E+10	3.260E+1	2.100E+1	1.724E+1
1.640E+10	3.120E+1	2.190E+1	1.995E+1
1.810E+10	2.960E+1	2.330E+1	2.345E+1
2.000E+10	2.800E+1	2.460E+1	2.741E+1

Dura

Frequency (Hz)	Ovine @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
1.300E+8	6.024E+1	8.938E+1	6.500E-1
1.440E+8	5.833E+1	8.326E+1	6.700E-1
1.590E+8	5.800E+1	7.639E+1	6.800E-1
1.760E+8	5.711E+1	7.007E+1	6.900E-1
1.940E+8	5.580E+1	6.439E+1	7.000E-1
2.150E+8	5.524E+1	5.960E+1	7.100E-1
2.380E+8	5.479E+1	5.504E+1	7.300E-1
2.630E+8	5.415E+1	4.983E+1	7.300E-1
2.910E+8	5.327E+1	4.568E+1	7.400E-1
3.220E+8	5.270E+1	4.245E+1	7.600E-1
3.560E+8	5.223E+1	3.902E+1	7.700E-1
3.940E+8	5.167E+1	3.563E+1	7.800E-1
4.350E+8	5.103E+1	3.283E+1	8.000E-1
4.810E+8	5.036E+1	3.041E+1	8.100E-1
5.330E+8	5.013E+1	2.825E+1	8.400E-1
5.890E+8	4.996E+1	2.601E+1	8.500E-1
6.510E+8	4.959E+1	2.388E+1	8.700E-1
7.200E+8	4.912E+1	2.214E+1	8.900E-1
7.970E+8	4.863E+1	2.070E+1	9.200E-1
8.810E+8	4.846E+1	1.969E+1	9.700E-1
9.740E+8	4.821E+1	1.864E+1	1.010E+0
1.080E+9	4.775E+1	1.769E+1	1.060E+0
1.190E+9	4.747E+1	1.687E+1	1.120E+0
1.320E+9	4.721E+1	1.604E+1	1.180E+0
1.460E+9	4.684E+1	1.516E+1	1.230E+0
1.610E+9	4.651E+1	1.459E+1	1.310E+0
1.780E+9	4.617E+1	1.438E+1	1.430E+0
1.970E+9	4.583E+1	1.411E+1	1.550E+0
2.180E+9	4.534E+1	1.369E+1	1.660E+0
2.410E+9	4.484E+1	1.352E+1	1.810E+0
2.670E+9	4.435E+1	1.358E+1	2.020E+0
2.950E+9	4.396E+1	1.365E+1	2.240E+0
3.260E+9	4.361E+1	1.371E+1	2.490E+0
3.610E+9	4.321E+1	1.385E+1	2.780E+0
3.990E+9	4.266E+1	1.417E+1	3.150E+0
4.410E+9	4.202E+1	1.445E+1	3.550E+0
4.880E+9	4.141E+1	1.478E+1	4.020E+0
5.400E+9	4.069E+1	1.524E+1	4.580E+0
5.970E+9	3.987E+1	1.572E+1	5.220E+0
6.600E+9	3.893E+1	1.621E+1	5.960E+0
7.300E+9	3.792E+1	1.677E+1	6.810E+0
8.080E+9	3.685E+1	1.734E+1	7.790E+0
8.940E+9	3.565E+1	1.785E+1	8.870E+0
9.880E+9	3.448E+1	1.821E+1	1.001E+1
1.090E+10	3.334E+1	1.861E+1	1.132E+1
1.210E+10	3.190E+1	1.909E+1	1.284E+1
1.340E+10	3.027E+1	1.963E+1	1.460E+1
1.480E+10	2.862E+1	2.002E+1	1.647E+1
1.640E+10	2.702E+1	2.028E+1	1.845E+1
1.810E+10	2.536E+1	2.072E+1	2.085E+1
2.000E+10	2.354E+1	2.124E+1	2.364E+1

Eye Tissues

Frequency (Hz)	Ovine (Sclera) @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
1.090E+6	3.115E+3	1.025E+4	6.200E-1
1.310E+6	2.407E+3	8.901E+3	6.500E-1
1.570E+6	1.853E+3	7.789E+3	6.800E-1
1.890E+6	1.489E+3	6.665E+3	7.000E-1
2.280E+6	1.243E+3	5.618E+3	7.100E-1
2.740E+6	9.377E+2	4.702E+3	7.200E-1
3.290E+6	7.362E+2	3.945E+3	7.200E-1
3.950E+6	6.205E+2	3.336E+3	7.300E-1
4.750E+6	5.146E+2	2.843E+3	7.500E-1
5.720E+6	4.076E+2	2.414E+3	7.700E-1
6.870E+6	3.112E+2	2.034E+3	7.800E-1
8.260E+6	2.482E+2	1.711E+3	7.900E-1
9.930E+6	2.100E+2	1.431E+3	7.900E-1
1.190E+7	1.822E+2	1.199E+3	8.000E-1
1.440E+7	1.569E+2	1.009E+3	8.100E-1
1.730E+7	1.385E+2	8.481E+2	8.100E-1
2.080E+7	1.239E+2	7.134E+2	8.200E-1
2.500E+7	1.114E+2	5.996E+2	8.300E-1
3.000E+7	1.012E+2	5.048E+2	8.400E-1
3.610E+7	9.360E+1	4.250E+2	8.500E-1
4.340E+7	8.690E+1	3.570E+2	8.600E-1
5.210E+7	8.100E+1	3.002E+2	8.700E-1
6.270E+7	7.630E+1	2.524E+2	8.800E-1
7.540E+7	7.240E+1	2.120E+2	8.900E-1
9.060E+7	6.910E+1	1.785E+2	9.000E-1
1.090E+8	6.600E+1	1.505E+2	9.100E-1
1.310E+8	6.360E+1	1.270E+2	9.300E-1
1.570E+8	6.170E+1	1.072E+2	9.400E-1
1.890E+8	6.000E+1	9.040E+1	9.500E-1
2.280E+8	5.840E+1	7.640E+1	9.700E-1
2.740E+8	5.710E+1	6.470E+1	9.800E-1
3.290E+8	5.600E+1	5.480E+1	1.000E+0
3.950E+8	5.500E+1	4.660E+1	1.030E+0
4.750E+8	5.410E+1	3.980E+1	1.050E+0
5.720E+8	5.340E+1	3.410E+1	1.080E+0
6.870E+8	5.270E+1	2.940E+1	1.120E+0
8.260E+8	5.210E+1	2.540E+1	1.170E+0
9.930E+8	5.140E+1	2.210E+1	1.220E+0
1.190E+9	5.090E+1	1.940E+1	1.290E+0
1.300E+8	6.451E+1	1.233E+2	8.900E-1
1.440E+8	6.460E+1	1.118E+2	8.900E-1
1.590E+8	6.420E+1	1.017E+2	9.000E-1
1.760E+8	6.322E+1	9.213E+1	9.000E-1
1.940E+8	6.215E+1	8.393E+1	9.100E-1
2.150E+8	6.179E+1	7.704E+1	9.200E-1
2.380E+8	6.124E+1	7.058E+1	9.300E-1
2.630E+8	6.063E+1	6.412E+1	9.400E-1
2.910E+8	6.001E+1	5.858E+1	9.500E-1
3.220E+8	5.914E+1	5.391E+1	9.700E-1
3.560E+8	5.844E+1	4.941E+1	9.800E-1
3.940E+8	5.804E+1	4.523E+1	9.900E-1
4.350E+8	5.769E+1	4.156E+1	1.010E+0
4.810E+8	5.711E+1	3.809E+1	1.020E+0
5.330E+8	5.658E+1	3.498E+1	1.040E+0
5.890E+8	5.630E+1	3.222E+1	1.060E+0
6.510E+8	5.607E+1	2.973E+1	1.080E+0
7.200E+8	5.573E+1	2.762E+1	1.110E+0
7.970E+8	5.523E+1	2.570E+1	1.140E+0
8.810E+8	5.490E+1	2.395E+1	1.170E+0
9.740E+8	5.451E+1	2.243E+1	1.220E+0

Frequency (Hz)	Ovine (Sclera) @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
1.080E+9	5.418E+1	2.117E+1	1.270E+0
1.190E+9	5.410E+1	2.004E+1	1.330E+0
1.320E+9	5.390E+1	1.901E+1	1.390E+0
1.460E+9	5.354E+1	1.812E+1	1.470E+0
1.610E+9	5.314E+1	1.739E+1	1.560E+0
1.780E+9	5.272E+1	1.679E+1	1.670E+0
1.970E+9	5.240E+1	1.629E+1	1.790E+0
2.180E+9	5.213E+1	1.597E+1	1.940E+0
2.410E+9	5.175E+1	1.577E+1	2.120E+0
2.670E+9	5.129E+1	1.566E+1	2.320E+0
2.950E+9	5.085E+1	1.564E+1	2.570E+0
3.260E+9	5.045E+1	1.568E+1	2.850E+0
3.610E+9	5.004E+1	1.589E+1	3.190E+0
3.990E+9	4.958E+1	1.633E+1	3.630E+0
4.410E+9	4.896E+1	1.690E+1	4.150E+0
4.880E+9	4.811E+1	1.755E+1	4.770E+0
5.400E+9	4.706E+1	1.829E+1	5.500E+0
5.970E+9	4.591E+1	1.897E+1	6.300E+0
6.600E+9	4.470E+1	1.957E+1	7.190E+0
7.300E+9	4.343E+1	2.016E+1	8.190E+0
8.080E+9	4.210E+1	2.082E+1	9.360E+0
8.940E+9	4.051E+1	2.147E+1	1.067E+1
9.880E+9	3.881E+1	2.192E+1	1.205E+1
1.090E+10	3.710E+1	2.224E+1	1.352E+1
1.210E+10	3.532E+1	2.251E+1	1.513E+1
1.340E+10	3.358E+1	2.263E+1	1.683E+1
1.480E+10	3.178E+1	2.266E+1	1.864E+1
1.640E+10	2.994E+1	2.276E+1	2.070E+1
1.810E+10	2.810E+1	2.292E+1	2.306E+1
2.000E+10	2.624E+1	2.310E+1	2.570E+1

Fat

Frequency (Hz)	Bovine Fat @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	1.060E+7	2.621E+7	1.458E-2
1.122E+1	9.682E+6	2.416E+7	1.508E-2
1.259E+1	8.646E+6	2.233E+7	1.564E-2
1.350E+1	7.698E+6	2.058E+7	1.617E-2
1.585E+1	6.803E+6	1.892E+7	1.669E-2
1.778E+1	5.965E+6	1.737E+7	1.719E-2
1.995E+1	5.214E+6	1.594E+7	1.770E-2
2.239E+1	4.528E+6	1.458E+7	1.816E-2
2.512E+1	3.916E+6	1.332E+7	1.861E-2
2.818E+1	3.376E+6	1.214E+7	1.903E-2
3.162E+1	2.899E+6	1.105E+7	1.943E-2
3.548E+1	2.484E+6	1.004E+7	1.981E-2
3.981E+1	2.126E+6	9.104E+6	2.016E-2
4.467E+1	1.808E+6	8.250E+6	2.050E-2
5.012E+1	1.538E+6	7.464E+6	2.081E-2
5.623E+1	1.306E+6	6.745E+6	2.110E-2
6.310E+1	1.108E+6	6.088E+6	2.137E-2
7.079E+1	9.387E+5	5.490E+6	2.162E-2
7.943E+1	7.937E+5	4.947E+6	2.186E-2
8.913E+1	6.714E+5	4.452E+6	2.208E-2
1.000E+2	5.671E+5	4.005E+6	2.228E-2
1.122E+2	4.804E+5	3.600E+6	2.247E-2
1.259E+2	4.038E+5	3.232E+6	2.264E-2
1.413E+2	3.417E+5	2.903E+6	2.281E-2
1.585E+2	2.887E+5	2.606E+6	2.297E-2
1.778E+2	2.438E+5	2.337E+6	2.312E-2
1.995E+2	2.059E+5	2.095E+6	2.325E-2
2.239E+2	1.740E+5	1.878E+6	2.338E-2
2.512E+2	1.469E+5	1.682E+6	2.350E-2
2.818E+2	1.245E+5	1.507E+6	2.362E-2
3.162E+2	1.051E+5	1.349E+6	2.373E-2
3.548E+2	8.914E+4	1.207E+6	2.383E-2
3.981E+2	7.554E+4	1.081E+6	2.393E-2
4.467E+2	6.414E+4	9.666E+5	2.402E-2
5.012E+2	5.436E+4	8.647E+5	2.411E-2
5.623E+2	4.619E+4	7.733E+5	2.419E-2
6.310E+2	3.929E+4	6.915E+5	2.427E-2
7.079E+2	3.343E+4	6.183E+5	2.435E-2
7.943E+2	2.849E+4	5.527E+5	2.442E-2
8.913E+2	2.431E+4	4.940E+5	2.449E-2
1.000E+3	2.076E+4	4.415E+5	2.456E-2
1.122E+3	1.779E+4	3.945E+5	2.463E-2
1.259E+3	1.524E+4	3.526E+5	2.469E-2
1.413E+3	1.308E+4	3.150E+5	2.475E-2
1.585E+3	1.123E+4	2.814E+5	2.481E-2
1.778E+3	9.649E+3	2.514E+5	2.487E-2
1.995E+3	8.359E+3	2.246E+5	2.493E-2
2.239E+3	7.191E+3	2.006E+5	2.498E-2
2.512E+3	6.202E+3	1.791E+5	2.503E-2
2.818E+3	5.362E+3	1.600E+5	2.509E-2
3.162E+3	4.642E+3	1.429E+5	2.514E-2
3.548E+3	4.022E+3	1.276E+5	2.518E-2
3.981E+3	3.486E+3	1.139E+5	2.523E-2
4.467E+3	3.024E+3	1.017E+5	2.528E-2
5.012E+3	2.629E+3	9.083E+4	2.533E-2
5.623E+3	2.287E+3	8.109E+4	2.537E-2
6.310E+3	1.987E+3	7.238E+4	2.541E-2
7.079E+3	1.729E+3	6.462E+4	2.545E-2
7.943E+3	1.506E+3	5.768E+4	2.549E-2
8.913E+3	1.312E+3	5.149E+4	2.553E-2

Frequency (Hz)	Bovine Fat @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	1.144E+3	4.596E+4	2.557E-2
1.122E+4	1.003E+3	4.102E+4	2.561E-2
1.259E+4	8.765E+2	3.661E+4	2.564E-2
1.413E+4	7.665E+2	3.268E+4	2.568E-2
1.585E+4	6.708E+2	2.917E+4	2.572E-2
1.778E+4	5.873E+2	2.603E+4	2.575E-2
1.995E+4	5.140E+2	2.323E+4	2.578E-2
2.239E+4	4.512E+2	2.073E+4	2.581E-2
2.512E+4	3.953E+2	1.849E+4	2.585E-2
2.818E+4	3.473E+2	1.651E+4	2.588E-2
3.162E+4	3.052E+2	1.473E+4	2.591E-2
3.548E+4	2.695E+2	1.314E+4	2.593E-2
3.981E+4	2.378E+2	1.172E+4	2.596E-2
4.467E+4	2.105E+2	1.046E+4	2.599E-2
5.012E+4	1.868E+2	9.331E+3	2.602E-2
5.623E+4	1.655E+2	8.325E+3	2.604E-2
6.310E+4	1.477E+2	7.426E+3	2.607E-2
7.079E+4	1.314E+2	6.625E+3	2.609E-2
7.943E+4	1.177E+2	5.909E+3	2.611E-2
8.913E+4	1.059E+2	5.272E+3	2.614E-2
1.000E+5	9.535E+1	4.702E+3	2.616E-2
1.122E+5	8.610E+1	4.195E+3	2.619E-2
1.259E+5	7.817E+1	3.742E+3	2.621E-2
1.413E+5	7.117E+1	3.337E+3	2.623E-2
1.585E+5	6.511E+1	2.977E+3	2.625E-2
1.778E+5	5.968E+1	2.656E+3	2.627E-2
1.995E+5	5.499E+1	2.369E+3	2.629E-2
2.239E+5	5.084E+1	2.113E+3	2.632E-2
2.512E+5	4.721E+1	1.885E+3	2.634E-2
2.818E+5	4.401E+1	1.681E+3	2.636E-2
3.162E+5	4.113E+1	1.500E+3	2.639E-2
3.548E+5	3.859E+1	1.338E+3	2.641E-2
3.981E+5	3.631E+1	1.193E+3	2.643E-2
4.467E+5	3.429E+1	1.065E+3	2.646E-2
5.012E+5	3.250E+1	9.499E+2	2.649E-2
5.623E+5	3.081E+1	8.476E+2	2.652E-2
6.310E+5	2.938E+1	7.562E+2	2.654E-2
7.079E+5	2.804E+1	6.749E+2	2.658E-2
7.943E+5	2.680E+1	6.021E+2	2.661E-2
8.913E+5	2.573E+1	5.374E+2	2.665E-2
1.000E+6	2.474E+1	4.796E+2	2.668E-2
1.122E+6	2.380E+1	4.281E+2	2.672E-2
1.259E+6	2.296E+1	3.821E+2	2.676E-2
1.413E+6	2.217E+1	3.411E+2	2.680E-2
1.585E+6	2.143E+1	3.046E+2	2.686E-2
1.778E+6	2.076E+1	2.719E+2	2.690E-2
1.995E+6	2.008E+1	2.428E+2	2.695E-2
2.239E+6	1.951E+1	2.171E+2	2.704E-2
2.512E+6	1.889E+1	1.937E+2	2.707E-2
2.818E+6	1.842E+1	1.730E+2	2.713E-2
3.162E+6	1.794E+1	1.545E+2	2.718E-2
3.548E+6	1.752E+1	1.379E+2	2.722E-2
3.981E+6	1.716E+1	1.231E+2	2.727E-2
4.467E+6	1.684E+1	1.100E+2	2.734E-2
5.012E+6	1.655E+1	9.820E+1	2.738E-2
5.623E+6	1.632E+1	8.760E+1	2.741E-2
6.310E+6	1.616E+1	7.814E+1	2.743E-2
7.079E+6	1.609E+1	6.963E+1	2.742E-2
7.943E+6	1.575E+1	6.211E+1	2.745E-2
8.913E+6	1.550E+1	5.523E+1	2.738E-2

Fat

Frequency (Hz)	Bovine Fat @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+7	1.525E+1	4.913E+1	2.733E-2
1.089E+7	1.500E+1	4.456E+1	2.700E-2
1.194E+7	1.475E+1	4.064E+1	2.700E-2
1.310E+7	1.450E+1	3.706E+1	2.700E-2
1.436E+7	1.328E+1	3.380E+1	2.700E-2
1.574E+7	1.279E+1	3.083E+1	2.700E-2
1.726E+7	1.251E+1	2.811E+1	2.700E-2
1.893E+7	1.152E+1	2.564E+1	2.700E-2
2.075E+7	1.131E+1	2.338E+1	2.700E-2
2.276E+7	1.066E+1	2.133E+1	2.700E-2
2.495E+7	1.025E+1	1.945E+1	2.700E-2
2.736E+7	1.008E+1	1.774E+1	2.700E-2
3.000E+7	9.465E+0	1.618E+1	2.700E-2
3.289E+7	8.883E+0	1.475E+1	2.700E-2
3.607E+7	8.808E+0	1.346E+1	2.700E-2
3.955E+7	8.322E+0	1.227E+1	2.700E-2
4.336E+7	8.141E+0	1.145E+1	2.763E-2
4.755E+7	7.745E+0	1.040E+1	2.751E-2
5.213E+7	7.580E+0	9.746E+0	2.827E-2
5.716E+7	7.314E+0	9.049E+0	2.878E-2
6.268E+7	7.267E+0	8.401E+0	2.929E-2
6.873E+7	6.956E+0	7.852E+0	3.002E-2
7.536E+7	6.790E+0	7.342E+0	3.078E-2
8.263E+7	6.640E+0	6.764E+0	3.109E-2
9.060E+7	6.518E+0	6.244E+0	3.147E-2
9.934E+7	6.290E+0	5.887E+0	3.254E-2
1.089E+8	6.249E+0	5.402E+0	3.273E-2
1.194E+8	6.087E+0	4.976E+0	3.306E-2
1.310E+8	5.947E+0	4.718E+0	3.437E-2
1.436E+8	5.788E+0	4.304E+0	3.438E-2
1.574E+8	5.791E+0	4.078E+0	3.572E-2
1.726E+8	5.662E+0	3.798E+0	3.648E-2
1.893E+8	5.561E+0	3.487E+0	3.672E-2
2.075E+8	5.502E+0	3.289E+0	3.798E-2
2.276E+8	5.415E+0	3.062E+0	3.877E-2
2.495E+8	5.340E+0	2.804E+0	3.892E-2
2.736E+8	5.257E+0	2.635E+0	4.010E-2
3.000E+8	5.218E+0	2.504E+0	4.178E-2
3.289E+8	5.141E+0	2.258E+0	4.131E-2
3.607E+8	5.110E+0	2.133E+0	4.281E-2
3.955E+8	5.079E+0	1.997E+0	4.393E-2
4.336E+8	5.028E+0	1.866E+0	4.502E-2
4.755E+8	4.999E+0	1.759E+0	4.652E-2
5.213E+8	4.941E+0	1.651E+0	4.790E-2
5.716E+8	4.941E+0	1.550E+0	4.930E-2
6.268E+8	4.877E+0	1.472E+0	5.132E-2
6.873E+8	4.862E+0	1.334E+0	5.100E-2
7.536E+8	4.870E+0	1.240E+0	5.200E-2
8.263E+8	4.830E+0	1.131E+0	5.200E-2
9.060E+8	4.782E+0	1.052E+0	5.300E-2
9.934E+8	4.725E+0	9.771E-1	5.400E-2
1.089E+9	4.754E+0	9.076E-1	5.500E-2
1.133E+9	4.533E+0	8.723E-1	5.500E-2
1.192E+9	4.590E+0	8.445E-1	5.600E-2
1.254E+9	4.495E+0	8.102E-1	5.650E-2
1.318E+9	4.426E+0	7.772E-1	5.700E-2
1.386E+9	4.662E+0	7.623E-1	5.880E-2
1.458E+9	4.438E+0	7.397E-1	6.000E-2
1.533E+9	4.490E+0	7.131E-1	6.083E-2
1.612E+9	4.465E+0	6.787E-1	6.089E-2

Frequency (Hz)	Bovine Fat @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.696E+9	4.446E+0	6.678E-1	6.300E-2
1.783E+9	4.508E+0	6.713E-1	6.660E-2
1.875E+9	4.503E+0	6.488E-1	6.769E-2
1.972E+9	4.445E+0	6.552E-1	7.189E-2
2.074E+9	4.490E+0	6.458E-1	7.452E-2
2.181E+9	4.483E+0	6.345E-1	7.700E-2
2.294E+9	4.454E+0	6.300E-1	8.040E-2
2.412E+9	4.394E+0	5.971E-1	8.014E-2
2.537E+9	4.400E+0	5.840E-1	8.242E-2
2.668E+9	4.429E+0	6.435E-1	9.551E-2
2.806E+9	4.404E+0	5.968E-1	9.316E-2
2.951E+9	4.405E+0	6.129E-1	1.006E-1
3.103E+9	4.420E+0	6.508E-1	1.124E-1
3.263E+9	4.426E+0	6.225E-1	1.130E-1
3.432E+9	4.408E+0	6.287E-1	1.200E-1
3.609E+9	4.397E+0	6.331E-1	1.271E-1
3.796E+9	4.383E+0	6.405E-1	1.352E-1
3.992E+9	4.362E+0	6.542E-1	1.453E-1
4.198E+9	4.399E+0	6.706E-1	1.566E-1
4.415E+9	4.356E+0	6.929E-1	1.702E-1
4.643E+9	4.362E+0	7.314E-1	1.889E-1
4.883E+9	4.325E+0	7.526E-1	2.044E-1
5.135E+9	4.312E+0	7.691E-1	2.197E-1
5.400E+9	4.304E+0	7.850E-1	2.358E-1
5.679E+9	4.277E+0	8.095E-1	2.557E-1
5.972E+9	4.242E+0	8.438E-1	2.804E-1
6.281E+9	4.244E+0	8.649E-1	3.022E-1
6.605E+9	4.194E+0	8.986E-1	3.302E-1
6.946E+9	4.138E+0	9.162E-1	3.540E-1
7.305E+9	4.140E+0	9.497E-1	3.859E-1
7.682E+9	4.117E+0	9.917E-1	4.238E-1
8.079E+9	4.071E+0	9.760E-1	4.387E-1
8.496E+9	4.011E+0	1.008E+0	4.764E-1
8.935E+9	3.972E+0	1.026E+0	5.098E-1
9.397E+9	3.910E+0	1.047E+0	5.472E-1
9.882E+9	3.870E+0	1.063E+0	5.842E-1
1.039E+10	3.813E+0	1.066E+0	6.166E-1
1.093E+10	3.773E+0	1.087E+0	6.609E-1
1.149E+10	3.729E+0	1.085E+0	6.935E-1
1.209E+10	3.679E+0	1.076E+0	7.235E-1
1.271E+10	3.613E+0	1.089E+0	7.700E-1
1.337E+10	3.565E+0	1.086E+0	8.074E-1
1.406E+10	3.525E+0	1.080E+0	8.447E-1
1.478E+10	3.458E+0	1.069E+0	8.789E-1
1.555E+10	3.412E+0	1.076E+0	9.303E-1
1.635E+10	3.367E+0	1.055E+0	9.599E-1
1.720E+10	3.328E+0	1.040E+0	9.946E-1
1.808E+10	3.278E+0	1.041E+0	1.047E+0
1.902E+10	3.233E+0	1.027E+0	1.086E+0
2.000E+10	3.194E+0	1.018E+0	1.132E+0

Gall Bladder

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.194E+7	9.775E+1	1.176E+3	7.812E-1
1.310E+7	9.633E+1	1.075E+3	7.829E-1
1.436E+7	9.518E+1	9.769E+2	7.804E-1
1.574E+7	9.439E+1	8.917E+2	7.811E-1
1.726E+7	9.471E+1	8.157E+2	7.834E-1
1.893E+7	9.558E+1	7.449E+2	7.844E-1
2.075E+7	9.526E+1	6.817E+2	7.871E-1
2.276E+7	9.570E+1	6.226E+2	7.883E-1
2.495E+7	9.431E+1	5.687E+2	7.895E-1
2.736E+7	9.592E+1	5.205E+2	7.923E-1
3.000E+7	9.400E+1	4.777E+2	7.973E-1
3.289E+7	9.274E+1	4.377E+2	8.009E-1
3.607E+7	9.227E+1	4.010E+2	8.046E-1
3.955E+7	9.156E+1	3.678E+2	8.092E-1
4.336E+7	8.986E+1	3.370E+2	8.131E-1
4.755E+7	8.911E+1	3.105E+2	8.213E-1
5.213E+7	8.770E+1	2.854E+2	8.277E-1
5.716E+7	8.589E+1	2.625E+2	8.347E-1
6.268E+7	8.447E+1	2.416E+2	8.424E-1
6.873E+7	8.253E+1	2.225E+2	8.507E-1
7.536E+7	8.112E+1	2.048E+2	8.587E-1
8.263E+7	7.928E+1	1.884E+2	8.658E-1
9.060E+7	7.749E+1	1.737E+2	8.757E-1
9.934E+7	7.612E+1	1.601E+2	8.848E-1
1.089E+8	7.449E+1	1.472E+2	8.918E-1
1.194E+8	7.320E+1	1.354E+2	8.998E-1
1.310E+8	7.184E+1	1.249E+2	9.099E-1
1.436E+8	7.043E+1	1.148E+2	9.173E-1
1.574E+8	6.896E+1	1.058E+2	9.266E-1
1.726E+8	6.781E+1	9.732E+1	9.346E-1
1.893E+8	6.671E+1	8.961E+1	9.437E-1
2.075E+8	6.573E+1	8.261E+1	9.538E-1
2.276E+8	6.480E+1	7.611E+1	9.635E-1
2.495E+8	6.401E+1	6.991E+1	9.706E-1
2.736E+8	6.314E+1	6.438E+1	9.799E-1
3.000E+8	6.240E+1	5.932E+1	9.901E-1
3.289E+8	6.177E+1	5.472E+1	1.001E+0
3.607E+8	6.117E+1	5.035E+1	1.010E+0
3.955E+8	6.051E+1	4.633E+1	1.019E+0
4.336E+8	6.006E+1	4.289E+1	1.035E+0
4.354E+8	6.414E+1	5.253E+1	1.272E+0
4.578E+8	6.406E+1	5.054E+1	1.287E+0
4.815E+8	6.387E+1	4.838E+1	1.296E+0
5.064E+8	6.342E+1	4.625E+1	1.303E+0
5.325E+8	6.320E+1	4.454E+1	1.320E+0
5.600E+8	6.291E+1	4.234E+1	1.319E+0
5.889E+8	6.295E+1	4.039E+1	1.323E+0
6.194E+8	6.254E+1	3.898E+1	1.343E+0
6.513E+8	6.248E+1	3.754E+1	1.360E+0
6.850E+8	6.222E+1	3.588E+1	1.367E+0
7.204E+8	6.207E+1	3.454E+1	1.384E+0
7.576E+8	6.202E+1	3.329E+1	1.403E+0
7.967E+8	6.172E+1	3.178E+1	1.408E+0
8.378E+8	6.166E+1	3.073E+1	1.432E+0
8.811E+8	6.128E+1	2.948E+1	1.445E+0
9.266E+8	6.129E+1	2.844E+1	1.466E+0
9.745E+8	6.129E+1	2.737E+1	1.484E+0
1.025E+9	6.086E+1	2.653E+1	1.513E+0
1.078E+9	6.060E+1	2.556E+1	1.532E+0
1.133E+9	6.073E+1	2.466E+1	1.555E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.192E+9	6.045E+1	2.401E+1	1.592E+0
1.254E+9	6.028E+1	2.328E+1	1.624E+0
1.318E+9	6.017E+1	2.261E+1	1.658E+0
1.386E+9	5.998E+1	2.180E+1	1.681E+0
1.458E+9	5.988E+1	2.120E+1	1.720E+0
1.533E+9	5.965E+1	2.076E+1	1.771E+0
1.612E+9	5.957E+1	2.034E+1	1.825E+0
1.696E+9	5.938E+1	1.973E+1	1.861E+0
1.783E+9	5.926E+1	1.925E+1	1.910E+0
1.875E+9	5.907E+1	1.893E+1	1.975E+0
1.972E+9	5.890E+1	1.859E+1	2.040E+0
2.074E+9	5.873E+1	1.819E+1	2.099E+0
2.181E+9	5.858E+1	1.793E+1	2.176E+0
2.294E+9	5.835E+1	1.770E+1	2.259E+0
2.412E+9	5.811E+1	1.754E+1	2.354E+0
2.537E+9	5.800E+1	1.734E+1	2.447E+0
2.668E+9	5.782E+1	1.717E+1	2.549E+0
2.806E+9	5.768E+1	1.705E+1	2.662E+0
2.951E+9	5.740E+1	1.699E+1	2.790E+0
3.103E+9	5.722E+1	1.683E+1	2.905E+0
3.263E+9	5.702E+1	1.682E+1	3.054E+0
3.432E+9	5.686E+1	1.680E+1	3.208E+0
3.609E+9	5.651E+1	1.679E+1	3.372E+0
3.796E+9	5.655E+1	1.680E+1	3.548E+0
3.992E+9	5.635E+1	1.692E+1	3.757E+0
4.198E+9	5.621E+1	1.705E+1	3.983E+0
4.415E+9	5.591E+1	1.735E+1	4.261E+0
4.643E+9	5.574E+1	1.758E+1	4.541E+0
4.883E+9	5.562E+1	1.812E+1	4.923E+0
5.135E+9	5.518E+1	1.853E+1	5.294E+0
5.400E+9	5.496E+1	1.900E+1	5.709E+0
5.679E+9	5.437E+1	1.953E+1	6.169E+0
5.972E+9	5.370E+1	2.016E+1	6.698E+0
6.281E+9	5.298E+1	2.064E+1	7.212E+0
6.605E+9	5.214E+1	2.099E+1	7.712E+0
6.946E+9	5.144E+1	2.130E+1	8.230E+0
7.305E+9	5.078E+1	2.151E+1	8.743E+0
7.682E+9	5.019E+1	2.209E+1	9.442E+0
8.079E+9	4.931E+1	2.222E+1	9.988E+0
8.496E+9	4.855E+1	2.266E+1	1.071E+1
8.935E+9	4.774E+1	2.329E+1	1.158E+1
9.397E+9	4.697E+1	2.371E+1	1.240E+1
9.882E+9	4.570E+1	2.404E+1	1.321E+1
1.039E+10	4.466E+1	2.462E+1	1.423E+1
1.093E+10	4.333E+1	2.452E+1	1.491E+1
1.149E+10	4.239E+1	2.483E+1	1.588E+1
1.209E+10	4.129E+1	2.476E+1	1.665E+1
1.271E+10	4.038E+1	2.485E+1	1.757E+1
1.337E+10	3.913E+1	2.440E+1	1.815E+1
1.406E+10	3.797E+1	2.481E+1	1.941E+1
1.478E+10	3.690E+1	2.489E+1	2.047E+1
1.555E+10	3.611E+1	2.452E+1	2.121E+1
1.635E+10	3.514E+1	2.479E+1	2.255E+1
1.720E+10	3.384E+1	2.472E+1	2.365E+1
1.808E+10	3.300E+1	2.460E+1	2.475E+1
1.902E+10	3.186E+1	2.467E+1	2.610E+1
2.000E+10	3.090E+1	2.411E+1	2.682E+1

Gall Bladder Bile

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
2.075E+7	1.108E+2	1.151E+3	1.330E+0
2.276E+7	1.126E+2	1.050E+3	1.330E+0
2.495E+7	1.114E+2	9.579E+2	1.330E+0
2.736E+7	1.154E+2	8.757E+2	1.333E+0
3.000E+7	1.141E+2	8.020E+2	1.339E+0
3.289E+7	1.127E+2	7.337E+2	1.343E+0
3.607E+7	1.130E+2	6.714E+2	1.347E+0
3.955E+7	1.130E+2	6.150E+2	1.353E+0
4.336E+7	1.114E+2	5.628E+2	1.358E+0
4.755E+7	1.107E+2	5.179E+2	1.370E+0
5.213E+7	1.090E+2	4.749E+2	1.378E+0
5.716E+7	1.070E+2	4.360E+2	1.387E+0
6.268E+7	1.052E+2	4.004E+2	1.396E+0
6.873E+7	1.026E+2	3.680E+2	1.407E+0
7.536E+7	1.012E+2	3.379E+2	1.417E+0
8.263E+7	9.893E+1	3.100E+2	1.425E+0
9.060E+7	9.665E+1	2.852E+2	1.437E+0
9.934E+7	9.495E+1	2.623E+2	1.450E+0
1.089E+8	9.301E+1	2.403E+2	1.456E+0
1.194E+8	9.132E+1	2.206E+2	1.466E+0
1.310E+8	8.969E+1	2.027E+2	1.477E+0
1.436E+8	8.812E+1	1.858E+2	1.484E+0
1.574E+8	8.624E+1	1.706E+2	1.494E+0
1.726E+8	8.497E+1	1.566E+2	1.504E+0
1.893E+8	8.364E+1	1.437E+2	1.513E+0
2.075E+8	8.259E+1	1.320E+2	1.524E+0
2.276E+8	8.161E+1	1.214E+2	1.536E+0
2.495E+8	8.071E+1	1.112E+2	1.543E+0
2.736E+8	7.973E+1	1.020E+2	1.553E+0
3.000E+8	7.893E+1	9.369E+1	1.564E+0
3.289E+8	7.827E+1	8.613E+1	1.576E+0
3.607E+8	7.771E+1	7.900E+1	1.585E+0
3.955E+8	7.699E+1	7.254E+1	1.596E+0
4.336E+8	7.655E+1	6.686E+1	1.613E+0
4.755E+8	7.639E+1	6.145E+1	1.626E+0
5.213E+8	7.572E+1	5.681E+1	1.648E+0
5.716E+8	7.528E+1	5.237E+1	1.665E+0
6.268E+8	7.478E+1	4.814E+1	1.679E+0
6.873E+8	7.465E+1	4.444E+1	1.699E+0
7.536E+8	7.450E+1	4.102E+1	1.720E+0
8.263E+8	7.418E+1	3.850E+1	1.770E+0
9.060E+8	7.460E+1	3.543E+1	1.786E+0
9.934E+8	7.375E+1	3.390E+1	1.874E+0
1.089E+9	7.395E+1	3.156E+1	1.912E+0
1.194E+9	7.332E+1	3.031E+1	2.014E+0
1.310E+9	7.210E+1	2.900E+1	2.113E+0
1.436E+9	7.125E+1	2.663E+1	2.127E+0
1.574E+9	7.135E+1	2.530E+1	2.216E+0
1.726E+9	7.165E+1	2.350E+1	2.257E+0
1.893E+9	7.134E+1	2.278E+1	2.399E+0
2.075E+9	7.131E+1	2.249E+1	2.597E+0
2.181E+9	6.738E+1	2.141E+1	2.598E+0
2.294E+9	6.728E+1	2.105E+1	2.686E+0
2.412E+9	6.695E+1	2.065E+1	2.771E+0
2.537E+9	6.684E+1	2.040E+1	2.879E+0
2.668E+9	6.666E+1	2.016E+1	2.993E+0
2.806E+9	6.653E+1	1.999E+1	3.121E+0
2.951E+9	6.629E+1	1.984E+1	3.257E+0
3.103E+9	6.606E+1	1.965E+1	3.392E+0
3.263E+9	6.579E+1	1.949E+1	3.538E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.432E+9	6.575E+1	1.950E+1	3.724E+0
3.609E+9	6.530E+1	1.941E+1	3.898E+0
3.796E+9	6.523E+1	1.951E+1	4.119E+0
3.992E+9	6.496E+1	1.961E+1	4.355E+0
4.198E+9	6.475E+1	1.963E+1	4.585E+0
4.415E+9	6.436E+1	1.993E+1	4.895E+0
4.643E+9	6.416E+1	1.991E+1	5.142E+0
4.883E+9	6.377E+1	2.044E+1	5.552E+0
5.135E+9	6.322E+1	2.066E+1	5.900E+0
5.400E+9	6.291E+1	2.090E+1	6.279E+0
5.679E+9	6.248E+1	2.116E+1	6.686E+0
5.972E+9	6.179E+1	2.155E+1	7.158E+0
6.281E+9	6.137E+1	2.186E+1	7.639E+0
6.605E+9	6.076E+1	2.232E+1	8.201E+0
6.946E+9	6.025E+1	2.253E+1	8.708E+0
7.305E+9	5.962E+1	2.285E+1	9.288E+0
7.682E+9	5.910E+1	2.344E+1	1.002E+1
8.079E+9	5.819E+1	2.366E+1	1.064E+1
8.496E+9	5.735E+1	2.420E+1	1.144E+1
8.935E+9	5.652E+1	2.466E+1	1.226E+1
9.397E+9	5.595E+1	2.518E+1	1.316E+1
9.882E+9	5.473E+1	2.541E+1	1.397E+1
1.039E+10	5.397E+1	2.609E+1	1.508E+1
1.093E+10	5.269E+1	2.617E+1	1.591E+1
1.149E+10	5.185E+1	2.681E+1	1.714E+1
1.209E+10	5.082E+1	2.693E+1	1.811E+1
1.271E+10	5.006E+1	2.721E+1	1.924E+1
1.337E+10	4.862E+1	2.700E+1	2.008E+1
1.406E+10	4.735E+1	2.749E+1	2.150E+1
1.478E+10	4.629E+1	2.823E+1	2.322E+1
1.555E+10	4.520E+1	2.777E+1	2.402E+1
1.635E+10	4.429E+1	2.843E+1	2.586E+1
1.720E+10	4.273E+1	2.848E+1	2.725E+1
1.808E+10	4.180E+1	2.853E+1	2.870E+1
1.902E+10	4.037E+1	2.866E+1	3.032E+1
2.000E+10	3.906E+1	2.821E+1	3.139E+1

Grey Matter

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	5.260E+7	6.163E+7	3.429E-2
1.122E+1	4.923E+7	5.826E+7	3.637E-2
1.259E+1	4.558E+7	5.553E+7	3.889E-2
1.350E+1	4.198E+7	5.289E+7	4.156E-2
1.585E+1	3.834E+7	5.028E+7	4.433E-2
1.778E+1	3.474E+7	4.767E+7	4.716E-2
1.995E+1	3.128E+7	4.511E+7	5.007E-2
2.239E+1	2.800E+7	4.265E+7	5.312E-2
2.512E+1	2.491E+7	4.021E+7	5.619E-2
2.818E+1	2.177E+7	3.881E+7	6.085E-2
3.162E+1	1.918E+7	3.634E+7	6.394E-2
3.548E+1	1.675E+7	3.383E+7	6.679E-2
3.981E+1	1.457E+7	3.137E+7	6.947E-2
4.467E+1	1.263E+7	2.903E+7	7.214E-2
5.012E+1	1.089E+7	2.678E+7	7.468E-2
5.623E+1	9.346E+6	2.462E+7	7.703E-2
6.310E+1	7.996E+6	2.256E+7	7.920E-2
7.079E+1	6.841E+6	2.066E+7	8.137E-2
7.943E+1	5.851E+6	1.889E+7	8.349E-2
8.913E+1	4.988E+6	1.722E+7	8.539E-2
1.000E+2	4.239E+6	1.566E+7	8.714E-2
1.122E+2	3.603E+6	1.422E+7	8.876E-2
1.259E+2	3.055E+6	1.289E+7	9.025E-2
1.413E+2	2.587E+6	1.166E+7	9.159E-2
1.585E+2	2.193E+6	1.054E+7	9.291E-2
1.778E+2	1.858E+6	9.509E+6	9.407E-2
1.995E+2	1.572E+6	8.565E+6	9.508E-2
2.239E+2	1.330E+6	7.708E+6	9.601E-2
2.512E+2	1.131E+6	6.941E+6	9.699E-2
2.818E+2	9.610E+5	6.241E+6	9.785E-2
3.162E+2	8.179E+5	5.608E+6	9.866E-2
3.548E+2	6.949E+5	5.033E+6	9.934E-2
3.981E+2	5.950E+5	4.524E+6	1.002E-1
4.467E+2	5.100E+5	4.062E+6	1.009E-1
5.012E+2	4.362E+5	3.642E+6	1.016E-1
5.623E+2	3.750E+5	3.266E+6	1.022E-1
6.310E+2	3.229E+5	2.928E+6	1.028E-1
7.079E+2	2.782E+5	2.623E+6	1.033E-1
7.943E+2	2.404E+5	2.350E+6	1.039E-1
8.913E+2	2.084E+5	2.106E+6	1.044E-1
1.000E+3	1.812E+5	1.887E+6	1.050E-1
1.122E+3	1.581E+5	1.691E+6	1.056E-1
1.259E+3	1.376E+5	1.514E+6	1.061E-1
1.413E+3	1.208E+5	1.357E+6	1.067E-1
1.585E+3	1.066E+5	1.217E+6	1.073E-1
1.778E+3	9.411E+4	1.090E+6	1.078E-1
1.995E+3	8.292E+4	9.750E+5	1.082E-1
2.239E+3	7.309E+4	8.726E+5	1.087E-1
2.512E+3	6.509E+4	7.819E+5	1.093E-1
2.818E+3	5.766E+4	6.996E+5	1.097E-1
3.162E+3	5.141E+4	6.267E+5	1.102E-1
3.548E+3	4.596E+4	5.617E+5	1.109E-1
3.981E+3	4.118E+4	5.036E+5	1.115E-1
4.467E+3	3.709E+4	4.510E+5	1.121E-1
5.012E+3	3.321E+4	4.035E+5	1.125E-1
5.623E+3	2.996E+4	3.613E+5	1.130E-1
6.310E+3	2.698E+4	3.234E+5	1.135E-1
7.079E+3	2.443E+4	2.898E+5	1.141E-1
7.943E+3	2.208E+4	2.593E+5	1.146E-1
8.913E+3	2.006E+4	2.324E+5	1.152E-1

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	1.821E+4	2.080E+5	1.157E-1
1.122E+4	1.658E+4	1.865E+5	1.164E-1
1.259E+4	1.518E+4	1.672E+5	1.171E-1
1.413E+4	1.385E+4	1.498E+5	1.177E-1
1.585E+4	1.269E+4	1.344E+5	1.185E-1
1.778E+4	1.169E+4	1.206E+5	1.193E-1
1.995E+4	1.067E+4	1.082E+5	1.201E-1
2.239E+4	9.918E+3	9.736E+4	1.213E-1
2.512E+4	9.140E+3	8.744E+4	1.222E-1
2.818E+4	8.485E+3	7.897E+4	1.238E-1
3.162E+4	7.875E+3	7.118E+4	1.252E-1
3.548E+4	7.334E+3	6.375E+4	1.258E-1
3.981E+4	6.702E+3	5.684E+4	1.259E-1
4.467E+4	6.186E+3	5.094E+4	1.266E-1
5.012E+4	5.723E+3	4.567E+4	1.273E-1
5.623E+4	5.328E+3	4.105E+4	1.284E-1
6.310E+4	4.934E+3	3.684E+4	1.293E-1
7.079E+4	4.609E+3	3.312E+4	1.304E-1
7.943E+4	4.286E+3	2.975E+4	1.315E-1
8.913E+4	3.988E+3	2.671E+4	1.324E-1
1.000E+5	3.719E+3	2.400E+4	1.335E-1
1.122E+5	3.481E+3	2.159E+4	1.348E-1
1.259E+5	3.247E+3	1.941E+4	1.359E-1
1.413E+5	3.042E+3	1.747E+4	1.373E-1
1.585E+5	2.840E+3	1.575E+4	1.388E-1
1.778E+5	2.668E+3	1.422E+4	1.407E-1
1.995E+5	2.504E+3	1.282E+4	1.423E-1
2.239E+5	2.346E+3	1.155E+4	1.439E-1
2.512E+5	2.193E+3	1.041E+4	1.455E-1
2.818E+5	2.053E+3	9.398E+3	1.474E-1
3.162E+5	1.922E+3	8.494E+3	1.494E-1
3.548E+5	1.807E+3	7.692E+3	1.518E-1
3.981E+5	1.691E+3	6.951E+3	1.539E-1
4.467E+5	1.583E+3	6.283E+3	1.561E-1
5.012E+5	1.481E+3	5.687E+3	1.586E-1
5.623E+5	1.386E+3	5.155E+3	1.613E-1
6.310E+5	1.302E+3	4.688E+3	1.646E-1
7.079E+5	1.214E+3	4.246E+3	1.672E-1
7.943E+5	1.137E+3	3.861E+3	1.706E-1
8.913E+5	1.062E+3	3.510E+3	1.741E-1
1.000E+6	9.914E+2	3.186E+3	1.772E-1
1.122E+6	9.268E+2	2.896E+3	1.808E-1
1.259E+6	8.646E+2	2.627E+3	1.840E-1
1.413E+6	8.077E+2	2.387E+3	1.875E-1
1.585E+6	7.550E+2	2.169E+3	1.912E-1
1.778E+6	7.052E+2	1.978E+3	1.957E-1
1.995E+6	6.611E+2	1.798E+3	1.996E-1
2.239E+6	6.343E+2	1.643E+3	2.046E-1
2.512E+6	5.865E+2	1.508E+3	2.108E-1
2.818E+6	5.442E+2	1.377E+3	2.159E-1
3.162E+6	5.068E+2	1.259E+3	2.215E-1
3.548E+6	4.719E+2	1.152E+3	2.274E-1
3.981E+6	4.409E+2	1.053E+3	2.332E-1
4.467E+6	4.115E+2	9.632E+2	2.394E-1
5.012E+6	3.832E+2	8.819E+2	2.459E-1
5.623E+6	3.573E+2	8.090E+2	2.531E-1
6.310E+6	3.332E+2	7.404E+2	2.599E-1
7.079E+6	3.114E+2	6.780E+2	2.670E-1
7.943E+6	2.893E+2	6.229E+2	2.753E-1
8.913E+6	2.700E+2	5.697E+2	2.825E-1

Grey Matter

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+7	2.650E+2	5.212E+2	2.900E-1
1.089E+7	2.600E+2	4.951E+2	3.000E-1
1.194E+7	2.550E+2	4.816E+2	3.200E-1
1.310E+7	2.500E+2	4.667E+2	3.400E-1
1.436E+7	2.450E+2	4.507E+2	3.600E-1
1.574E+7	2.400E+2	4.338E+2	3.800E-1
1.726E+7	2.376E+2	4.165E+2	4.000E-1
1.893E+7	2.234E+2	3.840E+2	4.044E-1
2.075E+7	2.134E+2	3.631E+2	4.192E-1
2.276E+7	2.012E+2	3.391E+2	4.294E-1
2.495E+7	1.876E+2	3.195E+2	4.436E-1
2.736E+7	1.802E+2	2.993E+2	4.556E-1
3.000E+7	1.707E+2	2.779E+2	4.638E-1
3.289E+7	1.616E+2	2.624E+2	4.802E-1
3.607E+7	1.546E+2	2.445E+2	4.907E-1
3.955E+7	1.464E+2	2.308E+2	5.079E-1
4.336E+7	1.391E+2	2.175E+2	5.246E-1
4.755E+7	1.314E+2	2.029E+2	5.368E-1
5.213E+7	1.237E+2	1.906E+2	5.527E-1
5.716E+7	1.181E+2	1.783E+2	5.670E-1
6.268E+7	1.115E+2	1.671E+2	5.826E-1
6.873E+7	1.058E+2	1.562E+2	5.973E-1
7.536E+7	1.003E+2	1.461E+2	6.124E-1
8.263E+7	9.517E+1	1.363E+2	6.266E-1
9.060E+7	9.073E+1	1.269E+2	6.398E-1
9.934E+7	8.659E+1	1.187E+2	6.558E-1
1.089E+8	8.337E+1	1.109E+2	6.719E-1
1.194E+8	7.985E+1	1.035E+2	6.878E-1
1.310E+8	7.671E+1	9.656E+1	7.034E-1
1.436E+8	7.369E+1	9.026E+1	7.210E-1
1.574E+8	7.098E+1	8.373E+1	7.334E-1
1.726E+8	6.866E+1	7.749E+1	7.442E-1
1.893E+8	6.666E+1	7.206E+1	7.588E-1
2.075E+8	6.452E+1	6.690E+1	7.725E-1
2.276E+8	6.253E+1	6.222E+1	7.877E-1
2.495E+8	6.089E+1	5.764E+1	8.002E-1
2.736E+8	5.952E+1	5.340E+1	8.129E-1
3.000E+8	5.831E+1	4.945E+1	8.254E-1
3.289E+8	5.705E+1	4.584E+1	8.390E-1
3.607E+8	5.598E+1	4.240E+1	8.509E-1
3.955E+8	5.508E+1	3.932E+1	8.650E-1
4.336E+8	5.427E+1	3.637E+1	8.775E-1
4.755E+8	5.389E+1	3.363E+1	8.896E-1
5.213E+8	5.303E+1	3.155E+1	9.152E-1
5.716E+8	5.228E+1	2.926E+1	9.307E-1
6.268E+8	5.165E+1	2.710E+1	9.451E-1
6.873E+8	5.160E+1	2.554E+1	9.767E-1
7.536E+8	5.086E+1	2.309E+1	9.681E-1
8.263E+8	5.047E+1	2.246E+1	1.033E+0
9.060E+8	5.191E+1	1.999E+1	1.007E+0
9.934E+8	4.987E+1	2.035E+1	1.125E+0
1.089E+9	5.085E+1	1.819E+1	1.102E+0
1.194E+9	5.033E+1	1.846E+1	1.227E+0
1.310E+9	4.885E+1	1.819E+1	1.325E+0
1.436E+9	4.817E+1	1.704E+1	1.361E+0
1.574E+9	4.759E+1	1.645E+1	1.441E+0
1.726E+9	4.790E+1	1.543E+1	1.482E+0
1.893E+9	4.766E+1	1.500E+1	1.580E+0
2.075E+9	4.729E+1	1.512E+1	1.745E+0
2.276E+9	4.714E+1	1.540E+1	1.950E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
2.495E+9	4.595E+1	1.597E+1	2.217E+0
2.736E+9	4.473E+1	1.660E+1	2.526E+0
3.000E+9	4.500E+1	1.558E+1	2.600E+0
3.103E+9	4.600E+1	1.564E+1	2.700E+0
3.263E+9	4.700E+1	1.542E+1	2.800E+0
3.432E+9	4.800E+1	1.519E+1	2.900E+0
3.609E+9	4.900E+1	1.494E+1	3.000E+0
3.796E+9	4.990E+1	1.468E+1	3.100E+0
3.992E+9	4.979E+1	1.446E+1	3.210E+0
4.198E+9	4.948E+1	1.468E+1	3.429E+0
4.415E+9	4.921E+1	1.489E+1	3.657E+0
4.643E+9	4.890E+1	1.505E+1	3.888E+0
4.883E+9	4.842E+1	1.530E+1	4.155E+0
5.135E+9	4.807E+1	1.572E+1	4.490E+0
5.400E+9	4.747E+1	1.581E+1	4.749E+0
5.679E+9	4.699E+1	1.604E+1	5.068E+0
5.972E+9	4.631E+1	1.615E+1	5.366E+0
6.281E+9	4.589E+1	1.645E+1	5.748E+0
6.605E+9	4.518E+1	1.635E+1	6.006E+0
6.946E+9	4.454E+1	1.648E+1	6.367E+0
7.305E+9	4.397E+1	1.653E+1	6.717E+0
7.682E+9	4.340E+1	1.648E+1	7.042E+0
8.079E+9	4.286E+1	1.673E+1	7.518E+0
8.496E+9	4.226E+1	1.684E+1	7.958E+0
8.935E+9	4.155E+1	1.697E+1	8.435E+0
9.397E+9	4.085E+1	1.694E+1	8.858E+0
9.882E+9	4.018E+1	1.686E+1	9.267E+0
1.039E+10	3.943E+1	1.663E+1	9.615E+0
1.093E+10	3.906E+1	1.654E+1	1.006E+1
1.149E+10	3.834E+1	1.641E+1	1.050E+1
1.209E+10	3.801E+1	1.619E+1	1.089E+1
1.271E+10	3.752E+1	1.605E+1	1.135E+1
1.337E+10	3.718E+1	1.580E+1	1.175E+1
1.406E+10	3.698E+1	1.591E+1	1.244E+1
1.478E+10	3.656E+1	1.598E+1	1.314E+1
1.555E+10	3.629E+1	1.581E+1	1.367E+1
1.635E+10	3.577E+1	1.597E+1	1.453E+1
1.720E+10	3.563E+1	1.604E+1	1.534E+1
1.808E+10	3.506E+1	1.633E+1	1.643E+1
1.902E+10	3.478E+1	1.648E+1	1.743E+1
2.000E+10	3.437E+1	1.666E+1	1.854E+1

Heart

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	2.322E+7	9.933E+7	5.526E-2
1.122E+1	2.250E+7	9.021E+7	5.631E-2
1.259E+1	2.200E+7	8.127E+7	5.692E-2
1.350E+1	2.133E+7	7.348E+7	5.774E-2
1.585E+1	2.050E+7	6.662E+7	5.874E-2
1.778E+1	1.951E+7	6.052E+7	5.987E-2
1.995E+1	1.847E+7	5.525E+7	6.132E-2
2.239E+1	1.715E+7	5.041E+7	6.278E-2
2.512E+1	1.585E+7	4.620E+7	6.456E-2
2.818E+1	1.448E+7	4.239E+7	6.646E-2
3.162E+1	1.309E+7	3.891E+7	6.845E-2
3.548E+1	1.172E+7	3.569E+7	7.045E-2
3.981E+1	1.038E+7	3.265E+7	7.232E-2
4.467E+1	9.144E+6	2.984E+7	7.415E-2
5.012E+1	8.009E+6	2.726E+7	7.600E-2
5.623E+1	6.992E+6	2.486E+7	7.778E-2
6.310E+1	6.072E+6	2.263E+7	7.942E-2
7.079E+1	5.250E+6	2.056E+7	8.097E-2
7.943E+1	4.536E+6	1.864E+7	8.236E-2
8.913E+1	3.908E+6	1.688E+7	8.368E-2
1.000E+2	3.365E+6	1.527E+7	8.497E-2
1.122E+2	2.904E+6	1.381E+7	8.620E-2
1.259E+2	2.512E+6	1.248E+7	8.738E-2
1.413E+2	2.170E+6	1.126E+7	8.851E-2
1.585E+2	1.871E+6	1.013E+7	8.934E-2
1.778E+2	1.619E+6	9.119E+6	9.021E-2
1.995E+2	1.404E+6	8.207E+6	9.110E-2
2.239E+2	1.223E+6	7.376E+6	9.187E-2
2.512E+2	1.070E+6	6.626E+6	9.259E-2
2.818E+2	9.405E+5	5.953E+6	9.334E-2
3.162E+2	8.312E+5	5.344E+6	9.401E-2
3.548E+2	7.379E+5	4.795E+6	9.466E-2
3.981E+2	6.569E+5	4.307E+6	9.540E-2
4.467E+2	5.917E+5	3.868E+6	9.612E-2
5.012E+2	5.354E+5	3.474E+6	9.687E-2
5.623E+2	4.862E+5	3.118E+6	9.755E-2
6.310E+2	4.444E+5	2.801E+6	9.833E-2
7.079E+2	4.084E+5	2.518E+6	9.919E-2
7.943E+2	3.769E+5	2.264E+6	1.000E-1
8.913E+2	3.494E+5	2.035E+6	1.009E-1
1.000E+3	3.239E+5	1.831E+6	1.018E-1
1.122E+3	3.017E+5	1.649E+6	1.029E-1
1.259E+3	2.817E+5	1.486E+6	1.041E-1
1.413E+3	2.630E+5	1.339E+6	1.053E-1
1.585E+3	2.459E+5	1.209E+6	1.066E-1
1.778E+3	2.303E+5	1.091E+6	1.080E-1
1.995E+3	2.154E+5	9.846E+5	1.093E-1
2.239E+3	2.012E+5	8.907E+5	1.109E-1
2.512E+3	1.879E+5	8.060E+5	1.126E-1
2.818E+3	1.752E+5	7.304E+5	1.145E-1
3.162E+3	1.632E+5	6.624E+5	1.165E-1
3.548E+3	1.518E+5	6.012E+5	1.187E-1
3.981E+3	1.408E+5	5.459E+5	1.209E-1
4.467E+3	1.305E+5	4.962E+5	1.233E-1
5.012E+3	1.207E+5	4.511E+5	1.258E-1
5.623E+3	1.115E+5	4.101E+5	1.283E-1
6.310E+3	1.029E+5	3.728E+5	1.309E-1
7.079E+3	9.490E+4	3.391E+5	1.335E-1
7.943E+3	8.742E+4	3.085E+5	1.363E-1
8.913E+3	8.039E+4	2.806E+5	1.391E-1

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	7.360E+4	2.548E+5	1.418E-1
1.122E+4	6.792E+4	2.324E+5	1.450E-1
1.259E+4	6.240E+4	2.115E+5	1.481E-1
1.413E+4	5.728E+4	1.925E+5	1.513E-1
1.585E+4	5.261E+4	1.753E+5	1.546E-1
1.778E+4	4.825E+4	1.597E+5	1.580E-1
1.995E+4	4.427E+4	1.454E+5	1.614E-1
2.239E+4	4.066E+4	1.324E+5	1.649E-1
2.512E+4	3.731E+4	1.206E+5	1.686E-1
2.818E+4	3.420E+4	1.099E+5	1.724E-1
3.162E+4	3.139E+4	1.002E+5	1.762E-1
3.548E+4	2.876E+4	9.136E+4	1.803E-1
3.981E+4	2.641E+4	8.344E+4	1.848E-1
4.467E+4	2.424E+4	7.614E+4	1.892E-1
5.012E+4	2.222E+4	6.937E+4	1.934E-1
5.623E+4	2.038E+4	6.327E+4	1.979E-1
6.310E+4	1.868E+4	5.766E+4	2.024E-1
7.079E+4	1.711E+4	5.258E+4	2.071E-1
7.943E+4	1.567E+4	4.798E+4	2.120E-1
8.913E+4	1.435E+4	4.379E+4	2.171E-1
1.000E+5	1.312E+4	4.000E+4	2.225E-1
1.122E+5	1.201E+4	3.654E+4	2.281E-1
1.259E+5	1.099E+4	3.336E+4	2.337E-1
1.413E+5	1.004E+4	3.051E+4	2.398E-1
1.585E+5	9.180E+3	2.785E+4	2.456E-1
1.778E+5	8.376E+3	2.541E+4	2.514E-1
1.995E+5	7.640E+3	2.321E+4	2.576E-1
2.239E+5	6.977E+3	2.122E+4	2.642E-1
2.512E+5	6.354E+3	1.932E+4	2.700E-1
2.818E+5	5.791E+3	1.786E+4	2.800E-1
3.162E+5	5.275E+3	1.648E+4	2.900E-1
3.289E+5	5.056E+3	1.639E+4	3.000E-1
3.607E+5	4.906E+3	1.545E+4	3.100E-1
3.955E+5	4.527E+3	1.454E+4	3.200E-1
4.336E+5	4.120E+3	1.371E+4	3.307E-1
4.755E+5	3.701E+3	1.270E+4	3.359E-1
5.213E+5	3.502E+3	1.173E+4	3.402E-1
5.716E+5	3.123E+3	1.084E+4	3.447E-1
6.268E+5	2.976E+3	1.005E+4	3.505E-1
6.873E+5	2.780E+3	9.365E+3	3.580E-1
7.536E+5	2.490E+3	8.647E+3	3.625E-1
8.263E+5	2.328E+3	8.020E+3	3.686E-1
9.060E+5	2.206E+3	7.421E+3	3.740E-1
9.934E+5	2.010E+3	6.905E+3	3.816E-1
1.089E+6	1.875E+3	6.353E+3	3.850E-1
1.194E+6	1.694E+3	5.920E+3	3.933E-1
1.310E+6	1.594E+3	5.469E+3	3.985E-1
1.436E+6	1.488E+3	5.070E+3	4.050E-1
1.574E+6	1.411E+3	4.668E+3	4.088E-1
1.726E+6	1.307E+3	4.305E+3	4.135E-1
1.893E+6	1.198E+3	3.995E+3	4.207E-1
2.075E+6	1.114E+3	3.713E+3	4.287E-1
2.276E+6	9.796E+2	3.420E+3	4.329E-1
2.495E+6	9.925E+2	3.180E+3	4.414E-1
2.736E+6	9.513E+2	2.960E+3	4.505E-1
3.000E+6	8.262E+2	2.744E+3	4.580E-1
3.289E+6	8.062E+2	2.544E+3	4.655E-1
3.607E+6	7.485E+2	2.349E+3	4.714E-1
3.955E+6	7.036E+2	2.173E+3	4.781E-1
4.336E+6	6.310E+2	2.026E+3	4.887E-1

Heart

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
4.755E+6	6.078E+2	1.888E+3	4.994E-1
5.213E+6	5.476E+2	1.734E+3	5.030E-1
5.716E+6	5.151E+2	1.597E+3	5.080E-1
6.268E+6	4.776E+2	1.473E+3	5.135E-1
6.873E+6	4.561E+2	1.357E+3	5.189E-1
7.536E+6	4.511E+2	1.256E+3	5.266E-1
8.263E+6	4.450E+2	1.186E+3	5.451E-1
9.060E+6	4.040E+2	1.134E+3	5.718E-1
9.934E+6	3.353E+2	1.062E+3	5.872E-1
1.089E+7	3.133E+2	9.594E+2	5.814E-1
1.194E+7	2.940E+2	8.731E+2	5.801E-1
1.310E+7	2.728E+2	8.135E+2	5.926E-1
1.436E+7	2.742E+2	7.504E+2	5.994E-1
1.574E+7	2.539E+2	7.008E+2	6.139E-1
1.726E+7	2.352E+2	6.463E+2	6.207E-1
1.893E+7	2.147E+2	6.027E+2	6.347E-1
2.075E+7	2.039E+2	5.586E+2	6.450E-1
2.276E+7	1.912E+2	5.201E+2	6.584E-1
2.495E+7	1.778E+2	4.790E+2	6.649E-1
2.736E+7	1.674E+2	4.441E+2	6.760E-1
3.000E+7	1.592E+2	4.122E+2	6.880E-1
3.289E+7	1.472E+2	3.789E+2	6.933E-1
3.607E+7	1.416E+2	3.503E+2	7.028E-1
3.955E+7	1.353E+2	3.273E+2	7.201E-1
4.336E+7	1.257E+2	3.027E+2	7.302E-1
4.755E+7	1.188E+2	2.805E+2	7.419E-1
5.213E+7	1.123E+2	2.586E+2	7.500E-1
5.716E+7	1.058E+2	2.399E+2	7.629E-1
6.268E+7	9.969E+1	2.210E+2	7.706E-1
6.873E+7	9.500E+1	2.042E+2	7.807E-1
7.536E+7	9.035E+1	1.878E+2	7.873E-1
8.263E+7	8.609E+1	1.732E+2	7.961E-1
9.060E+7	8.310E+1	1.589E+2	8.011E-1
9.934E+7	8.043E+1	1.464E+2	8.090E-1
1.089E+8	7.823E+1	1.348E+2	8.167E-1
1.194E+8	7.631E+1	1.248E+2	8.294E-1
1.310E+8	7.481E+1	1.153E+2	8.403E-1
1.436E+8	7.267E+1	1.067E+2	8.525E-1
1.574E+8	7.061E+1	9.788E+1	8.573E-1
1.726E+8	6.951E+1	8.957E+1	8.602E-1
1.893E+8	6.826E+1	8.239E+1	8.676E-1
2.075E+8	6.694E+1	7.600E+1	8.776E-1
2.276E+8	6.567E+1	7.030E+1	8.901E-1
2.495E+8	6.472E+1	6.483E+1	9.000E-1
2.736E+8	6.403E+1	5.958E+1	9.069E-1
3.000E+8	6.346E+1	5.512E+1	9.200E-1
3.289E+8	6.252E+1	5.137E+1	9.400E-1
3.607E+8	6.188E+1	4.784E+1	9.600E-1
3.955E+8	6.146E+1	4.454E+1	9.800E-1
4.140E+8	6.075E+1	4.274E+1	9.843E-1
4.354E+8	6.074E+1	4.073E+1	9.866E-1
4.578E+8	6.023E+1	3.905E+1	9.947E-1
4.815E+8	6.028E+1	3.750E+1	1.004E+0
5.064E+8	5.952E+1	3.606E+1	1.016E+0
5.325E+8	5.981E+1	3.443E+1	1.020E+0
5.600E+8	5.991E+1	3.321E+1	1.035E+0
5.889E+8	5.936E+1	3.170E+1	1.039E+0
6.194E+8	5.897E+1	3.020E+1	1.041E+0
6.513E+8	5.906E+1	2.937E+1	1.064E+0
6.850E+8	5.876E+1	2.836E+1	1.081E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
7.204E+8	5.879E+1	2.721E+1	1.091E+0
7.576E+8	5.858E+1	2.621E+1	1.104E+0
7.967E+8	5.857E+1	2.556E+1	1.133E+0
8.378E+8	5.821E+1	2.446E+1	1.140E+0
8.811E+8	5.802E+1	2.361E+1	1.157E+0
9.266E+8	5.787E+1	2.287E+1	1.179E+0
9.745E+8	5.770E+1	2.197E+1	1.191E+0
1.025E+9	5.748E+1	2.149E+1	1.225E+0
1.078E+9	5.738E+1	2.067E+1	1.239E+0
1.133E+9	5.735E+1	2.017E+1	1.272E+0
1.192E+9	5.723E+1	1.938E+1	1.285E+0
1.254E+9	5.717E+1	1.908E+1	1.331E+0
1.318E+9	5.688E+1	1.876E+1	1.376E+0
1.386E+9	5.674E+1	1.828E+1	1.410E+0
1.458E+9	5.658E+1	1.789E+1	1.451E+0
1.533E+9	5.634E+1	1.752E+1	1.494E+0
1.612E+9	5.628E+1	1.720E+1	1.543E+0
1.696E+9	5.611E+1	1.695E+1	1.599E+0
1.783E+9	5.589E+1	1.665E+1	1.652E+0
1.875E+9	5.577E+1	1.636E+1	1.706E+0
1.972E+9	5.566E+1	1.613E+1	1.770E+0
2.074E+9	5.551E+1	1.609E+1	1.856E+0
2.181E+9	5.530E+1	1.597E+1	1.938E+0
2.294E+9	5.520E+1	1.584E+1	2.022E+0
2.412E+9	5.494E+1	1.589E+1	2.133E+0
2.537E+9	5.466E+1	1.586E+1	2.238E+0
2.668E+9	5.441E+1	1.577E+1	2.341E+0
2.806E+9	5.428E+1	1.573E+1	2.455E+0
2.951E+9	5.397E+1	1.567E+1	2.573E+0
3.103E+9	5.388E+1	1.584E+1	2.735E+0
3.263E+9	5.369E+1	1.613E+1	2.929E+0
3.432E+9	5.332E+1	1.619E+1	3.091E+0
3.609E+9	5.302E+1	1.610E+1	3.233E+0
3.796E+9	5.301E+1	1.643E+1	3.469E+0
3.992E+9	5.276E+1	1.675E+1	3.720E+0
4.198E+9	5.238E+1	1.701E+1	3.972E+0
4.415E+9	5.208E+1	1.737E+1	4.267E+0
4.643E+9	5.161E+1	1.766E+1	4.561E+0
4.883E+9	5.130E+1	1.807E+1	4.907E+0
5.135E+9	5.069E+1	1.848E+1	5.278E+0
5.400E+9	5.007E+1	1.883E+1	5.658E+0
5.679E+9	4.955E+1	1.924E+1	6.078E+0
5.972E+9	4.903E+1	1.966E+1	6.531E+0
6.281E+9	4.827E+1	1.997E+1	6.978E+0
6.605E+9	4.777E+1	2.035E+1	7.477E+0
6.946E+9	4.701E+1	2.061E+1	7.965E+0
7.305E+9	4.636E+1	2.118E+1	8.608E+0
7.682E+9	4.561E+1	2.149E+1	9.183E+0
8.079E+9	4.481E+1	2.202E+1	9.895E+0
8.496E+9	4.391E+1	2.240E+1	1.059E+1
8.935E+9	4.302E+1	2.272E+1	1.129E+1
9.397E+9	4.201E+1	2.300E+1	1.202E+1
9.882E+9	4.097E+1	2.328E+1	1.280E+1
1.039E+10	3.996E+1	2.345E+1	1.356E+1
1.093E+10	3.883E+1	2.368E+1	1.440E+1
1.149E+10	3.780E+1	2.363E+1	1.511E+1
1.209E+10	3.693E+1	2.368E+1	1.592E+1
1.271E+10	3.597E+1	2.369E+1	1.675E+1
1.337E+10	3.464E+1	2.377E+1	1.768E+1
1.406E+10	3.387E+1	2.355E+1	1.842E+1

Heart

Frequency (Hz)	Ovine @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
1.478E+10	3.295E+1	2.330E+1	1.917E+1
1.555E+10	3.207E+1	2.332E+1	2.017E+1
1.635E+10	3.119E+1	2.309E+1	2.101E+1
1.720E+10	3.027E+1	2.303E+1	2.203E+1
1.808E+10	2.937E+1	2.305E+1	2.319E+1
1.902E+10	2.870E+1	2.284E+1	2.417E+1
2.000E+10	2.796E+1	2.258E+1	2.512E+1

Kidney

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	2.777E+7	1.165E+8	6.481E-2
1.122E+1	2.736E+7	1.051E+8	6.559E-2
1.259E+1	2.667E+7	9.475E+7	6.636E-2
1.350E+1	2.604E+7	8.560E+7	6.726E-2
1.585E+1	2.527E+7	7.758E+7	6.840E-2
1.778E+1	2.432E+7	7.058E+7	6.982E-2
1.995E+1	2.316E+7	6.441E+7	7.149E-2
2.239E+1	2.184E+7	5.896E+7	7.344E-2
2.512E+1	2.036E+7	5.411E+7	7.562E-2
2.818E+1	1.877E+7	4.979E+7	7.807E-2
3.162E+1	1.707E+7	4.580E+7	8.058E-2
3.548E+1	1.535E+7	4.212E+7	8.314E-2
3.981E+1	1.366E+7	3.872E+7	8.574E-2
4.467E+1	1.205E+7	3.553E+7	8.829E-2
5.012E+1	1.054E+7	3.257E+7	9.080E-2
5.623E+1	9.177E+6	2.981E+7	9.325E-2
6.310E+1	7.944E+6	2.723E+7	9.558E-2
7.079E+1	6.830E+6	2.481E+7	9.772E-2
7.943E+1	5.844E+6	2.256E+7	9.968E-2
8.913E+1	4.982E+6	2.048E+7	1.015E-1
1.000E+2	4.230E+6	1.854E+7	1.031E-1
1.122E+2	3.585E+6	1.677E+7	1.047E-1
1.259E+2	3.036E+6	1.515E+7	1.061E-1
1.413E+2	2.572E+6	1.368E+7	1.075E-1
1.585E+2	2.171E+6	1.231E+7	1.085E-1
1.778E+2	1.835E+6	1.107E+7	1.096E-1
1.995E+2	1.551E+6	9.931E+6	1.102E-1
2.239E+2	1.312E+6	8.916E+6	1.110E-1
2.512E+2	1.113E+6	7.999E+6	1.118E-1
2.818E+2	9.453E+5	7.173E+6	1.125E-1
3.162E+2	8.078E+5	6.429E+6	1.131E-1
3.548E+2	6.914E+5	5.763E+6	1.138E-1
3.981E+2	5.921E+5	5.163E+6	1.143E-1
4.467E+2	5.134E+5	4.626E+6	1.149E-1
5.012E+2	4.458E+5	4.143E+6	1.155E-1
5.623E+2	3.889E+5	3.710E+6	1.161E-1
6.310E+2	3.406E+5	3.323E+6	1.167E-1
7.079E+2	3.004E+5	2.977E+6	1.173E-1
7.943E+2	2.664E+5	2.666E+6	1.178E-1
8.913E+2	2.379E+5	2.388E+6	1.184E-1
1.000E+3	2.109E+5	2.138E+6	1.189E-1
1.122E+3	1.905E+5	1.916E+6	1.196E-1
1.259E+3	1.725E+5	1.715E+6	1.201E-1
1.413E+3	1.559E+5	1.537E+6	1.208E-1
1.585E+3	1.414E+5	1.378E+6	1.215E-1
1.778E+3	1.296E+5	1.235E+6	1.222E-1
1.995E+3	1.188E+5	1.106E+6	1.227E-1
2.239E+3	1.088E+5	9.912E+5	1.234E-1
2.512E+3	1.004E+5	8.890E+5	1.242E-1
2.818E+3	9.262E+4	7.975E+5	1.250E-1
3.162E+3	8.575E+4	7.156E+5	1.259E-1
3.548E+3	7.945E+4	6.421E+5	1.267E-1
3.981E+3	7.382E+4	5.765E+5	1.277E-1
4.467E+3	6.852E+4	5.181E+5	1.287E-1
5.012E+3	6.375E+4	4.657E+5	1.299E-1
5.623E+3	5.937E+4	4.186E+5	1.310E-1
6.310E+3	5.517E+4	3.762E+5	1.321E-1
7.079E+3	5.147E+4	3.385E+5	1.333E-1
7.943E+3	4.794E+4	3.048E+5	1.347E-1
8.913E+3	4.465E+4	2.744E+5	1.361E-1

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	4.152E+4	2.473E+5	1.376E-1
1.122E+4	3.870E+4	2.230E+5	1.392E-1
1.259E+4	3.601E+4	2.010E+5	1.408E-1
1.413E+4	3.347E+4	1.813E+5	1.425E-1
1.585E+4	3.111E+4	1.637E+5	1.443E-1
1.778E+4	2.890E+4	1.478E+5	1.463E-1
1.995E+4	2.682E+4	1.336E+5	1.483E-1
2.239E+4	2.490E+4	1.206E+5	1.502E-1
2.512E+4	2.310E+4	1.091E+5	1.524E-1
2.818E+4	2.138E+4	9.865E+4	1.547E-1
3.162E+4	1.981E+4	8.921E+4	1.570E-1
3.548E+4	1.832E+4	8.083E+4	1.596E-1
3.981E+4	1.696E+4	7.340E+4	1.626E-1
4.467E+4	1.574E+4	6.646E+4	1.652E-1
5.012E+4	1.454E+4	6.009E+4	1.675E-1
5.623E+4	1.344E+4	5.441E+4	1.702E-1
6.310E+4	1.243E+4	4.926E+4	1.729E-1
7.079E+4	1.149E+4	4.462E+4	1.757E-1
7.943E+4	1.062E+4	4.042E+4	1.786E-1
8.913E+4	9.819E+3	3.667E+4	1.818E-1
1.000E+5	9.071E+3	3.328E+4	1.851E-1
1.122E+5	8.390E+3	3.021E+4	1.886E-1
1.259E+5	7.768E+3	2.744E+4	1.922E-1
1.413E+5	7.186E+3	2.498E+4	1.963E-1
1.585E+5	6.657E+3	2.270E+4	2.001E-1
1.778E+5	6.159E+3	2.060E+4	2.038E-1
1.995E+5	5.701E+3	1.873E+4	2.079E-1
2.239E+5	5.289E+3	1.706E+4	2.125E-1
2.512E+5	4.897E+3	1.550E+4	2.166E-1
2.818E+5	4.535E+3	1.411E+4	2.212E-1
3.162E+5	4.208E+3	1.285E+4	2.261E-1
3.548E+5	3.902E+3	1.171E+4	2.312E-1
3.981E+5	3.618E+3	1.067E+4	2.364E-1
4.467E+5	3.355E+3	9.726E+3	2.417E-1
5.012E+5	3.108E+3	8.862E+3	2.471E-1
5.623E+5	2.885E+3	8.083E+3	2.529E-1
6.310E+5	2.672E+3	7.374E+3	2.588E-1
7.079E+5	2.478E+3	6.740E+3	2.655E-1
7.943E+5	2.296E+3	6.161E+3	2.723E-1
8.913E+5	2.126E+3	5.629E+3	2.791E-1
1.000E+6	1.969E+3	5.148E+3	2.864E-1
1.122E+6	1.822E+3	4.712E+3	2.941E-1
1.259E+6	1.687E+3	4.317E+3	3.023E-1
1.413E+6	1.565E+3	3.971E+3	3.121E-1
1.585E+6	1.452E+3	3.656E+3	3.224E-1
1.778E+6	1.340E+3	3.343E+3	3.308E-1
1.995E+6	1.237E+3	3.060E+3	3.396E-1
2.239E+6	1.144E+3	2.795E+3	3.481E-1
2.512E+6	1.055E+3	2.570E+3	3.591E-1
2.818E+6	9.653E+2	2.360E+3	3.700E-1
3.162E+6	8.857E+2	2.217E+3	3.900E-1
3.548E+6	8.122E+2	2.077E+3	4.100E-1
3.981E+6	7.451E+2	1.942E+3	4.300E-1
4.336E+6	7.703E+2	1.865E+3	4.500E-1
4.755E+6	7.439E+2	1.770E+3	4.683E-1
5.213E+6	6.820E+2	1.637E+3	4.749E-1
5.716E+6	6.464E+2	1.515E+3	4.819E-1
6.268E+6	6.057E+2	1.406E+3	4.904E-1
6.873E+6	5.801E+2	1.302E+3	4.979E-1
7.536E+6	5.709E+2	1.212E+3	5.079E-1

Kidney

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
8.263E+6	5.635E+2	1.150E+3	5.286E-1
9.060E+6	5.223E+2	1.110E+3	5.592E-1
9.934E+6	4.498E+2	1.053E+3	5.819E-1
1.089E+7	4.200E+2	9.565E+2	5.796E-1
1.194E+7	3.928E+2	8.767E+2	5.825E-1
1.310E+7	3.664E+2	8.241E+2	6.004E-1
1.436E+7	3.637E+2	7.645E+2	6.107E-1
1.574E+7	3.387E+2	7.196E+2	6.303E-1
1.726E+7	3.145E+2	6.696E+2	6.431E-1
1.893E+7	2.884E+2	6.303E+2	6.637E-1
2.075E+7	2.727E+2	5.889E+2	6.800E-1
2.276E+7	2.551E+2	5.529E+2	7.000E-1
2.495E+7	2.363E+2	5.134E+2	7.127E-1
2.736E+7	2.210E+2	4.802E+2	7.310E-1
3.000E+7	2.082E+2	4.488E+2	7.490E-1
3.289E+7	1.918E+2	4.161E+2	7.614E-1
3.607E+7	1.821E+2	3.872E+2	7.768E-1
3.955E+7	1.722E+2	3.642E+2	8.014E-1
4.336E+7	1.584E+2	3.391E+2	8.181E-1
4.755E+7	1.482E+2	3.165E+2	8.371E-1
5.213E+7	1.378E+2	2.938E+2	8.521E-1
5.716E+7	1.283E+2	2.744E+2	8.726E-1
6.268E+7	1.190E+2	2.540E+2	8.857E-1
6.873E+7	1.117E+2	2.360E+2	9.024E-1
7.536E+7	1.046E+2	2.181E+2	9.141E-1
8.263E+7	9.797E+1	2.021E+2	9.291E-1
9.060E+7	9.285E+1	1.863E+2	9.389E-1
9.934E+7	8.838E+1	1.721E+2	9.512E-1
1.089E+8	8.468E+1	1.590E+2	9.633E-1
1.194E+8	8.148E+1	1.476E+2	9.806E-1
1.310E+8	7.885E+1	1.368E+2	9.969E-1
1.436E+8	7.551E+1	1.268E+2	1.013E+0
1.574E+8	7.234E+1	1.165E+2	1.021E+0
1.726E+8	7.040E+1	1.068E+2	1.026E+0
1.893E+8	6.847E+1	9.845E+1	1.037E+0
2.075E+8	6.643E+1	9.094E+1	1.050E+0
2.276E+8	6.449E+1	8.411E+1	1.065E+0
2.495E+8	6.305E+1	7.765E+1	1.078E+0
2.736E+8	6.184E+1	7.137E+1	1.086E+0
3.000E+8	6.095E+1	6.576E+1	1.097E+0
3.289E+8	5.960E+1	6.077E+1	1.112E+0
3.607E+8	5.868E+1	5.599E+1	1.124E+0
3.955E+8	5.803E+1	5.180E+1	1.140E+0
4.336E+8	5.730E+1	4.774E+1	1.152E+0
4.755E+8	5.665E+1	4.427E+1	1.171E+0
5.213E+8	5.608E+1	4.096E+1	1.188E+0
5.716E+8	5.551E+1	3.802E+1	1.209E+0
6.268E+8	5.512E+1	3.527E+1	1.230E+0
6.873E+8	5.472E+1	3.290E+1	1.258E+0
7.536E+8	5.439E+1	3.067E+1	1.286E+0
8.263E+8	5.384E+1	2.892E+1	1.329E+0
9.060E+8	5.390E+1	2.680E+1	1.351E+0
9.934E+8	5.314E+1	2.497E+1	1.380E+0
1.089E+9	5.400E+1	2.294E+1	1.390E+0
1.078E+9	5.535E+1	2.335E+1	1.400E+0
1.133E+9	5.514E+1	2.224E+1	1.402E+0
1.192E+9	5.507E+1	2.136E+1	1.416E+0
1.254E+9	5.489E+1	2.097E+1	1.463E+0
1.318E+9	5.462E+1	2.058E+1	1.509E+0
1.386E+9	5.440E+1	1.999E+1	1.542E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.458E+9	5.421E+1	1.947E+1	1.579E+0
1.533E+9	5.397E+1	1.908E+1	1.628E+0
1.612E+9	5.386E+1	1.862E+1	1.670E+0
1.696E+9	5.363E+1	1.831E+1	1.727E+0
1.783E+9	5.341E+1	1.789E+1	1.775E+0
1.875E+9	5.322E+1	1.753E+1	1.829E+0
1.972E+9	5.313E+1	1.722E+1	1.890E+0
2.074E+9	5.294E+1	1.711E+1	1.974E+0
2.181E+9	5.271E+1	1.693E+1	2.054E+0
2.294E+9	5.255E+1	1.666E+1	2.126E+0
2.412E+9	5.231E+1	1.667E+1	2.237E+0
2.537E+9	5.197E+1	1.655E+1	2.336E+0
2.668E+9	5.171E+1	1.638E+1	2.431E+0
2.806E+9	5.149E+1	1.627E+1	2.539E+0
2.951E+9	5.126E+1	1.614E+1	2.649E+0
3.103E+9	5.116E+1	1.618E+1	2.793E+0
3.263E+9	5.096E+1	1.641E+1	2.979E+0
3.432E+9	5.060E+1	1.635E+1	3.123E+0
3.609E+9	5.028E+1	1.626E+1	3.265E+0
3.796E+9	5.017E+1	1.644E+1	3.472E+0
3.992E+9	4.996E+1	1.670E+1	3.708E+0
4.198E+9	4.962E+1	1.693E+1	3.954E+0
4.415E+9	4.929E+1	1.712E+1	4.205E+0
4.643E+9	4.881E+1	1.737E+1	4.487E+0
4.883E+9	4.857E+1	1.767E+1	4.799E+0
5.135E+9	4.798E+1	1.798E+1	5.137E+0
5.400E+9	4.735E+1	1.828E+1	5.492E+0
5.679E+9	4.687E+1	1.858E+1	5.869E+0
5.972E+9	4.632E+1	1.885E+1	6.263E+0
6.281E+9	4.563E+1	1.916E+1	6.693E+0
6.605E+9	4.511E+1	1.937E+1	7.119E+0
6.946E+9	4.446E+1	1.962E+1	7.581E+0
7.305E+9	4.378E+1	2.004E+1	8.145E+0
7.682E+9	4.305E+1	2.030E+1	8.678E+0
8.079E+9	4.231E+1	2.071E+1	9.308E+0
8.496E+9	4.144E+1	2.099E+1	9.923E+0
8.935E+9	4.064E+1	2.125E+1	1.056E+1
9.397E+9	3.965E+1	2.142E+1	1.120E+1
9.882E+9	3.869E+1	2.158E+1	1.187E+1
1.039E+10	3.775E+1	2.170E+1	1.255E+1
1.093E+10	3.675E+1	2.176E+1	1.323E+1
1.149E+10	3.577E+1	2.160E+1	1.381E+1
1.209E+10	3.498E+1	2.153E+1	1.448E+1
1.271E+10	3.411E+1	2.149E+1	1.520E+1
1.337E+10	3.300E+1	2.139E+1	1.590E+1
1.406E+10	3.230E+1	2.112E+1	1.652E+1
1.478E+10	3.146E+1	2.083E+1	1.713E+1
1.555E+10	3.076E+1	2.071E+1	1.791E+1
1.635E+10	3.003E+1	2.048E+1	1.863E+1
1.720E+10	2.931E+1	2.026E+1	1.939E+1
1.808E+10	2.860E+1	2.029E+1	2.042E+1
1.902E+10	2.814E+1	2.007E+1	2.124E+1
2.000E+10	2.750E+1	1.979E+1	2.202E+1

Lens Cortex

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.090E+6	1.913E+3	5.340E+3	3.200E-1
1.310E+6	1.600E+3	4.668E+3	3.400E-1
1.570E+6	1.347E+3	4.076E+3	3.600E-1
1.890E+6	1.146E+3	3.525E+3	3.700E-1
2.280E+6	9.670E+2	3.036E+3	3.900E-1
2.740E+6	7.975E+2	2.610E+3	4.000E-1
3.290E+6	6.615E+2	2.234E+3	4.100E-1
3.950E+6	5.559E+2	1.912E+3	4.200E-1
4.750E+6	4.651E+2	1.640E+3	4.300E-1
5.720E+6	3.848E+2	1.405E+3	4.500E-1
6.870E+6	3.185E+2	1.204E+3	4.600E-1
8.260E+6	2.656E+2	1.028E+3	4.700E-1
9.930E+6	2.235E+2	8.767E+2	4.800E-1
1.190E+7	1.896E+2	7.473E+2	4.900E-1
1.440E+7	1.617E+2	6.356E+2	5.100E-1
1.730E+7	1.386E+2	5.387E+2	5.200E-1
2.080E+7	1.199E+2	4.562E+2	5.300E-1
2.500E+7	1.053E+2	3.855E+2	5.400E-1
3.000E+7	9.393E+1	3.255E+2	5.400E-1
3.610E+7	8.517E+1	2.746E+2	5.500E-1
4.340E+7	7.831E+1	2.314E+2	5.600E-1
5.210E+7	7.290E+1	1.949E+2	5.700E-1
6.270E+7	6.863E+1	1.642E+2	5.700E-1
7.540E+7	6.529E+1	1.382E+2	5.800E-1
9.060E+7	6.262E+1	1.164E+2	5.900E-1
1.090E+8	6.040E+1	9.814E+1	6.000E-1
1.310E+8	5.861E+1	8.285E+1	6.000E-1
1.570E+8	5.723E+1	7.003E+1	6.100E-1
1.890E+8	5.600E+1	5.928E+1	6.200E-1
2.280E+8	5.490E+1	5.036E+1	6.400E-1
2.740E+8	5.399E+1	4.290E+1	6.500E-1
3.290E+8	5.315E+1	3.670E+1	6.700E-1
3.950E+8	5.240E+1	3.159E+1	6.900E-1
4.750E+8	5.173E+1	2.737E+1	7.200E-1
4.810E+8	5.322E+1	2.810E+1	7.500E-1
5.330E+8	5.297E+1	2.595E+1	7.700E-1
5.890E+8	5.278E+1	2.405E+1	7.900E-1
6.510E+8	5.256E+1	2.237E+1	8.100E-1
7.200E+8	5.223E+1	2.093E+1	8.400E-1
7.970E+8	5.183E+1	1.959E+1	8.700E-1
8.810E+8	5.155E+1	1.835E+1	9.000E-1
9.740E+8	5.120E+1	1.734E+1	9.400E-1
1.080E+9	5.089E+1	1.637E+1	9.800E-1
1.190E+9	5.066E+1	1.554E+1	1.030E+0
1.320E+9	5.036E+1	1.487E+1	1.090E+0
1.460E+9	5.005E+1	1.428E+1	1.160E+0
1.610E+9	4.979E+1	1.381E+1	1.240E+0
1.780E+9	4.950E+1	1.342E+1	1.330E+0
1.970E+9	4.920E+1	1.311E+1	1.440E+0
2.180E+9	4.888E+1	1.298E+1	1.580E+0
2.410E+9	4.855E+1	1.290E+1	1.730E+0
2.670E+9	4.822E+1	1.285E+1	1.910E+0
2.950E+9	4.789E+1	1.296E+1	2.130E+0
3.260E+9	4.747E+1	1.322E+1	2.400E+0
3.610E+9	4.700E+1	1.351E+1	2.710E+0
3.990E+9	4.653E+1	1.382E+1	3.070E+0
4.410E+9	4.606E+1	1.423E+1	3.490E+0
4.880E+9	4.553E+1	1.481E+1	4.020E+0
5.400E+9	4.482E+1	1.561E+1	4.690E+0
5.970E+9	4.391E+1	1.645E+1	5.460E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
6.600E+9	4.285E+1	1.719E+1	6.320E+0
7.300E+9	4.173E+1	1.792E+1	7.280E+0
8.080E+9	4.053E+1	1.869E+1	8.400E+0
8.940E+9	3.909E+1	1.944E+1	9.660E+0
9.880E+9	3.745E+1	1.999E+1	1.099E+1
1.090E+10	3.585E+1	2.047E+1	1.245E+1
1.210E+10	3.418E+1	2.084E+1	1.402E+1
1.340E+10	3.251E+1	2.113E+1	1.572E+1
1.480E+10	3.082E+1	2.136E+1	1.756E+1
1.640E+10	2.904E+1	2.166E+1	1.971E+1
1.810E+10	2.722E+1	2.209E+1	2.222E+1
2.000E+10	2.542E+1	2.241E+1	2.493E+1

Lens Nucleus

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.090E+6	6.095E+2	3.105E+3	1.900E-1
1.310E+6	4.922E+2	2.643E+3	1.900E-1
1.570E+6	4.098E+2	2.245E+3	2.000E-1
1.890E+6	3.501E+2	1.895E+3	2.000E-1
2.280E+6	2.951E+2	1.599E+3	2.000E-1
2.740E+6	2.497E+2	1.349E+3	2.100E-1
3.290E+6	2.137E+2	1.134E+3	2.100E-1
3.950E+6	1.861E+2	9.537E+2	2.100E-1
4.750E+6	1.629E+2	8.035E+2	2.100E-1
5.720E+6	1.427E+2	6.775E+2	2.200E-1
6.870E+6	1.270E+2	5.734E+2	2.200E-1
8.260E+6	1.136E+2	4.856E+2	2.200E-1
9.930E+6	1.018E+2	4.114E+2	2.300E-1
1.190E+7	9.199E+1	3.486E+2	2.300E-1
1.440E+7	8.386E+1	2.951E+2	2.400E-1
1.730E+7	7.659E+1	2.495E+2	2.400E-1
2.080E+7	7.027E+1	2.110E+2	2.400E-1
2.500E+7	6.514E+1	1.784E+2	2.500E-1
3.000E+7	6.105E+1	1.509E+2	2.500E-1
3.610E+7	5.773E+1	1.277E+2	2.600E-1
4.340E+7	5.497E+1	1.082E+2	2.600E-1
5.210E+7	5.263E+1	9.175E+1	2.700E-1
6.270E+7	5.063E+1	7.792E+1	2.700E-1
7.540E+7	4.891E+1	6.626E+1	2.800E-1
9.060E+7	4.740E+1	5.646E+1	2.800E-1
1.090E+8	4.605E+1	4.819E+1	2.900E-1
1.300E+8	4.421E+1	4.016E+1	2.900E-1
1.440E+8	4.366E+1	3.625E+1	2.900E-1
1.590E+8	4.325E+1	3.311E+1	2.900E-1
1.760E+8	4.269E+1	3.036E+1	3.000E-1
1.940E+8	4.206E+1	2.805E+1	3.000E-1
2.150E+8	4.186E+1	2.600E+1	3.100E-1
2.380E+8	4.149E+1	2.404E+1	3.200E-1
2.630E+8	4.082E+1	2.215E+1	3.200E-1
2.910E+8	4.029E+1	2.056E+1	3.300E-1
3.220E+8	3.988E+1	1.909E+1	3.400E-1
3.560E+8	3.950E+1	1.774E+1	3.500E-1
3.940E+8	3.915E+1	1.651E+1	3.600E-1
4.350E+8	3.876E+1	1.551E+1	3.800E-1
4.810E+8	3.839E+1	1.445E+1	3.900E-1
5.330E+8	3.810E+1	1.359E+1	4.000E-1
5.890E+8	3.784E+1	1.291E+1	4.200E-1
6.510E+8	3.757E+1	1.216E+1	4.400E-1
7.200E+8	3.727E+1	1.155E+1	4.600E-1
7.970E+8	3.693E+1	1.097E+1	4.900E-1
8.810E+8	3.659E+1	1.050E+1	5.100E-1
9.740E+8	3.626E+1	1.006E+1	5.500E-1
1.080E+9	3.600E+1	9.640E+0	5.800E-1
1.190E+9	3.578E+1	9.350E+0	6.200E-1
1.320E+9	3.556E+1	9.120E+0	6.700E-1
1.460E+9	3.527E+1	8.960E+0	7.300E-1
1.610E+9	3.497E+1	8.850E+0	7.900E-1
1.780E+9	3.468E+1	8.770E+0	8.700E-1
1.970E+9	3.439E+1	8.700E+0	9.500E-1
2.180E+9	3.408E+1	8.710E+0	1.060E+0
2.410E+9	3.374E+1	8.780E+0	1.180E+0
2.670E+9	3.340E+1	8.860E+0	1.320E+0
2.950E+9	3.305E+1	9.010E+0	1.480E+0
3.260E+9	3.267E+1	9.200E+0	1.670E+0
3.610E+9	3.229E+1	9.460E+0	1.900E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.990E+9	3.190E+1	9.830E+0	2.180E+0
4.410E+9	3.144E+1	1.024E+1	2.510E+0
4.880E+9	3.083E+1	1.068E+1	2.900E+0
5.400E+9	3.010E+1	1.116E+1	3.350E+0
5.970E+9	2.930E+1	1.161E+1	3.860E+0
6.600E+9	2.843E+1	1.199E+1	4.410E+0
7.300E+9	2.750E+1	1.232E+1	5.010E+0
8.080E+9	2.650E+1	1.262E+1	5.670E+0
8.940E+9	2.542E+1	1.287E+1	6.400E+0
9.880E+9	2.432E+1	1.300E+1	7.150E+0
1.090E+10	2.321E+1	1.305E+1	7.930E+0
1.210E+10	2.212E+1	1.301E+1	8.750E+0
1.340E+10	2.104E+1	1.290E+1	9.590E+0
1.480E+10	1.998E+1	1.275E+1	1.049E+1
1.640E+10	1.897E+1	1.260E+1	1.146E+1
1.810E+10	1.805E+1	1.246E+1	1.254E+1
2.000E+10	1.717E+1	1.232E+1	1.371E+1

Liver

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	1.808E+7	4.340E+7	2.415E-2
1.122E+1	1.655E+7	3.947E+7	2.464E-2
1.259E+1	1.413E+7	3.690E+7	2.584E-2
1.350E+1	1.230E+7	3.391E+7	2.664E-2
1.585E+1	1.067E+7	3.105E+7	2.738E-2
1.778E+1	9.029E+6	2.846E+7	2.816E-2
1.995E+1	7.843E+6	2.592E+7	2.877E-2
2.239E+1	6.678E+6	2.362E+7	2.942E-2
2.512E+1	5.677E+6	2.145E+7	2.998E-2
2.818E+1	4.820E+6	1.945E+7	3.050E-2
3.162E+1	4.080E+6	1.761E+7	3.098E-2
3.548E+1	3.450E+6	1.591E+7	3.141E-2
3.981E+1	2.915E+6	1.436E+7	3.181E-2
4.467E+1	2.461E+6	1.295E+7	3.218E-2
5.012E+1	2.084E+6	1.166E+7	3.252E-2
5.623E+1	1.754E+6	1.050E+7	3.284E-2
6.310E+1	1.483E+6	9.436E+6	3.312E-2
7.079E+1	1.254E+6	8.478E+6	3.339E-2
7.943E+1	1.062E+6	7.611E+6	3.363E-2
8.913E+1	9.006E+5	6.827E+6	3.385E-2
1.000E+2	7.657E+5	6.122E+6	3.406E-2
1.122E+2	6.541E+5	5.490E+6	3.427E-2
1.259E+2	5.601E+5	4.919E+6	3.445E-2
1.413E+2	4.815E+5	4.408E+6	3.464E-2
1.585E+2	4.162E+5	3.949E+6	3.482E-2
1.778E+2	3.612E+5	3.536E+6	3.498E-2
1.995E+2	3.157E+5	3.168E+6	3.516E-2
2.239E+2	2.776E+5	2.836E+6	3.533E-2
2.512E+2	2.456E+5	2.539E+6	3.549E-2
2.818E+2	2.184E+5	2.268E+6	3.556E-2
3.162E+2	1.941E+5	2.028E+6	3.568E-2
3.548E+2	1.748E+5	1.818E+6	3.588E-2
3.981E+2	1.581E+5	1.627E+6	3.602E-2
4.467E+2	1.443E+5	1.455E+6	3.617E-2
5.012E+2	1.314E+5	1.302E+6	3.630E-2
5.623E+2	1.212E+5	1.167E+6	3.650E-2
6.310E+2	1.122E+5	1.045E+6	3.669E-2
7.079E+2	1.043E+5	9.366E+5	3.689E-2
7.943E+2	9.728E+4	8.392E+5	3.708E-2
8.913E+2	9.103E+4	7.520E+5	3.729E-2
1.000E+3	8.558E+4	6.744E+5	3.752E-2
1.122E+3	8.071E+4	6.049E+5	3.776E-2
1.259E+3	7.632E+4	5.428E+5	3.802E-2
1.413E+3	7.228E+4	4.872E+5	3.828E-2
1.585E+3	6.862E+4	4.374E+5	3.857E-2
1.778E+3	6.520E+4	3.928E+5	3.886E-2
1.995E+3	6.206E+4	3.530E+5	3.919E-2
2.239E+3	5.913E+4	3.176E+5	3.955E-2
2.512E+3	5.635E+4	2.858E+5	3.993E-2
2.818E+3	5.372E+4	2.574E+5	4.036E-2
3.162E+3	5.128E+4	2.321E+5	4.083E-2
3.548E+3	4.892E+4	2.093E+5	4.132E-2
3.981E+3	4.666E+4	1.890E+5	4.185E-2
4.467E+3	4.449E+4	1.707E+5	4.243E-2
5.012E+3	4.240E+4	1.545E+5	4.306E-2
5.623E+3	4.035E+4	1.399E+5	4.377E-2
6.310E+3	3.853E+4	1.271E+5	4.461E-2
7.079E+3	3.666E+4	1.154E+5	4.545E-2
7.943E+3	3.492E+4	1.049E+5	4.636E-2
8.913E+3	3.313E+4	9.534E+4	4.727E-2

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	3.150E+4	8.688E+4	4.833E-2
1.122E+4	2.989E+4	7.918E+4	4.942E-2
1.259E+4	2.836E+4	7.224E+4	5.059E-2
1.413E+4	2.686E+4	6.598E+4	5.185E-2
1.585E+4	2.544E+4	6.033E+4	5.319E-2
1.778E+4	2.407E+4	5.519E+4	5.459E-2
1.995E+4	2.275E+4	5.057E+4	5.613E-2
2.239E+4	2.151E+4	4.636E+4	5.774E-2
2.512E+4	2.030E+4	4.258E+4	5.950E-2
2.818E+4	1.917E+4	3.917E+4	6.142E-2
3.162E+4	1.807E+4	3.604E+4	6.341E-2
3.548E+4	1.701E+4	3.319E+4	6.551E-2
3.981E+4	1.600E+4	3.059E+4	6.775E-2
4.467E+4	1.503E+4	2.826E+4	7.022E-2
5.012E+4	1.413E+4	2.614E+4	7.287E-2
5.623E+4	1.325E+4	2.417E+4	7.562E-2
6.310E+4	1.241E+4	2.237E+4	7.852E-2
7.079E+4	1.161E+4	2.074E+4	8.167E-2
7.943E+4	1.085E+4	1.923E+4	8.497E-2
8.913E+4	1.012E+4	1.784E+4	8.848E-2
1.000E+5	9.419E+3	1.656E+4	9.214E-2
1.122E+5	8.756E+3	1.538E+4	9.602E-2
1.259E+5	8.127E+3	1.430E+4	1.002E-1
1.413E+5	7.530E+3	1.330E+4	1.045E-1
1.585E+5	6.969E+3	1.234E+4	1.088E-1
1.778E+5	6.423E+3	1.147E+4	1.135E-1
1.995E+5	5.918E+3	1.067E+4	1.184E-1
2.239E+5	5.442E+3	9.926E+3	1.236E-1
2.512E+5	4.994E+3	9.230E+3	1.290E-1
2.818E+5	4.574E+3	8.580E+3	1.345E-1
3.162E+5	4.180E+3	7.969E+3	1.402E-1
3.548E+5	3.813E+3	7.399E+3	1.460E-1
3.981E+5	3.472E+3	6.863E+3	1.520E-1
4.467E+5	3.156E+3	6.360E+3	1.581E-1
5.012E+5	2.863E+3	5.886E+3	1.641E-1
5.623E+5	2.593E+3	5.445E+3	1.703E-1
6.310E+5	2.346E+3	5.031E+3	1.766E-1
7.079E+5	2.120E+3	4.644E+3	1.829E-1
7.943E+5	1.915E+3	4.282E+3	1.892E-1
8.913E+5	1.728E+3	3.946E+3	1.956E-1
1.000E+6	1.558E+3	3.631E+3	2.020E-1
1.122E+6	1.405E+3	3.339E+3	2.084E-1
1.259E+6	1.267E+3	3.067E+3	2.148E-1
1.413E+6	1.142E+3	2.815E+3	2.212E-1
1.585E+6	1.030E+3	2.582E+3	2.276E-1
1.778E+6	9.286E+2	2.365E+3	2.340E-1
1.995E+6	8.387E+2	2.164E+3	2.403E-1
2.239E+6	7.617E+2	1.976E+3	2.461E-1
2.512E+6	6.922E+2	1.817E+3	2.540E-1
2.818E+6	6.221E+2	1.663E+3	2.608E-1
3.162E+6	5.900E+2	1.506E+3	2.650E-1
3.289E+6	5.800E+2	1.475E+3	2.700E-1
3.607E+6	5.700E+2	1.374E+3	2.757E-1
3.955E+6	5.640E+2	1.297E+3	2.854E-1
4.336E+6	4.902E+2	1.230E+3	2.968E-1
4.755E+6	4.833E+2	1.146E+3	3.032E-1
5.213E+6	4.248E+2	1.041E+3	3.019E-1
5.716E+6	3.929E+2	9.438E+2	3.050E-1
6.268E+6	3.682E+2	8.811E+2	3.072E-1
6.873E+6	3.649E+2	7.925E+2	3.130E-1

Liver

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
7.536E+6	3.562E+2	7.589E+2	3.182E-1
8.263E+6	3.422E+2	7.446E+2	3.423E-1
9.060E+6	2.882E+2	6.944E+2	3.500E-1
9.934E+6	2.187E+2	6.424E+2	3.550E-1
1.089E+7	2.206E+2	5.941E+2	3.600E-1
1.194E+7	2.255E+2	5.463E+2	3.630E-1
1.310E+7	2.134E+2	5.010E+2	3.650E-1
1.436E+7	2.146E+2	4.632E+2	3.700E-1
1.574E+7	1.979E+2	4.264E+2	3.735E-1
1.726E+7	1.811E+2	3.920E+2	3.765E-1
1.893E+7	1.663E+2	3.661E+2	3.855E-1
2.075E+7	1.576E+2	3.413E+2	3.941E-1
2.276E+7	1.493E+2	3.162E+2	4.003E-1
2.495E+7	1.403E+2	2.916E+2	4.049E-1
2.736E+7	1.330E+2	2.739E+2	4.169E-1
3.000E+7	1.262E+2	2.543E+2	4.244E-1
3.289E+7	1.189E+2	2.363E+2	4.325E-1
3.607E+7	1.141E+2	2.194E+2	4.401E-1
3.955E+7	1.096E+2	2.046E+2	4.502E-1
4.336E+7	1.032E+2	1.900E+2	4.583E-1
4.755E+7	9.743E+1	1.765E+2	4.669E-1
5.213E+7	9.334E+1	1.637E+2	4.748E-1
5.716E+7	8.764E+1	1.528E+2	4.858E-1
6.268E+7	8.319E+1	1.410E+2	4.915E-1
6.873E+7	7.925E+1	1.307E+2	4.998E-1
7.536E+7	7.555E+1	1.208E+2	5.064E-1
8.263E+7	7.229E+1	1.119E+2	5.142E-1
9.060E+7	7.002E+1	1.030E+2	5.194E-1
9.934E+7	6.774E+1	9.534E+1	5.269E-1
1.089E+8	6.581E+1	8.843E+1	5.359E-1
1.194E+8	6.408E+1	8.205E+1	5.452E-1
1.310E+8	6.261E+1	7.636E+1	5.563E-1
1.436E+8	6.075E+1	7.093E+1	5.666E-1
1.574E+8	5.909E+1	6.524E+1	5.714E-1
1.726E+8	5.815E+1	5.999E+1	5.762E-1
1.893E+8	5.710E+1	5.545E+1	5.840E-1
2.075E+8	5.586E+1	5.141E+1	5.936E-1
2.276E+8	5.475E+1	4.768E+1	6.036E-1
2.495E+8	5.383E+1	4.416E+1	6.131E-1
2.736E+8	5.322E+1	4.081E+1	6.212E-1
3.000E+8	5.263E+1	3.783E+1	6.314E-1
3.289E+8	5.179E+1	3.508E+1	6.420E-1
3.607E+8	5.121E+1	3.256E+1	6.533E-1
3.955E+8	5.079E+1	3.041E+1	6.690E-1
4.336E+8	5.034E+1	2.819E+1	6.801E-1
4.755E+8	4.986E+1	2.640E+1	6.984E-1
5.213E+8	4.942E+1	2.471E+1	7.167E-1
5.716E+8	4.900E+1	2.314E+1	7.359E-1
6.268E+8	4.865E+1	2.177E+1	7.591E-1
6.873E+8	4.833E+1	2.057E+1	7.865E-1
7.536E+8	4.800E+1	1.943E+1	8.147E-1
8.263E+8	4.747E+1	1.870E+1	8.598E-1
9.060E+8	4.744E+1	1.750E+1	8.822E-1
9.934E+8	4.673E+1	1.610E+1	8.900E-1
1.025E+9	4.600E+1	1.579E+1	9.000E-1
1.078E+9	4.532E+1	1.513E+1	9.073E-1
1.133E+9	4.531E+1	1.478E+1	9.319E-1
1.192E+9	4.501E+1	1.461E+1	9.685E-1
1.254E+9	4.490E+1	1.432E+1	9.986E-1
1.318E+9	4.462E+1	1.386E+1	1.017E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.386E+9	4.454E+1	1.368E+1	1.055E+0
1.458E+9	4.433E+1	1.342E+1	1.088E+0
1.533E+9	4.424E+1	1.325E+1	1.130E+0
1.612E+9	4.406E+1	1.310E+1	1.175E+0
1.696E+9	4.379E+1	1.294E+1	1.221E+0
1.783E+9	4.375E+1	1.271E+1	1.261E+0
1.875E+9	4.345E+1	1.261E+1	1.315E+0
1.972E+9	4.332E+1	1.258E+1	1.380E+0
2.074E+9	4.317E+1	1.243E+1	1.434E+0
2.181E+9	4.296E+1	1.245E+1	1.510E+0
2.294E+9	4.280E+1	1.244E+1	1.587E+0
2.412E+9	4.261E+1	1.234E+1	1.656E+0
2.537E+9	4.241E+1	1.237E+1	1.746E+0
2.668E+9	4.221E+1	1.244E+1	1.846E+0
2.806E+9	4.205E+1	1.254E+1	1.957E+0
2.951E+9	4.174E+1	1.248E+1	2.050E+0
3.103E+9	4.149E+1	1.264E+1	2.181E+0
3.263E+9	4.137E+1	1.274E+1	2.313E+0
3.432E+9	4.098E+1	1.279E+1	2.442E+0
3.609E+9	4.079E+1	1.299E+1	2.608E+0
3.796E+9	4.056E+1	1.307E+1	2.760E+0
3.992E+9	4.027E+1	1.323E+1	2.937E+0
4.198E+9	4.012E+1	1.347E+1	3.146E+0
4.415E+9	3.982E+1	1.364E+1	3.351E+0
4.643E+9	3.945E+1	1.410E+1	3.642E+0
4.883E+9	3.906E+1	1.438E+1	3.907E+0
5.135E+9	3.867E+1	1.469E+1	4.197E+0
5.400E+9	3.813E+1	1.504E+1	4.519E+0
5.679E+9	3.755E+1	1.537E+1	4.854E+0
5.972E+9	3.694E+1	1.561E+1	5.187E+0
6.281E+9	3.642E+1	1.594E+1	5.571E+0
6.605E+9	3.583E+1	1.618E+1	5.946E+0
6.946E+9	3.532E+1	1.642E+1	6.347E+0
7.305E+9	3.471E+1	1.665E+1	6.765E+0
7.682E+9	3.394E+1	1.685E+1	7.203E+0
8.079E+9	3.321E+1	1.704E+1	7.659E+0
8.496E+9	3.244E+1	1.728E+1	8.169E+0
8.935E+9	3.172E+1	1.744E+1	8.671E+0
9.397E+9	3.095E+1	1.756E+1	9.181E+0
9.882E+9	3.000E+1	1.763E+1	9.690E+0
1.039E+10	2.923E+1	1.772E+1	1.025E+1
1.093E+10	2.824E+1	1.764E+1	1.072E+1
1.149E+10	2.741E+1	1.749E+1	1.118E+1
1.209E+10	2.671E+1	1.746E+1	1.174E+1
1.271E+10	2.597E+1	1.713E+1	1.211E+1
1.337E+10	2.529E+1	1.694E+1	1.260E+1
1.406E+10	2.451E+1	1.665E+1	1.302E+1
1.478E+10	2.377E+1	1.639E+1	1.348E+1
1.555E+10	2.329E+1	1.613E+1	1.395E+1
1.635E+10	2.281E+1	1.584E+1	1.441E+1
1.720E+10	2.224E+1	1.551E+1	1.484E+1
1.808E+10	2.173E+1	1.531E+1	1.540E+1
1.902E+10	2.119E+1	1.520E+1	1.608E+1
2.000E+10	2.082E+1	1.486E+1	1.653E+1

Lung Deflated

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.607E+6	4.220E+2	2.010E+3	4.033E-1
3.955E+6	4.217E+2	1.887E+3	4.157E-1
4.336E+6	3.870E+2	1.737E+3	4.183E-1
4.755E+6	3.783E+2	1.623E+3	4.290E-1
5.213E+6	3.397E+2	1.493E+3	4.340E-1
5.716E+6	2.960E+2	1.360E+3	4.320E-1
6.268E+6	2.780E+2	1.287E+3	4.487E-1
6.873E+6	2.447E+2	1.163E+3	4.443E-1
7.536E+6	2.300E+2	1.080E+3	4.530E-1
8.263E+6	2.153E+2	1.010E+3	4.640E-1
9.060E+6	1.930E+2	9.257E+2	4.660E-1
9.934E+6	1.913E+2	8.423E+2	4.657E-1
1.089E+7	1.733E+2	7.743E+2	4.693E-1
1.194E+7	1.550E+2	7.243E+2	4.810E-1
1.310E+7	1.483E+2	6.677E+2	4.863E-1
1.436E+7	1.440E+2	6.113E+2	4.887E-1
1.574E+7	1.347E+2	5.570E+2	4.880E-1
1.726E+7	1.210E+2	5.197E+2	4.990E-1
1.893E+7	1.153E+2	4.783E+2	5.037E-1
2.075E+7	1.070E+2	4.373E+2	5.053E-1
2.276E+7	1.005E+2	4.023E+2	5.090E-1
2.495E+7	9.520E+1	3.707E+2	5.143E-1
2.736E+7	9.220E+1	3.410E+2	5.187E-1
3.000E+7	8.627E+1	3.127E+2	5.213E-1
3.289E+7	8.313E+1	2.877E+2	5.260E-1
3.607E+7	7.787E+1	2.637E+2	5.290E-1
3.955E+7	7.583E+1	2.427E+2	5.333E-1
4.336E+7	7.237E+1	2.237E+2	5.393E-1
4.755E+7	6.933E+1	2.047E+2	5.413E-1
5.213E+7	6.673E+1	1.880E+2	5.447E-1
5.716E+7	6.510E+1	1.720E+2	5.473E-1
6.268E+7	6.337E+1	1.577E+2	5.503E-1
6.873E+7	6.163E+1	1.450E+2	5.540E-1
7.536E+7	6.027E+1	1.333E+2	5.577E-1
8.263E+7	5.880E+1	1.217E+2	5.600E-1
9.060E+7	5.757E+1	1.117E+2	5.633E-1
9.934E+7	5.637E+1	1.026E+2	5.667E-1
1.089E+8	5.550E+1	9.400E+1	5.707E-1
1.194E+8	5.440E+1	8.647E+1	5.743E-1
1.310E+8	5.367E+1	7.937E+1	5.783E-1
1.436E+8	5.277E+1	7.297E+1	5.830E-1
1.574E+8	5.223E+1	6.703E+1	5.873E-1
1.726E+8	5.177E+1	6.150E+1	5.907E-1
1.893E+8	5.143E+1	5.670E+1	5.970E-1
2.075E+8	5.070E+1	5.207E+1	6.010E-1
2.151E+8	5.530E+1	5.477E+1	6.550E-1
2.262E+8	5.507E+1	5.270E+1	6.630E-1
2.379E+8	5.530E+1	4.943E+1	6.543E-1
2.502E+8	5.517E+1	4.753E+1	6.617E-1
2.631E+8	5.473E+1	4.597E+1	6.727E-1
2.767E+8	5.420E+1	4.380E+1	6.740E-1
2.910E+8	5.380E+1	4.137E+1	6.697E-1
3.060E+8	5.347E+1	4.007E+1	6.817E-1
3.218E+8	5.387E+1	3.837E+1	6.870E-1
3.384E+8	5.343E+1	3.703E+1	6.967E-1
3.559E+8	5.313E+1	3.510E+1	6.943E-1
3.743E+8	5.350E+1	3.373E+1	7.023E-1
3.936E+8	5.323E+1	3.227E+1	7.070E-1
4.140E+8	5.253E+1	3.043E+1	7.010E-1
4.354E+8	5.283E+1	2.947E+1	7.147E-1

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
4.578E+8	5.273E+1	2.860E+1	7.287E-1
4.815E+8	5.257E+1	2.713E+1	7.277E-1
5.064E+8	5.243E+1	2.590E+1	7.297E-1
5.325E+8	5.253E+1	2.487E+1	7.363E-1
5.600E+8	5.213E+1	2.410E+1	7.500E-1
5.889E+8	5.200E+1	2.327E+1	7.620E-1
6.194E+8	5.207E+1	2.250E+1	7.750E-1
6.513E+8	5.193E+1	2.180E+1	7.903E-1
6.850E+8	5.153E+1	2.093E+1	7.977E-1
7.204E+8	5.157E+1	2.027E+1	8.127E-1
7.576E+8	5.140E+1	1.947E+1	8.217E-1
7.967E+8	5.120E+1	1.903E+1	8.437E-1
8.378E+8	5.127E+1	1.840E+1	8.583E-1
8.811E+8	5.103E+1	1.773E+1	8.707E-1
9.266E+8	5.087E+1	1.730E+1	8.920E-1
9.745E+8	5.080E+1	1.677E+1	9.100E-1
1.025E+9	5.060E+1	1.633E+1	9.307E-1
1.078E+9	5.057E+1	1.597E+1	9.560E-1
1.133E+9	5.043E+1	1.550E+1	9.790E-1
1.192E+9	5.027E+1	1.530E+1	1.013E+0
1.254E+9	5.020E+1	1.487E+1	1.037E+0
1.318E+9	5.007E+1	1.470E+1	1.077E+0
1.386E+9	5.000E+1	1.443E+1	1.110E+0
1.458E+9	4.980E+1	1.420E+1	1.153E+0
1.533E+9	4.960E+1	1.387E+1	1.183E+0
1.612E+9	4.957E+1	1.370E+1	1.227E+0
1.696E+9	4.940E+1	1.357E+1	1.280E+0
1.783E+9	4.907E+1	1.343E+1	1.333E+0
1.875E+9	4.910E+1	1.330E+1	1.387E+0
1.972E+9	4.883E+1	1.320E+1	1.447E+0
2.074E+9	4.867E+1	1.313E+1	1.517E+0
2.181E+9	4.853E+1	1.320E+1	1.600E+0
2.294E+9	4.833E+1	1.303E+1	1.663E+0
2.412E+9	4.817E+1	1.310E+1	1.760E+0
2.537E+9	4.790E+1	1.307E+1	1.850E+0
2.668E+9	4.767E+1	1.320E+1	1.967E+0
2.806E+9	4.743E+1	1.323E+1	2.063E+0
2.951E+9	4.727E+1	1.327E+1	2.177E+0
3.103E+9	4.697E+1	1.340E+1	2.313E+0
3.263E+9	4.677E+1	1.360E+1	2.470E+0
3.432E+9	4.647E+1	1.367E+1	2.613E+0
3.609E+9	4.617E+1	1.380E+1	2.773E+0
3.796E+9	4.590E+1	1.393E+1	2.940E+0
3.992E+9	4.563E+1	1.407E+1	3.123E+0
4.198E+9	4.537E+1	1.430E+1	3.340E+0
4.415E+9	4.507E+1	1.450E+1	3.560E+0
4.643E+9	4.470E+1	1.487E+1	3.837E+0
4.883E+9	4.440E+1	1.517E+1	4.123E+0
5.135E+9	4.397E+1	1.553E+1	4.430E+0
5.400E+9	4.337E+1	1.583E+1	4.753E+0
5.679E+9	4.293E+1	1.617E+1	5.103E+0
5.972E+9	4.247E+1	1.643E+1	5.463E+0
6.281E+9	4.170E+1	1.677E+1	5.860E+0
6.605E+9	4.127E+1	1.700E+1	6.240E+0
6.946E+9	4.067E+1	1.713E+1	6.623E+0
7.305E+9	4.010E+1	1.743E+1	7.083E+0
7.682E+9	3.953E+1	1.773E+1	7.587E+0
8.079E+9	3.883E+1	1.790E+1	8.057E+0
8.496E+9	3.837E+1	1.813E+1	8.570E+0
8.935E+9	3.767E+1	1.837E+1	9.130E+0

Lung Deflated

Frequency (Hz)	Human @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
9.397E+9	3.693E+1	1.853E+1	9.663E+0
9.882E+9	3.637E+1	1.883E+1	1.037E+1
1.039E+10	3.560E+1	1.903E+1	1.100E+1
1.093E+10	3.510E+1	1.927E+1	1.173E+1
1.149E+10	3.427E+1	1.933E+1	1.233E+1
1.209E+10	3.380E+1	1.957E+1	1.317E+1
1.271E+10	3.270E+1	1.973E+1	1.393E+1
1.337E+10	3.230E+1	2.013E+1	1.500E+1
1.406E+10	3.170E+1	2.043E+1	1.597E+1
1.478E+10	3.060E+1	2.047E+1	1.683E+1
1.555E+10	2.957E+1	2.103E+1	1.820E+1
1.635E+10	2.843E+1	2.103E+1	1.917E+1
1.720E+10	2.763E+1	2.117E+1	2.023E+1
1.808E+10	2.650E+1	2.137E+1	2.147E+1
1.902E+10	2.513E+1	2.123E+1	2.247E+1
2.000E+10	2.397E+1	2.123E+1	2.360E+1

Lung Inflated

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	3.042E+7	4.626E+7	2.573E-2
1.122E+1	2.790E+7	4.338E+7	2.708E-2
1.259E+1	2.492E+7	4.126E+7	2.889E-2
1.350E+1	2.210E+7	3.887E+7	3.054E-2
1.585E+1	1.940E+7	3.647E+7	3.215E-2
1.778E+1	1.676E+7	3.414E+7	3.377E-2
1.995E+1	1.457E+7	3.165E+7	3.513E-2
2.239E+1	1.256E+7	2.931E+7	3.650E-2
2.512E+1	1.077E+7	2.702E+7	3.776E-2
2.818E+1	9.176E+6	2.483E+7	3.893E-2
3.162E+1	7.797E+6	2.274E+7	4.000E-2
3.548E+1	6.646E+6	2.087E+7	4.120E-2
3.981E+1	5.646E+6	1.909E+7	4.227E-2
4.467E+1	4.784E+6	1.739E+7	4.322E-2
5.012E+1	4.036E+6	1.578E+7	4.401E-2
5.623E+1	3.398E+6	1.430E+7	4.472E-2
6.310E+1	2.866E+6	1.293E+7	4.538E-2
7.079E+1	2.408E+6	1.167E+7	4.596E-2
7.943E+1	2.026E+6	1.053E+7	4.655E-2
8.913E+1	1.707E+6	9.494E+6	4.708E-2
1.000E+2	1.439E+6	8.549E+6	4.756E-2
1.122E+2	1.215E+6	7.694E+6	4.803E-2
1.259E+2	1.027E+6	6.919E+6	4.846E-2
1.413E+2	8.694E+5	6.217E+6	4.886E-2
1.585E+2	7.377E+5	5.581E+6	4.921E-2
1.778E+2	6.273E+5	5.006E+6	4.952E-2
1.995E+2	5.357E+5	4.489E+6	4.983E-2
2.239E+2	4.587E+5	4.022E+6	5.010E-2
2.512E+2	3.939E+5	3.601E+6	5.032E-2
2.818E+2	3.401E+5	3.226E+6	5.057E-2
3.162E+2	2.950E+5	2.889E+6	5.082E-2
3.548E+2	2.579E+5	2.591E+6	5.114E-2
3.981E+2	2.295E+5	2.322E+6	5.142E-2
4.467E+2	2.018E+5	2.081E+6	5.171E-2
5.012E+2	1.790E+5	1.865E+6	5.201E-2
5.623E+2	1.606E+5	1.674E+6	5.236E-2
6.310E+2	1.437E+5	1.497E+6	5.255E-2
7.079E+2	1.301E+5	1.344E+6	5.294E-2
7.943E+2	1.176E+5	1.204E+6	5.323E-2
8.913E+2	1.071E+5	1.080E+6	5.356E-2
1.000E+3	9.686E+4	9.688E+5	5.390E-2
1.122E+3	8.899E+4	8.689E+5	5.424E-2
1.259E+3	8.085E+4	7.800E+5	5.463E-2
1.413E+3	7.402E+4	7.005E+5	5.505E-2
1.585E+3	6.780E+4	6.296E+5	5.552E-2
1.778E+3	6.228E+4	5.660E+5	5.600E-2
1.995E+3	5.708E+4	5.086E+5	5.646E-2
2.239E+3	5.243E+4	4.573E+5	5.696E-2
2.512E+3	4.808E+4	4.115E+5	5.751E-2
2.818E+3	4.396E+4	3.698E+5	5.798E-2
3.162E+3	4.107E+4	3.313E+5	5.829E-2
3.548E+3	3.661E+4	2.954E+5	5.832E-2
3.981E+3	3.327E+4	2.658E+5	5.886E-2
4.467E+3	3.082E+4	2.395E+5	5.951E-2
5.012E+3	2.814E+4	2.151E+5	5.997E-2
5.623E+3	2.567E+4	1.933E+5	6.049E-2
6.310E+3	2.346E+4	1.742E+5	6.115E-2
7.079E+3	2.147E+4	1.567E+5	6.170E-2
7.943E+3	1.950E+4	1.410E+5	6.232E-2
8.913E+3	1.789E+4	1.271E+5	6.304E-2

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	1.634E+4	1.144E+5	6.366E-2
1.122E+4	1.486E+4	1.031E+5	6.434E-2
1.259E+4	1.362E+4	9.287E+4	6.505E-2
1.413E+4	1.241E+4	8.353E+4	6.564E-2
1.585E+4	1.138E+4	7.532E+4	6.641E-2
1.778E+4	1.040E+4	6.778E+4	6.706E-2
1.995E+4	9.529E+3	6.108E+4	6.780E-2
2.239E+4	8.755E+3	5.499E+4	6.849E-2
2.512E+4	8.023E+3	4.941E+4	6.905E-2
2.818E+4	7.361E+3	4.450E+4	6.978E-2
3.162E+4	6.775E+3	4.007E+4	7.048E-2
3.548E+4	6.232E+3	3.609E+4	7.124E-2
3.981E+4	5.744E+3	3.256E+4	7.211E-2
4.467E+4	5.292E+3	2.934E+4	7.292E-2
5.012E+4	4.878E+3	2.646E+4	7.377E-2
5.623E+4	4.505E+3	2.388E+4	7.471E-2
6.310E+4	4.149E+3	2.154E+4	7.561E-2
7.079E+4	3.839E+3	1.949E+4	7.674E-2
7.943E+4	3.542E+3	1.759E+4	7.772E-2
8.913E+4	3.263E+3	1.589E+4	7.881E-2
1.000E+5	3.016E+3	1.438E+4	7.997E-2
1.122E+5	2.784E+3	1.299E+4	8.111E-2
1.259E+5	2.567E+3	1.175E+4	8.232E-2
1.413E+5	2.369E+3	1.063E+4	8.353E-2
1.585E+5	2.182E+3	9.620E+3	8.482E-2
1.778E+5	2.015E+3	8.721E+3	8.628E-2
1.995E+5	1.857E+3	7.889E+3	8.757E-2
2.239E+5	1.710E+3	7.147E+3	8.901E-2
2.512E+5	1.578E+3	6.480E+3	9.056E-2
2.818E+5	1.453E+3	5.872E+3	9.207E-2
3.162E+5	1.339E+3	5.323E+3	9.364E-2
3.548E+5	1.233E+3	4.824E+3	9.522E-2
3.981E+5	1.136E+3	4.335E+3	9.600E-2
4.467E+5	1.046E+3	3.883E+3	9.650E-2
5.012E+5	9.645E+2	3.479E+3	9.700E-2
5.623E+5	8.886E+2	3.117E+3	9.750E-2
6.310E+5	8.500E+2	2.792E+3	9.800E-2
6.873E+5	8.000E+2	2.576E+3	9.850E-2
7.536E+5	7.500E+2	2.361E+3	9.900E-2
8.263E+5	7.000E+2	2.160E+3	9.930E-2
9.060E+5	6.500E+2	1.976E+3	9.960E-2
9.934E+5	6.067E+2	1.808E+3	9.990E-2
1.089E+6	5.808E+2	1.683E+3	1.020E-1
1.194E+6	5.600E+2	1.565E+3	1.040E-1
1.310E+6	5.429E+2	1.441E+3	1.050E-1
1.436E+6	5.200E+2	1.327E+3	1.060E-1
1.574E+6	4.900E+2	1.222E+3	1.070E-1
1.726E+6	4.760E+2	1.125E+3	1.080E-1
1.893E+6	4.437E+2	1.044E+3	1.099E-1
2.075E+6	4.227E+2	9.464E+2	1.093E-1
2.276E+6	4.048E+2	9.247E+2	1.171E-1
2.495E+6	3.741E+2	8.358E+2	1.160E-1
2.736E+6	3.654E+2	8.074E+2	1.229E-1
3.000E+6	3.466E+2	7.668E+2	1.280E-1
3.289E+6	3.137E+2	7.049E+2	1.290E-1
3.607E+6	3.004E+2	6.683E+2	1.341E-1
3.955E+6	2.842E+2	6.222E+2	1.369E-1
4.336E+6	2.782E+2	5.861E+2	1.414E-1
4.755E+6	2.582E+2	5.630E+2	1.489E-1
5.213E+6	2.362E+2	5.064E+2	1.469E-1

Lung Inflated

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
5.716E+6	2.070E+2	4.667E+2	1.484E-1
6.268E+6	1.993E+2	4.341E+2	1.514E-1
6.873E+6	1.941E+2	4.181E+2	1.599E-1
7.536E+6	1.999E+2	3.915E+2	1.641E-1
8.263E+6	1.780E+2	3.659E+2	1.682E-1
9.060E+6	1.552E+2	3.466E+2	1.747E-1
9.934E+6	1.500E+2	3.157E+2	1.744E-1
1.089E+7	1.410E+2	2.960E+2	1.794E-1
1.194E+7	1.315E+2	2.766E+2	1.838E-1
1.310E+7	1.225E+2	2.578E+2	1.878E-1
1.436E+7	1.163E+2	2.438E+2	1.947E-1
1.574E+7	1.066E+2	2.300E+2	2.015E-1
1.726E+7	9.883E+1	2.148E+2	2.063E-1
1.893E+7	9.317E+1	2.014E+2	2.121E-1
2.075E+7	8.457E+1	1.862E+2	2.150E-1
2.276E+7	8.018E+1	1.748E+2	2.214E-1
2.495E+7	7.412E+1	1.631E+2	2.264E-1
2.736E+7	6.957E+1	1.515E+2	2.305E-1
3.000E+7	6.424E+1	1.411E+2	2.355E-1
3.289E+7	6.049E+1	1.318E+2	2.412E-1
3.607E+7	5.635E+1	1.222E+2	2.453E-1
3.955E+7	5.316E+1	1.141E+2	2.511E-1
4.336E+7	4.944E+1	1.059E+2	2.555E-1
4.755E+7	4.642E+1	9.848E+1	2.605E-1
5.213E+7	4.387E+1	9.089E+1	2.636E-1
5.716E+7	4.123E+1	8.431E+1	2.681E-1
6.268E+7	3.881E+1	7.815E+1	2.725E-1
6.873E+7	3.688E+1	7.230E+1	2.764E-1
7.536E+7	3.510E+1	6.676E+1	2.799E-1
8.263E+7	3.338E+1	6.176E+1	2.839E-1
9.060E+7	3.199E+1	5.698E+1	2.872E-1
9.934E+7	3.080E+1	5.261E+1	2.908E-1
1.089E+8	2.955E+1	4.865E+1	2.948E-1
1.194E+8	2.858E+1	4.502E+1	2.991E-1
1.310E+8	2.753E+1	4.167E+1	3.036E-1
1.436E+8	2.663E+1	3.842E+1	3.069E-1
1.574E+8	2.596E+1	3.546E+1	3.106E-1
1.726E+8	2.531E+1	3.261E+1	3.132E-1
1.893E+8	2.483E+1	3.005E+1	3.165E-1
2.075E+8	2.423E+1	2.775E+1	3.204E-1
2.276E+8	2.369E+1	2.561E+1	3.243E-1
2.495E+8	2.323E+1	2.365E+1	3.284E-1
2.736E+8	2.290E+1	2.179E+1	3.317E-1
3.000E+8	2.262E+1	2.017E+1	3.367E-1
3.289E+8	2.228E+1	1.860E+1	3.404E-1
3.607E+8	2.201E+1	1.716E+1	3.443E-1
3.955E+8	2.181E+1	1.595E+1	3.510E-1
4.336E+8	2.158E+1	1.476E+1	3.561E-1
4.755E+8	2.150E+1	1.353E+1	3.580E-1
5.213E+8	2.140E+1	1.241E+1	3.600E-1
5.325E+8	2.130E+1	1.225E+1	3.630E-1
5.600E+8	2.120E+1	1.175E+1	3.660E-1
5.889E+8	2.110E+1	1.126E+1	3.691E-1
6.194E+8	2.105E+1	1.074E+1	3.701E-1
6.513E+8	2.100E+1	1.035E+1	3.752E-1
6.850E+8	2.098E+1	1.002E+1	3.818E-1
7.204E+8	2.095E+1	9.599E+0	3.847E-1
7.576E+8	2.093E+1	9.214E+0	3.883E-1
7.967E+8	2.090E+1	8.874E+0	3.933E-1
8.378E+8	2.084E+1	8.444E+0	3.936E-1

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
8.811E+8	2.083E+1	8.258E+0	4.048E-1
9.266E+8	2.077E+1	8.058E+0	4.154E-1
9.745E+8	2.068E+1	7.669E+0	4.157E-1
1.025E+9	2.050E+1	7.501E+0	4.276E-1
1.078E+9	2.048E+1	7.184E+0	4.307E-1
1.133E+9	2.055E+1	7.041E+0	4.439E-1
1.192E+9	2.059E+1	6.854E+0	4.545E-1
1.254E+9	2.048E+1	6.664E+0	4.647E-1
1.318E+9	2.042E+1	6.533E+0	4.791E-1
1.386E+9	2.043E+1	6.384E+0	4.924E-1
1.458E+9	2.032E+1	6.243E+0	5.064E-1
1.533E+9	2.032E+1	6.145E+0	5.242E-1
1.612E+9	2.027E+1	5.946E+0	5.334E-1
1.696E+9	2.025E+1	5.876E+0	5.543E-1
1.783E+9	2.017E+1	5.724E+0	5.679E-1
1.875E+9	2.017E+1	5.602E+0	5.845E-1
1.972E+9	2.011E+1	5.552E+0	6.092E-1
2.074E+9	2.009E+1	5.464E+0	6.305E-1
2.181E+9	2.000E+1	5.382E+0	6.531E-1
2.294E+9	2.005E+1	5.376E+0	6.861E-1
2.412E+9	1.996E+1	5.325E+0	7.146E-1
2.537E+9	1.984E+1	5.339E+0	7.536E-1
2.668E+9	1.978E+1	5.325E+0	7.905E-1
2.806E+9	1.972E+1	5.352E+0	8.354E-1
2.951E+9	1.960E+1	5.387E+0	8.842E-1
3.103E+9	1.951E+1	5.412E+0	9.343E-1
3.263E+9	1.946E+1	5.443E+0	9.882E-1
3.432E+9	1.938E+1	5.497E+0	1.050E+0
3.609E+9	1.926E+1	5.579E+0	1.120E+0
3.796E+9	1.922E+1	5.647E+0	1.192E+0
3.992E+9	1.915E+1	5.685E+0	1.262E+0
4.198E+9	1.912E+1	5.803E+0	1.355E+0
4.415E+9	1.899E+1	5.851E+0	1.437E+0
4.643E+9	1.894E+1	6.006E+0	1.551E+0
4.883E+9	1.879E+1	6.093E+0	1.655E+0
5.135E+9	1.858E+1	6.201E+0	1.771E+0
5.400E+9	1.839E+1	6.365E+0	1.912E+0
5.679E+9	1.815E+1	6.632E+0	2.095E+0
5.972E+9	1.789E+1	6.805E+0	2.261E+0
6.281E+9	1.767E+1	6.951E+0	2.429E+0
6.605E+9	1.746E+1	7.031E+0	2.584E+0
6.946E+9	1.726E+1	7.133E+0	2.757E+0
7.305E+9	1.709E+1	7.189E+0	2.922E+0
7.682E+9	1.682E+1	7.304E+0	3.122E+0
8.079E+9	1.643E+1	7.473E+0	3.359E+0
8.496E+9	1.598E+1	7.693E+0	3.636E+0
8.935E+9	1.561E+1	7.792E+0	3.873E+0
9.397E+9	1.536E+1	7.812E+0	4.084E+0
9.882E+9	1.510E+1	7.861E+0	4.322E+0
1.039E+10	1.474E+1	7.919E+0	4.578E+0
1.093E+10	1.416E+1	7.909E+0	4.809E+0
1.149E+10	1.377E+1	7.947E+0	5.081E+0
1.209E+10	1.358E+1	7.826E+0	5.263E+0
1.271E+10	1.328E+1	7.794E+0	5.511E+0
1.337E+10	1.285E+1	7.762E+0	5.773E+0
1.406E+10	1.242E+1	7.645E+0	5.979E+0
1.478E+10	1.232E+1	7.608E+0	6.258E+0
1.555E+10	1.198E+1	7.571E+0	6.548E+0
1.635E+10	1.152E+1	7.405E+0	6.736E+0
1.720E+10	1.145E+1	7.436E+0	7.113E+0

Lung Inflated

Frequency (Hz)	Ovine @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
1.808E+10	1.115E+1	7.344E+0	7.389E+0
1.902E+10	1.075E+1	7.134E+0	7.547E+0
2.000E+10	1.066E+1	7.254E+0	8.071E+0

Musle

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	4.070E+7	4.010E+8	2.231E-1
1.122E+1	3.550E+7	3.559E+8	2.221E-1
1.259E+1	3.105E+7	3.154E+8	2.209E-1
1.350E+1	2.769E+7	2.798E+8	2.199E-1
1.585E+1	2.564E+7	2.492E+8	2.197E-1
1.778E+1	2.398E+7	2.220E+8	2.197E-1
1.995E+1	2.254E+7	1.983E+8	2.201E-1
2.239E+1	2.155E+7	1.771E+8	2.206E-1
2.512E+1	2.076E+7	1.584E+8	2.214E-1
2.818E+1	2.044E+7	1.419E+8	2.225E-1
3.162E+1	1.967E+7	1.272E+8	2.239E-1
3.548E+1	1.905E+7	1.146E+8	2.262E-1
3.981E+1	1.837E+7	1.032E+8	2.286E-1
4.467E+1	1.771E+7	9.311E+7	2.314E-1
5.012E+1	1.701E+7	8.405E+7	2.343E-1
5.623E+1	1.616E+7	7.592E+7	2.375E-1
6.310E+1	1.531E+7	6.868E+7	2.411E-1
7.079E+1	1.438E+7	6.214E+7	2.447E-1
7.943E+1	1.342E+7	5.630E+7	2.488E-1
8.913E+1	1.246E+7	5.105E+7	2.531E-1
1.000E+2	1.150E+7	4.638E+7	2.580E-1
1.122E+2	1.057E+7	4.217E+7	2.632E-1
1.259E+2	9.590E+6	3.836E+7	2.686E-1
1.413E+2	8.628E+6	3.494E+7	2.746E-1
1.585E+2	7.707E+6	3.181E+7	2.805E-1
1.778E+2	6.815E+6	2.894E+7	2.863E-1
1.995E+2	5.990E+6	2.631E+7	2.920E-1
2.239E+2	5.211E+6	2.389E+7	2.975E-1
2.512E+2	4.510E+6	2.167E+7	3.029E-1
2.818E+2	3.882E+6	1.965E+7	3.081E-1
3.162E+2	3.326E+6	1.778E+7	3.129E-1
3.548E+2	2.831E+6	1.605E+7	3.169E-1
3.981E+2	2.405E+6	1.449E+7	3.210E-1
4.467E+2	2.036E+6	1.306E+7	3.246E-1
5.012E+2	1.719E+6	1.177E+7	3.281E-1
5.623E+2	1.442E+6	1.059E+7	3.312E-1
6.310E+2	1.210E+6	9.513E+6	3.339E-1
7.079E+2	1.014E+6	8.546E+6	3.366E-1
7.943E+2	8.498E+5	7.678E+6	3.393E-1
8.913E+2	7.096E+5	6.890E+6	3.416E-1
1.000E+3	5.935E+5	6.177E+6	3.436E-1
1.122E+3	4.965E+5	5.534E+6	3.454E-1
1.259E+3	4.142E+5	4.955E+6	3.471E-1
1.413E+3	3.467E+5	4.437E+6	3.487E-1
1.585E+3	2.908E+5	3.969E+6	3.500E-1
1.778E+3	2.450E+5	3.546E+6	3.508E-1
1.995E+3	2.054E+5	3.168E+6	3.517E-1
2.239E+3	1.732E+5	2.833E+6	3.528E-1
2.512E+3	1.477E+5	2.532E+6	3.539E-1
2.818E+3	1.241E+5	2.259E+6	3.542E-1
3.162E+3	1.056E+5	2.018E+6	3.550E-1
3.548E+3	9.063E+4	1.800E+6	3.553E-1
3.981E+3	7.815E+4	1.605E+6	3.555E-1
4.467E+3	6.760E+4	1.432E+6	3.559E-1
5.012E+3	5.901E+4	1.279E+6	3.565E-1
5.623E+3	5.185E+4	1.142E+6	3.573E-1
6.310E+3	4.580E+4	1.020E+6	3.579E-1
7.079E+3	4.097E+4	9.107E+5	3.587E-1
7.943E+3	3.677E+4	8.137E+5	3.596E-1
8.913E+3	3.283E+4	7.269E+5	3.604E-1

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	3.043E+4	6.508E+5	3.621E-1
1.122E+4	2.802E+4	5.808E+5	3.626E-1
1.259E+4	2.574E+4	5.186E+5	3.632E-1
1.413E+4	2.379E+4	4.631E+5	3.640E-1
1.585E+4	2.220E+4	4.140E+5	3.650E-1
1.778E+4	2.085E+4	3.698E+5	3.659E-1
1.995E+4	1.954E+4	3.302E+5	3.665E-1
2.239E+4	1.845E+4	2.948E+5	3.672E-1
2.512E+4	1.748E+4	2.631E+5	3.676E-1
2.818E+4	1.649E+4	2.351E+5	3.686E-1
3.162E+4	1.569E+4	2.101E+5	3.697E-1
3.548E+4	1.490E+4	1.879E+5	3.709E-1
3.981E+4	1.420E+4	1.680E+5	3.721E-1
4.467E+4	1.351E+4	1.504E+5	3.737E-1
5.012E+4	1.286E+4	1.347E+5	3.755E-1
5.623E+4	1.226E+4	1.207E+5	3.776E-1
6.310E+4	1.169E+4	1.082E+5	3.798E-1
7.079E+4	1.110E+4	9.702E+4	3.821E-1
7.943E+4	1.054E+4	8.707E+4	3.848E-1
8.913E+4	1.002E+4	7.868E+4	3.901E-1
1.000E+5	9.496E+3	7.061E+4	3.928E-1
1.122E+5	8.989E+3	6.345E+4	3.961E-1
1.259E+5	8.493E+3	5.704E+4	3.995E-1
1.413E+5	7.998E+3	5.137E+4	4.037E-1
1.585E+5	7.526E+3	4.632E+4	4.084E-1
1.778E+5	7.056E+3	4.178E+4	4.134E-1
1.995E+5	6.591E+3	3.784E+4	4.200E-1
2.239E+5	6.143E+3	3.453E+4	4.300E-1
2.512E+5	5.709E+3	3.149E+4	4.400E-1
2.818E+5	5.279E+3	2.902E+4	4.550E-1
3.000E+5	5.468E+3	2.816E+4	4.700E-1
3.289E+5	5.028E+3	2.650E+4	4.850E-1
3.607E+5	4.663E+3	2.492E+4	5.000E-1
3.955E+5	4.374E+3	2.340E+4	5.149E-1
4.336E+5	4.035E+3	2.161E+4	5.212E-1
4.755E+5	3.698E+3	2.003E+4	5.299E-1
5.213E+5	3.412E+3	1.847E+4	5.357E-1
5.716E+5	3.107E+3	1.709E+4	5.434E-1
6.268E+5	2.826E+3	1.576E+4	5.495E-1
6.873E+5	2.562E+3	1.456E+4	5.566E-1
7.536E+5	2.372E+3	1.342E+4	5.626E-1
8.263E+5	2.140E+3	1.243E+4	5.712E-1
9.060E+5	1.895E+3	1.148E+4	5.785E-1
9.934E+5	1.732E+3	1.059E+4	5.854E-1
1.089E+6	1.569E+3	9.733E+3	5.898E-1
1.194E+6	1.384E+3	8.990E+3	5.973E-1
1.310E+6	1.247E+3	8.267E+3	6.023E-1
1.436E+6	1.107E+3	7.599E+3	6.070E-1
1.574E+6	9.989E+2	6.984E+3	6.118E-1
1.726E+6	8.806E+2	6.437E+3	6.182E-1
1.893E+6	7.864E+2	5.919E+3	6.233E-1
2.075E+6	6.943E+2	5.440E+3	6.281E-1
2.276E+6	6.188E+2	4.992E+3	6.320E-1
2.495E+6	5.559E+2	4.573E+3	6.349E-1
2.736E+6	4.942E+2	4.190E+3	6.377E-1
3.000E+6	4.558E+2	3.837E+3	6.404E-1
3.289E+6	4.032E+2	3.525E+3	6.450E-1
3.607E+6	3.667E+2	3.232E+3	6.485E-1
3.955E+6	3.239E+2	2.957E+3	6.505E-1
4.336E+6	2.959E+2	2.705E+3	6.525E-1

Muscle

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
4.755E+6	2.677E+2	2.481E+3	6.562E-1
5.213E+6	2.439E+2	2.267E+3	6.576E-1
5.716E+6	2.245E+2	2.074E+3	6.595E-1
6.268E+6	2.102E+2	1.898E+3	6.619E-1
6.873E+6	1.976E+2	1.731E+3	6.620E-1
7.536E+6	1.842E+2	1.588E+3	6.659E-1
8.263E+6	1.722E+2	1.450E+3	6.664E-1
9.060E+6	1.586E+2	1.329E+3	6.698E-1
9.934E+6	1.528E+2	1.213E+3	6.703E-1
1.089E+7	1.464E+2	1.111E+3	6.733E-1
1.194E+7	1.438E+2	1.014E+3	6.738E-1
1.310E+7	1.372E+2	9.290E+2	6.768E-1
1.436E+7	1.313E+2	8.467E+2	6.763E-1
1.574E+7	1.257E+2	7.735E+2	6.775E-1
1.726E+7	1.220E+2	7.095E+2	6.814E-1
1.893E+7	1.194E+2	6.493E+2	6.837E-1
2.075E+7	1.162E+2	5.953E+2	6.874E-1
2.276E+7	1.138E+2	5.444E+2	6.892E-1
2.495E+7	1.101E+2	4.982E+2	6.916E-1
2.736E+7	1.093E+2	4.565E+2	6.949E-1
3.000E+7	1.063E+2	4.193E+2	6.999E-1
3.289E+7	1.035E+2	3.848E+2	7.042E-1
3.607E+7	1.018E+2	3.529E+2	7.080E-1
3.955E+7	1.002E+2	3.244E+2	7.138E-1
4.336E+7	9.798E+1	2.976E+2	7.179E-1
4.755E+7	9.630E+1	2.745E+2	7.260E-1
5.213E+7	9.436E+1	2.525E+2	7.324E-1
5.716E+7	9.221E+1	2.326E+2	7.398E-1
6.268E+7	9.020E+1	2.143E+2	7.474E-1
6.873E+7	8.804E+1	1.977E+2	7.559E-1
7.536E+7	8.636E+1	1.821E+2	7.634E-1
8.263E+7	8.435E+1	1.676E+2	7.704E-1
9.060E+7	8.245E+1	1.547E+2	7.800E-1
9.934E+7	8.086E+1	1.429E+2	7.895E-1
1.089E+8	7.914E+1	1.314E+2	7.964E-1
1.194E+8	7.767E+1	1.213E+2	8.057E-1
1.310E+8	7.626E+1	1.120E+2	8.161E-1
1.436E+8	7.481E+1	1.032E+2	8.240E-1
1.574E+8	7.340E+1	9.524E+1	8.342E-1
1.726E+8	7.223E+1	8.780E+1	8.432E-1
1.893E+8	7.108E+1	8.100E+1	8.530E-1
2.075E+8	7.008E+1	7.478E+1	8.634E-1
2.276E+8	6.911E+1	6.909E+1	8.747E-1
2.495E+8	6.829E+1	6.375E+1	8.849E-1
2.736E+8	6.743E+1	5.891E+1	8.966E-1
3.000E+8	6.671E+1	5.451E+1	9.097E-1
3.289E+8	6.603E+1	5.045E+1	9.232E-1
3.607E+8	6.537E+1	4.668E+1	9.366E-1
3.955E+8	6.472E+1	4.322E+1	9.510E-1
4.336E+8	6.421E+1	4.019E+1	9.695E-1
4.755E+8	6.390E+1	3.733E+1	9.874E-1
5.213E+8	6.330E+1	3.491E+1	1.013E+0
5.716E+8	6.272E+1	3.257E+1	1.036E+0
6.268E+8	6.220E+1	3.031E+1	1.057E+0
6.873E+8	6.188E+1	2.833E+1	1.083E+0
7.536E+8	6.165E+1	2.647E+1	1.110E+0
8.263E+8	6.124E+1	2.533E+1	1.164E+0
9.060E+8	6.142E+1	2.355E+1	1.187E+0
9.934E+8	6.068E+1	2.306E+1	1.274E+0
1.025E+9	5.900E+1	2.288E+1	1.305E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.078E+9	5.834E+1	2.231E+1	1.337E+0
1.133E+9	5.819E+1	2.163E+1	1.364E+0
1.192E+9	5.796E+1	2.121E+1	1.407E+0
1.254E+9	5.784E+1	2.053E+1	1.432E+0
1.318E+9	5.759E+1	2.014E+1	1.477E+0
1.386E+9	5.720E+1	1.963E+1	1.514E+0
1.458E+9	5.708E+1	1.927E+1	1.563E+0
1.533E+9	5.685E+1	1.889E+1	1.611E+0
1.612E+9	5.668E+1	1.855E+1	1.664E+0
1.696E+9	5.636E+1	1.819E+1	1.716E+0
1.783E+9	5.619E+1	1.786E+1	1.772E+0
1.875E+9	5.591E+1	1.767E+1	1.844E+0
1.972E+9	5.564E+1	1.737E+1	1.906E+0
2.074E+9	5.547E+1	1.714E+1	1.978E+0
2.181E+9	5.520E+1	1.695E+1	2.057E+0
2.294E+9	5.501E+1	1.687E+1	2.153E+0
2.412E+9	5.472E+1	1.674E+1	2.247E+0
2.537E+9	5.448E+1	1.667E+1	2.353E+0
2.668E+9	5.426E+1	1.658E+1	2.460E+0
2.806E+9	5.407E+1	1.657E+1	2.587E+0
2.951E+9	5.374E+1	1.656E+1	2.718E+0
3.103E+9	5.347E+1	1.647E+1	2.844E+0
3.263E+9	5.322E+1	1.650E+1	2.995E+0
3.432E+9	5.300E+1	1.654E+1	3.158E+0
3.609E+9	5.256E+1	1.660E+1	3.333E+0
3.796E+9	5.247E+1	1.678E+1	3.543E+0
3.992E+9	5.217E+1	1.694E+1	3.763E+0
4.198E+9	5.189E+1	1.709E+1	3.992E+0
4.415E+9	5.149E+1	1.743E+1	4.280E+0
4.643E+9	5.117E+1	1.766E+1	4.561E+0
4.883E+9	5.078E+1	1.810E+1	4.918E+0
5.135E+9	5.018E+1	1.841E+1	5.258E+0
5.400E+9	4.970E+1	1.866E+1	5.605E+0
5.679E+9	4.905E+1	1.897E+1	5.993E+0
5.972E+9	4.845E+1	1.932E+1	6.420E+0
6.281E+9	4.793E+1	1.954E+1	6.827E+0
6.605E+9	4.721E+1	1.990E+1	7.313E+0
6.946E+9	4.669E+1	2.016E+1	7.792E+0
7.305E+9	4.603E+1	2.037E+1	8.276E+0
7.682E+9	4.539E+1	2.076E+1	8.872E+0
8.079E+9	4.459E+1	2.098E+1	9.429E+0
8.496E+9	4.377E+1	2.137E+1	1.010E+1
8.935E+9	4.296E+1	2.172E+1	1.080E+1
9.397E+9	4.224E+1	2.208E+1	1.154E+1
9.882E+9	4.108E+1	2.217E+1	1.219E+1
1.039E+10	4.023E+1	2.260E+1	1.306E+1
1.093E+10	3.911E+1	2.258E+1	1.373E+1
1.149E+10	3.827E+1	2.272E+1	1.453E+1
1.209E+10	3.729E+1	2.267E+1	1.525E+1
1.271E+10	3.648E+1	2.277E+1	1.610E+1
1.337E+10	3.548E+1	2.242E+1	1.668E+1
1.406E+10	3.443E+1	2.256E+1	1.765E+1
1.478E+10	3.358E+1	2.274E+1	1.870E+1
1.555E+10	3.270E+1	2.249E+1	1.945E+1
1.635E+10	3.188E+1	2.260E+1	2.056E+1
1.720E+10	3.090E+1	2.240E+1	2.143E+1
1.808E+10	3.008E+1	2.239E+1	2.253E+1
1.902E+10	2.911E+1	2.232E+1	2.362E+1
2.000E+10	2.827E+1	2.201E+1	2.449E+1

Nerve

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.090E+6	9.352E+2	1.949E+3	1.200E-1
1.310E+6	7.897E+2	1.696E+3	1.200E-1
1.570E+6	6.664E+2	1.508E+3	1.300E-1
1.890E+6	6.138E+2	1.318E+3	1.400E-1
2.280E+6	5.601E+2	1.139E+3	1.400E-1
2.740E+6	4.690E+2	9.788E+2	1.500E-1
3.290E+6	4.047E+2	8.422E+2	1.500E-1
3.950E+6	3.606E+2	7.294E+2	1.600E-1
4.750E+6	3.205E+2	6.390E+2	1.700E-1
5.720E+6	2.811E+2	5.634E+2	1.800E-1
6.870E+6	2.459E+2	4.948E+2	1.900E-1
8.260E+6	2.158E+2	4.330E+2	2.000E-1
9.930E+6	1.918E+2	3.745E+2	2.100E-1
1.190E+7	1.712E+2	3.260E+2	2.200E-1
1.440E+7	1.524E+2	2.857E+2	2.300E-1
1.730E+7	1.378E+2	2.496E+2	2.400E-1
2.080E+7	1.244E+2	2.182E+2	2.500E-1
2.500E+7	1.122E+2	1.907E+2	2.600E-1
3.000E+7	1.017E+2	1.672E+2	2.800E-1
3.610E+7	9.240E+1	1.466E+2	2.900E-1
4.340E+7	8.380E+1	1.282E+2	3.100E-1
5.210E+7	7.620E+1	1.121E+2	3.200E-1
6.270E+7	6.970E+1	9.770E+1	3.400E-1
7.540E+7	6.410E+1	8.490E+1	3.600E-1
9.060E+7	5.930E+1	7.390E+1	3.700E-1
1.090E+8	5.480E+1	6.450E+1	3.900E-1
1.300E+8	4.570E+1	5.380E+1	3.900E-1
1.440E+8	4.480E+1	4.980E+1	4.000E-1
1.590E+8	4.370E+1	4.610E+1	4.100E-1
1.760E+8	4.240E+1	4.250E+1	4.200E-1
1.940E+8	4.120E+1	3.920E+1	4.200E-1
2.150E+8	4.040E+1	3.620E+1	4.300E-1
2.380E+8	3.960E+1	3.340E+1	4.400E-1
2.630E+8	3.880E+1	3.090E+1	4.500E-1
2.910E+8	3.800E+1	2.850E+1	4.600E-1
3.220E+8	3.740E+1	2.630E+1	4.700E-1
3.560E+8	3.680E+1	2.420E+1	4.800E-1
3.940E+8	3.620E+1	2.230E+1	4.900E-1
4.350E+8	3.570E+1	2.060E+1	5.000E-1
4.810E+8	3.510E+1	1.900E+1	5.100E-1
5.330E+8	3.470E+1	1.760E+1	5.200E-1
5.890E+8	3.440E+1	1.630E+1	5.300E-1
6.510E+8	3.420E+1	1.520E+1	5.500E-1
7.200E+8	3.400E+1	1.420E+1	5.700E-1
7.970E+8	3.370E+1	1.320E+1	5.800E-1
8.810E+8	3.340E+1	1.230E+1	6.000E-1
9.740E+8	3.320E+1	1.150E+1	6.300E-1
1.080E+9	3.300E+1	1.090E+1	6.500E-1
1.190E+9	3.280E+1	1.030E+1	6.800E-1
1.320E+9	3.260E+1	9.800E+0	7.200E-1
1.460E+9	3.240E+1	9.300E+0	7.500E-1
1.610E+9	3.230E+1	8.900E+0	8.000E-1
1.780E+9	3.210E+1	8.700E+0	8.600E-1
1.970E+9	3.200E+1	8.400E+0	9.300E-1
2.180E+9	3.180E+1	8.300E+0	1.010E+0
2.410E+9	3.160E+1	8.200E+0	1.100E+0
2.670E+9	3.140E+1	8.200E+0	1.220E+0
2.950E+9	3.120E+1	8.200E+0	1.350E+0
3.260E+9	3.090E+1	8.300E+0	1.510E+0
3.610E+9	3.060E+1	8.500E+0	1.700E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.990E+9	3.030E+1	8.700E+0	1.930E+0
4.410E+9	3.000E+1	9.000E+0	2.200E+0
4.880E+9	2.960E+1	9.300E+0	2.540E+0
5.400E+9	2.900E+1	9.700E+0	2.920E+0
5.970E+9	2.840E+1	1.010E+1	3.370E+0
6.600E+9	2.770E+1	1.050E+1	3.860E+0
7.300E+9	2.690E+1	1.080E+1	4.400E+0
8.080E+9	2.610E+1	1.110E+1	4.970E+0
8.940E+9	2.520E+1	1.120E+1	5.570E+0
9.880E+9	2.420E+1	1.130E+1	6.190E+0
1.090E+10	2.340E+1	1.130E+1	6.860E+0
1.210E+10	2.270E+1	1.130E+1	7.600E+0
1.340E+10	2.200E+1	1.130E+1	8.380E+0
1.480E+10	2.140E+1	1.130E+1	9.270E+0
1.640E+10	2.070E+1	1.150E+1	1.047E+1
1.810E+10	2.010E+1	1.190E+1	1.199E+1
2.000E+10	1.960E+1	1.230E+1	1.373E+1

Ovary

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.000E+5	1.515E+3	2.130E+4	3.560E-1
3.289E+5	1.380E+3	1.955E+4	3.580E-1
3.607E+5	1.335E+3	1.785E+4	3.590E-1
3.955E+5	1.300E+3	1.640E+4	3.605E-1
4.336E+5	1.215E+3	1.495E+4	3.605E-1
4.755E+5	1.180E+3	1.370E+4	3.625E-1
5.213E+5	1.103E+3	1.260E+4	3.650E-1
5.716E+5	1.079E+3	1.145E+4	3.645E-1
6.268E+5	1.022E+3	1.053E+4	3.665E-1
6.873E+5	9.720E+2	9.620E+3	3.685E-1
7.536E+5	9.595E+2	8.835E+3	3.700E-1
8.263E+5	9.075E+2	8.095E+3	3.720E-1
9.060E+5	8.775E+2	7.410E+3	3.740E-1
9.934E+5	8.340E+2	6.805E+3	3.760E-1
1.089E+6	8.075E+2	6.240E+3	3.780E-1
1.194E+6	7.755E+2	5.720E+3	3.800E-1
1.310E+6	7.380E+2	5.245E+3	3.820E-1
1.436E+6	7.145E+2	4.805E+3	3.845E-1
1.574E+6	6.905E+2	4.420E+3	3.875E-1
1.726E+6	6.550E+2	4.060E+3	3.900E-1
1.893E+6	6.305E+2	3.735E+3	3.930E-1
2.075E+6	6.030E+2	3.425E+3	3.955E-1
2.276E+6	5.865E+2	3.155E+3	4.000E-1
2.495E+6	5.590E+2	2.905E+3	4.030E-1
2.736E+6	5.270E+2	2.670E+3	4.065E-1
3.000E+6	5.085E+2	2.465E+3	4.110E-1
3.289E+6	4.885E+2	2.275E+3	4.155E-1
3.607E+6	4.595E+2	2.090E+3	4.195E-1
3.955E+6	4.395E+2	1.925E+3	4.230E-1
4.336E+6	4.250E+2	1.775E+3	4.285E-1
4.755E+6	4.010E+2	1.635E+3	4.340E-1
5.213E+6	3.845E+2	1.515E+3	4.390E-1
5.716E+6	3.630E+2	1.395E+3	4.450E-1
6.268E+6	3.515E+2	1.290E+3	4.500E-1
6.873E+6	3.315E+2	1.200E+3	4.575E-1
7.536E+6	3.155E+2	1.105E+3	4.625E-1
8.263E+6	3.015E+2	1.020E+3	4.680E-1
9.060E+6	2.865E+2	9.470E+2	4.765E-1
9.934E+6	2.740E+2	8.760E+2	4.840E-1
1.089E+7	2.600E+2	8.095E+2	4.905E-1
1.194E+7	2.470E+2	7.520E+2	5.000E-1
1.310E+7	2.350E+2	6.955E+2	5.070E-1
1.436E+7	2.250E+2	6.440E+2	5.140E-1
1.574E+7	2.120E+2	5.965E+2	5.225E-1
1.726E+7	2.030E+2	5.525E+2	5.310E-1
1.893E+7	1.935E+2	5.135E+2	5.410E-1
2.075E+7	1.835E+2	4.760E+2	5.495E-1
2.276E+7	1.735E+2	4.420E+2	5.590E-1
2.495E+7	1.665E+2	4.095E+2	5.690E-1
2.736E+7	1.580E+2	3.815E+2	5.805E-1
3.000E+7	1.510E+2	3.535E+2	5.900E-1
3.289E+7	1.435E+2	3.280E+2	6.005E-1
3.607E+7	1.380E+2	3.045E+2	6.110E-1
3.955E+7	1.320E+2	2.840E+2	6.250E-1
4.336E+7	1.260E+2	2.640E+2	6.360E-1
4.755E+7	1.205E+2	2.450E+2	6.480E-1
5.213E+7	1.140E+2	2.285E+2	6.625E-1
5.716E+7	1.095E+2	2.120E+2	6.745E-1
6.268E+7	1.045E+2	1.970E+2	6.885E-1
6.873E+7	9.930E+1	1.840E+2	7.025E-1

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
7.536E+7	9.530E+1	1.705E+2	7.150E-1
8.263E+7	9.095E+1	1.585E+2	7.285E-1
9.060E+7	8.740E+1	1.470E+2	7.425E-1
9.934E+7	8.410E+1	1.370E+2	7.570E-1
1.089E+8	8.050E+1	1.275E+2	7.710E-1
1.194E+8	7.780E+1	1.180E+2	7.840E-1
1.310E+8	7.520E+1	1.095E+2	7.990E-1
1.436E+8	7.250E+1	1.015E+2	8.110E-1
1.574E+8	7.020E+1	9.405E+1	8.250E-1
1.726E+8	6.815E+1	8.725E+1	8.380E-1
1.893E+8	6.625E+1	8.080E+1	8.510E-1
2.075E+8	6.440E+1	7.490E+1	8.650E-1
2.276E+8	6.275E+1	6.950E+1	8.795E-1
2.495E+8	6.130E+1	6.435E+1	8.930E-1
2.736E+8	6.000E+1	5.970E+1	9.085E-1
3.000E+8	5.890E+1	5.530E+1	9.235E-1
3.060E+8	5.535E+1	5.675E+1	9.670E-1
3.218E+8	5.500E+1	5.475E+1	9.795E-1
3.384E+8	5.385E+1	5.225E+1	9.845E-1
3.559E+8	5.320E+1	5.005E+1	9.935E-1
3.743E+8	5.305E+1	4.810E+1	1.002E+0
3.936E+8	5.265E+1	4.650E+1	1.019E+0
4.140E+8	5.225E+1	4.445E+1	1.026E+0
4.354E+8	5.155E+1	4.275E+1	1.033E+0
4.578E+8	5.165E+1	4.130E+1	1.054E+0
4.815E+8	5.085E+1	3.975E+1	1.063E+0
5.064E+8	5.035E+1	3.805E+1	1.073E+0
5.325E+8	5.030E+1	3.635E+1	1.077E+0
5.600E+8	5.015E+1	3.515E+1	1.095E+0
5.889E+8	4.960E+1	3.375E+1	1.105E+0
6.194E+8	4.905E+1	3.275E+1	1.130E+0
6.513E+8	4.905E+1	3.135E+1	1.135E+0
6.850E+8	4.860E+1	3.045E+1	1.160E+0
7.204E+8	4.830E+1	2.955E+1	1.180E+0
7.576E+8	4.795E+1	2.845E+1	1.200E+0
7.967E+8	4.770E+1	2.745E+1	1.215E+0
8.378E+8	4.755E+1	2.650E+1	1.235E+0
8.811E+8	4.710E+1	2.590E+1	1.270E+0
9.266E+8	4.695E+1	2.495E+1	1.290E+0
9.745E+8	4.675E+1	2.420E+1	1.315E+0
1.025E+9	4.640E+1	2.355E+1	1.340E+0
1.078E+9	4.605E+1	2.285E+1	1.370E+0
1.133E+9	4.600E+1	2.230E+1	1.405E+0
1.192E+9	4.575E+1	2.175E+1	1.445E+0
1.254E+9	4.535E+1	2.120E+1	1.480E+0
1.318E+9	4.520E+1	2.070E+1	1.520E+0
1.386E+9	4.490E+1	2.010E+1	1.550E+0
1.458E+9	4.475E+1	1.975E+1	1.600E+0
1.533E+9	4.455E+1	1.940E+1	1.655E+0
1.612E+9	4.410E+1	1.905E+1	1.710E+0
1.696E+9	4.405E+1	1.865E+1	1.760E+0
1.783E+9	4.385E+1	1.830E+1	1.820E+0
1.875E+9	4.355E+1	1.825E+1	1.900E+0
1.972E+9	4.335E+1	1.800E+1	1.975E+0
2.074E+9	4.300E+1	1.765E+1	2.040E+0
2.181E+9	4.290E+1	1.755E+1	2.135E+0
2.294E+9	4.250E+1	1.740E+1	2.220E+0
2.412E+9	4.225E+1	1.725E+1	2.320E+0
2.537E+9	4.195E+1	1.720E+1	2.430E+0
2.668E+9	4.175E+1	1.715E+1	2.550E+0

Ovary

Frequency (Hz)	Human @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
2.806E+9	4.140E+1	1.705E+1	2.665E+0
2.951E+9	4.115E+1	1.690E+1	2.780E+0
3.103E+9	4.080E+1	1.700E+1	2.935E+0
3.263E+9	4.040E+1	1.695E+1	3.085E+0
3.432E+9	4.025E+1	1.700E+1	3.245E+0
3.609E+9	3.985E+1	1.720E+1	3.455E+0
3.796E+9	3.945E+1	1.730E+1	3.650E+0
3.992E+9	3.910E+1	1.735E+1	3.855E+0
4.198E+9	3.870E+1	1.745E+1	4.075E+0
4.415E+9	3.820E+1	1.755E+1	4.320E+0
4.643E+9	3.775E+1	1.785E+1	4.620E+0
4.883E+9	3.725E+1	1.805E+1	4.910E+0
5.135E+9	3.680E+1	1.830E+1	5.220E+0
5.400E+9	3.605E+1	1.850E+1	5.560E+0
5.679E+9	3.560E+1	1.855E+1	5.865E+0
5.972E+9	3.485E+1	1.875E+1	6.220E+0
6.281E+9	3.420E+1	1.870E+1	6.540E+0
6.605E+9	3.365E+1	1.895E+1	6.960E+0
6.946E+9	3.315E+1	1.900E+1	7.330E+0
7.305E+9	3.225E+1	1.910E+1	7.765E+0
7.682E+9	3.175E+1	1.905E+1	8.130E+0
8.079E+9	3.095E+1	1.905E+1	8.570E+0
8.496E+9	3.025E+1	1.920E+1	9.070E+0
8.935E+9	2.965E+1	1.930E+1	9.590E+0
9.397E+9	2.885E+1	1.925E+1	1.006E+1
9.882E+9	2.820E+1	1.930E+1	1.062E+1
1.039E+10	2.745E+1	1.910E+1	1.100E+1
1.093E+10	2.680E+1	1.915E+1	1.165E+1
1.149E+10	2.610E+1	1.895E+1	1.210E+1
1.209E+10	2.555E+1	1.900E+1	1.280E+1
1.271E+10	2.485E+1	1.865E+1	1.320E+1
1.337E+10	2.435E+1	1.930E+1	1.435E+1
1.406E+10	2.370E+1	1.900E+1	1.480E+1
1.478E+10	2.315E+1	1.875E+1	1.540E+1
1.555E+10	2.245E+1	1.900E+1	1.640E+1
1.635E+10	2.175E+1	1.890E+1	1.720E+1
1.720E+10	2.135E+1	1.880E+1	1.795E+1
1.808E+10	2.050E+1	1.890E+1	1.900E+1
1.902E+10	1.985E+1	1.880E+1	1.990E+1
2.000E+10	1.915E+1	1.900E+1	2.115E+1

Skin (Dry)

Frequency (Hz)	Human (In vivo-forearm) Current study measurements		
	ε′	ε″	σ (S/m)
1.000E+2	1.325E+3	3.248E+4	1.807E-4
1.122E+2	1.361E+3	2.873E+4	1.794E-4
1.259E+2	1.317E+3	2.557E+4	1.791E-4
1.413E+2	1.364E+3	2.273E+4	1.786E-4
1.585E+2	1.327E+3	2.021E+4	1.782E-4
1.778E+2	1.315E+3	1.793E+4	1.774E-4
1.995E+2	1.311E+3	1.595E+4	1.771E-4
2.239E+2	1.321E+3	1.420E+4	1.768E-4
2.512E+2	1.451E+3	1.267E+4	1.771E-4
2.818E+2	1.295E+3	1.127E+4	1.768E-4
3.162E+2	1.284E+3	1.005E+4	1.768E-4
3.548E+2	1.271E+3	8.950E+3	1.767E-4
3.981E+2	1.260E+3	7.993E+3	1.770E-4
4.467E+2	1.242E+3	7.134E+3	1.773E-4
5.012E+2	1.230E+3	6.358E+3	1.773E-4
5.623E+2	1.220E+3	5.676E+3	1.776E-4
6.310E+2	1.207E+3	5.071E+3	1.780E-4
7.079E+2	1.199E+3	4.532E+3	1.785E-4
7.943E+2	1.194E+3	4.053E+3	1.791E-4
8.913E+2	1.184E+3	3.624E+3	1.797E-4
1.000E+3	1.173E+3	3.244E+3	1.805E-4
1.122E+3	1.166E+3	2.898E+3	1.809E-4
1.259E+3	1.158E+3	2.599E+3	1.820E-4
1.413E+3	1.149E+3	2.330E+3	1.831E-4
1.585E+3	1.139E+3	2.088E+3	1.841E-4
1.778E+3	1.131E+3	1.876E+3	1.856E-4
1.995E+3	1.122E+3	1.685E+3	1.870E-4
2.239E+3	1.114E+3	1.515E+3	1.887E-4
2.512E+3	1.106E+3	1.365E+3	1.907E-4
2.818E+3	1.101E+3	1.231E+3	1.930E-4
3.162E+3	1.097E+3	1.113E+3	1.958E-4
3.548E+3	1.087E+3	1.007E+3	1.987E-4
3.981E+3	1.082E+3	9.112E+2	2.018E-4
4.467E+3	1.079E+3	8.275E+2	2.056E-4
5.012E+3	1.076E+3	7.547E+2	2.104E-4
5.623E+3	1.068E+3	6.901E+2	2.159E-4
6.310E+3	1.061E+3	6.296E+2	2.210E-4
7.079E+3	1.055E+3	5.768E+2	2.272E-4
7.943E+3	1.047E+3	5.298E+2	2.341E-4
8.913E+3	1.039E+3	4.864E+2	2.412E-4
1.000E+4	1.039E+3	4.482E+2	2.494E-4
1.122E+4	1.037E+3	4.159E+2	2.596E-4
1.259E+4	1.029E+3	3.861E+2	2.704E-4
1.413E+4	1.021E+3	3.583E+2	2.816E-4
1.585E+4	1.012E+3	3.334E+2	2.940E-4
1.778E+4	1.004E+3	3.110E+2	3.077E-4
1.995E+4	9.976E+2	2.909E+2	3.229E-4
2.239E+4	9.908E+2	2.733E+2	3.403E-4
2.512E+4	9.844E+2	2.571E+2	3.592E-4
2.818E+4	9.814E+2	2.435E+2	3.818E-4
3.162E+4	9.749E+2	2.305E+2	4.056E-4
3.548E+4	9.704E+2	2.221E+2	4.383E-4
3.981E+4	9.651E+2	2.058E+2	4.559E-4
4.467E+4	9.705E+2	1.997E+2	4.962E-4
5.012E+4	9.669E+2	1.916E+2	5.342E-4
5.623E+4	9.621E+2	1.851E+2	5.789E-4
6.310E+4	9.558E+2	1.780E+2	6.250E-4
7.079E+4	9.513E+2	1.738E+2	6.845E-4
7.943E+4	9.452E+2	1.686E+2	7.450E-4
8.913E+4	9.400E+2	1.640E+2	8.133E-4

Frequency (Hz)	Human (In vivo-forearm) Current study measurements		
	ε′	ε″	σ (S/m)
1.000E+5	9.340E+2	1.605E+2	8.929E-4
1.122E+5	9.277E+2	1.568E+2	9.785E-4
1.259E+5	9.220E+2	1.542E+2	1.080E-3
1.413E+5	9.183E+2	1.524E+2	1.197E-3
1.585E+5	9.125E+2	1.523E+2	1.343E-3
1.778E+5	9.078E+2	1.515E+2	1.499E-3
1.995E+5	9.009E+2	1.530E+2	1.698E-3
2.239E+5	8.952E+2	1.535E+2	1.912E-3
2.512E+5	8.882E+2	1.551E+2	2.167E-3
2.818E+5	8.829E+2	1.565E+2	2.453E-3
3.162E+5	8.787E+2	1.597E+2	2.810E-3
3.548E+5	8.731E+2	1.630E+2	3.217E-3
3.981E+5	8.662E+2	1.665E+2	3.687E-3
4.467E+5	8.582E+2	1.700E+2	4.226E-3
5.012E+5	8.507E+2	1.744E+2	4.863E-3
5.623E+5	8.435E+2	1.800E+2	5.630E-3
6.310E+5	8.329E+2	1.855E+2	6.512E-3
7.079E+5	8.229E+2	1.908E+2	7.515E-3
7.943E+5	8.137E+2	1.979E+2	8.745E-3
8.913E+5	8.035E+2	2.055E+2	1.019E-2
1.000E+6	7.917E+2	2.133E+2	1.186E-2
1.122E+6	7.786E+2	2.215E+2	1.383E-2
1.259E+6	7.648E+2	2.304E+2	1.614E-2
1.413E+6	7.522E+2	2.405E+2	1.890E-2
1.585E+6	7.356E+2	2.494E+2	2.199E-2
1.778E+6	7.172E+2	2.557E+2	2.530E-2
1.995E+6	7.005E+2	2.604E+2	2.891E-2
2.239E+6	6.993E+2	2.691E+2	3.351E-2
2.512E+6	6.713E+2	2.945E+2	4.116E-2
2.818E+6	6.439E+2	3.068E+2	4.811E-2
3.162E+6	6.169E+2	3.176E+2	5.588E-2
3.548E+6	5.876E+2	3.261E+2	6.438E-2
3.981E+6	5.575E+2	3.325E+2	7.365E-2
4.467E+6	5.271E+2	3.374E+2	8.384E-2
5.012E+6	4.939E+2	3.420E+2	9.537E-2
5.623E+6	4.606E+2	3.431E+2	1.073E-1
6.310E+6	4.269E+2	3.418E+2	1.200E-1
7.079E+6	3.942E+2	3.381E+2	1.331E-1
7.943E+6	3.606E+2	3.346E+2	1.479E-1
8.913E+6	3.261E+2	3.242E+2	1.608E-1
1.000E+7	2.956E+2	3.120E+2	1.736E-1
1.190E+7	3.080E+2	3.615E+2	2.400E-1
1.440E+7	2.601E+2	3.333E+2	2.700E-1
1.730E+7	2.186E+2	3.029E+2	2.900E-1
2.080E+7	1.840E+2	2.731E+2	3.200E-1
2.500E+7	1.552E+2	2.427E+2	3.400E-1
3.000E+7	1.324E+2	2.143E+2	3.600E-1
3.610E+7	1.134E+2	1.883E+2	3.800E-1
4.340E+7	9.737E+1	1.639E+2	4.000E-1
5.210E+7	8.499E+1	1.417E+2	4.100E-1
6.270E+7	7.531E+1	1.222E+2	4.300E-1
7.540E+7	6.762E+1	1.050E+2	4.400E-1
9.060E+7	6.165E+1	8.989E+1	4.500E-1
1.090E+8	5.688E+1	7.692E+1	4.700E-1
1.310E+8	5.314E+1	6.566E+1	4.800E-1
1.570E+8	5.028E+1	5.602E+1	4.900E-1
1.890E+8	4.791E+1	4.788E+1	5.000E-1
2.280E+8	4.594E+1	4.087E+1	5.200E-1
2.740E+8	4.436E+1	3.485E+1	5.300E-1
3.290E+8	4.307E+1	2.973E+1	5.400E-1

Skin (Dry)

Frequency (Hz)	Human (In vivo-forearm) Current study measurements		
	ε′	ε″	σ (S/m)
3.950E+8	4.204E+1	2.542E+1	5.600E-1
4.750E+8	4.120E+1	2.183E+1	5.800E-1
5.720E+8	4.051E+1	1.890E+1	6.000E-1
6.870E+8	4.007E+1	1.665E+1	6.400E-1
8.260E+8	3.964E+1	1.479E+1	6.800E-1
9.930E+8	3.952E+1	1.290E+1	7.100E-1
1.080E+9	3.995E+1	1.197E+1	7.200E-1
1.190E+9	3.970E+1	1.145E+1	7.600E-1
1.320E+9	3.931E+1	1.097E+1	8.000E-1
1.460E+9	3.909E+1	1.054E+1	8.600E-1
1.610E+9	3.877E+1	1.022E+1	9.200E-1
1.780E+9	3.843E+1	9.970E+0	9.900E-1
1.970E+9	3.816E+1	9.830E+0	1.080E+0
2.180E+9	3.786E+1	9.720E+0	1.180E+0
2.410E+9	3.762E+1	9.590E+0	1.290E+0
2.670E+9	3.730E+1	9.550E+0	1.420E+0
2.950E+9	3.694E+1	9.550E+0	1.570E+0
3.260E+9	3.663E+1	9.630E+0	1.750E+0
3.610E+9	3.631E+1	9.790E+0	1.970E+0
3.990E+9	3.594E+1	1.002E+1	2.220E+0
4.410E+9	3.554E+1	1.033E+1	2.540E+0
4.880E+9	3.509E+1	1.070E+1	2.910E+0
5.400E+9	3.449E+1	1.110E+1	3.330E+0
5.970E+9	3.383E+1	1.157E+1	3.840E+0
6.600E+9	3.313E+1	1.202E+1	4.420E+0
7.300E+9	3.231E+1	1.244E+1	5.060E+0
8.080E+9	3.143E+1	1.286E+1	5.780E+0
8.940E+9	3.048E+1	1.319E+1	6.550E+0
9.880E+9	2.950E+1	1.343E+1	7.380E+0
1.090E+10	2.852E+1	1.364E+1	8.300E+0
1.210E+10	2.757E+1	1.390E+1	9.340E+0
1.340E+10	2.665E+1	1.415E+1	1.052E+1
1.480E+10	2.563E+1	1.437E+1	1.182E+1
1.640E+10	2.451E+1	1.459E+1	1.327E+1
1.810E+10	2.340E+1	1.483E+1	1.492E+1
2.000E+10	2.227E+1	1.512E+1	1.682E+1

Skin (Wet)

Frequency (Hz)	Human (In vivo-forearm) Current study measurements ε′	ε″	σ (S/m)
1.995E+1	8.045E+4	2.600E+5	2.887E-4
2.239E+1	7.563E+4	2.394E+5	2.981E-4
2.512E+1	7.540E+4	2.133E+5	2.981E-4
2.818E+1	7.352E+4	1.905E+5	2.987E-4
3.162E+1	7.147E+4	1.705E+5	2.999E-4
3.548E+1	6.956E+4	1.526E+5	3.013E-4
3.981E+1	6.808E+4	1.362E+5	3.017E-4
4.467E+1	6.668E+4	1.221E+5	3.034E-4
5.012E+1	6.797E+4	1.107E+5	3.087E-4
5.623E+1	6.300E+4	9.829E+4	3.075E-4
6.310E+1	6.144E+4	8.917E+4	3.130E-4
7.079E+1	6.039E+4	8.030E+4	3.163E-4
7.943E+1	5.889E+4	7.264E+4	3.210E-4
8.913E+1	5.762E+4	6.579E+4	3.262E-4
1.000E+2	5.629E+4	5.969E+4	3.321E-4
1.122E+2	5.524E+4	5.445E+4	3.399E-4
1.259E+2	5.406E+4	4.962E+4	3.475E-4
1.413E+2	5.297E+4	4.533E+4	3.563E-4
1.585E+2	5.192E+4	4.147E+4	3.656E-4
1.778E+2	5.087E+4	3.795E+4	3.754E-4
1.995E+2	4.993E+4	3.478E+4	3.861E-4
2.239E+2	4.898E+4	3.195E+4	3.979E-4
2.512E+2	4.813E+4	2.942E+4	4.112E-4
2.818E+2	4.723E+4	2.709E+4	4.248E-4
3.162E+2	4.642E+4	2.503E+4	4.403E-4
3.548E+2	4.567E+4	2.318E+4	4.575E-4
3.981E+2	4.491E+4	2.147E+4	4.755E-4
4.467E+2	4.420E+4	1.995E+4	4.958E-4
5.012E+2	4.350E+4	1.857E+4	5.178E-4
5.623E+2	4.286E+4	1.735E+4	5.429E-4
6.310E+2	4.223E+4	1.624E+4	5.700E-4
7.079E+2	4.162E+4	1.522E+4	5.996E-4
7.943E+2	4.102E+4	1.432E+4	6.330E-4
8.913E+2	4.043E+4	1.350E+4	6.693E-4
1.000E+3	3.987E+4	1.276E+4	7.096E-4
1.122E+3	3.933E+4	1.208E+4	7.541E-4
1.259E+3	3.880E+4	1.149E+4	8.050E-4
1.413E+3	3.827E+4	1.096E+4	8.609E-4
1.585E+3	3.776E+4	1.048E+4	9.238E-4
1.778E+3	3.726E+4	1.005E+4	9.943E-4
1.995E+3	3.676E+4	9.681E+3	1.075E-3
2.239E+3	3.628E+4	9.348E+3	1.164E-3
2.512E+3	3.580E+4	9.067E+3	1.267E-3
2.818E+3	3.534E+4	8.819E+3	1.383E-3
3.162E+3	3.489E+4	8.587E+3	1.511E-3
3.548E+3	3.441E+4	8.421E+3	1.662E-3
3.981E+3	3.395E+4	8.275E+3	1.833E-3
4.467E+3	3.348E+4	8.157E+3	2.027E-3
5.012E+3	3.301E+4	8.072E+3	2.251E-3
5.623E+3	3.254E+4	8.014E+3	2.507E-3
6.310E+3	3.207E+4	7.989E+3	2.804E-3
7.079E+3	3.159E+4	7.981E+3	3.143E-3
7.943E+3	3.110E+4	7.990E+3	3.531E-3
8.913E+3	3.060E+4	8.021E+3	3.977E-3
1.000E+4	3.010E+4	8.079E+3	4.494E-3
1.122E+4	2.958E+4	8.149E+3	5.087E-3
1.259E+4	2.905E+4	8.233E+3	5.766E-3
1.413E+4	2.851E+4	8.345E+3	6.557E-3
1.585E+4	2.793E+4	8.460E+3	7.459E-3
1.778E+4	2.737E+4	8.592E+3	8.500E-3

Frequency (Hz)	Human (In vivo-forearm) Current study measurements ε′	ε″	σ (S/m)
1.995E+4	2.678E+4	8.735E+3	9.696E-3
2.239E+4	2.617E+4	8.884E+3	1.107E-2
2.512E+4	2.554E+4	9.049E+3	1.265E-2
2.818E+4	2.489E+4	9.220E+3	1.446E-2
3.162E+4	2.421E+4	9.385E+3	1.651E-2
3.548E+4	2.352E+4	9.554E+3	1.886E-2
3.981E+4	2.283E+4	9.722E+3	2.153E-2
4.467E+4	2.210E+4	9.890E+3	2.458E-2
5.012E+4	2.134E+4	1.005E+4	2.801E-2
5.623E+4	2.055E+4	1.020E+4	3.191E-2
6.310E+4	1.973E+4	1.033E+4	3.626E-2
7.079E+4	1.889E+4	1.044E+4	4.111E-2
7.943E+4	1.803E+4	1.053E+4	4.655E-2
8.913E+4	1.716E+4	1.061E+4	5.260E-2
1.000E+5	1.626E+4	1.065E+4	5.925E-2
1.122E+5	1.535E+4	1.065E+4	6.646E-2
1.259E+5	1.443E+4	1.063E+4	7.444E-2
1.413E+5	1.351E+4	1.056E+4	8.300E-2
1.585E+5	1.259E+4	1.047E+4	9.228E-2
1.778E+5	1.167E+4	1.033E+4	1.022E-1
1.995E+5	1.077E+4	1.015E+4	1.126E-1
2.239E+5	9.885E+3	9.923E+3	1.236E-1
2.512E+5	9.025E+3	9.656E+3	1.349E-1
2.818E+5	8.193E+3	9.352E+3	1.466E-1
3.162E+5	7.400E+3	9.011E+3	1.585E-1
3.548E+5	6.646E+3	8.638E+3	1.705E-1
3.981E+5	5.945E+3	8.242E+3	1.825E-1
4.467E+5	5.289E+3	7.827E+3	1.945E-1
5.012E+5	4.685E+3	7.396E+3	2.062E-1
5.623E+5	4.133E+3	6.961E+3	2.178E-1
6.310E+5	3.634E+3	6.525E+3	2.290E-1
7.079E+5	3.182E+3	6.092E+3	2.399E-1
7.943E+5	2.775E+3	5.668E+3	2.505E-1
8.913E+5	2.416E+3	5.253E+3	2.605E-1
1.000E+6	2.100E+3	4.854E+3	2.700E-1
1.090E+6	2.906E+3	3.379E+3	2.000E-1
1.310E+6	2.444E+3	3.100E+3	2.300E-1
1.570E+6	1.976E+3	2.795E+3	2.400E-1
1.890E+6	1.640E+3	2.583E+3	2.700E-1
2.280E+6	1.330E+3	2.359E+3	3.000E-1
2.740E+6	1.076E+3	2.078E+3	3.200E-1
3.290E+6	8.826E+2	1.848E+3	3.400E-1
3.950E+6	6.814E+2	1.651E+3	3.600E-1
4.750E+6	5.473E+2	1.440E+3	3.800E-1
5.720E+6	4.484E+2	1.240E+3	3.900E-1
6.870E+6	3.625E+2	1.067E+3	4.100E-1
8.260E+6	2.959E+2	9.175E+2	4.200E-1
9.930E+6	2.442E+2	7.824E+2	4.300E-1
1.190E+7	2.052E+2	6.691E+2	4.400E-1
1.440E+7	1.710E+2	5.703E+2	4.600E-1
1.730E+7	1.448E+2	4.847E+2	4.700E-1
2.080E+7	1.251E+2	4.127E+2	4.800E-1
2.500E+7	1.096E+2	3.499E+2	4.900E-1
3.000E+7	9.797E+1	2.972E+2	5.000E-1
3.610E+7	8.841E+1	2.523E+2	5.100E-1
4.340E+7	8.019E+1	2.133E+2	5.100E-1
5.210E+7	7.383E+1	1.804E+2	5.200E-1
6.270E+7	6.874E+1	1.527E+2	5.300E-1
7.540E+7	6.467E+1	1.291E+2	5.400E-1
9.060E+7	6.154E+1	1.092E+2	5.500E-1

Skin (Wet)

Frequency (Hz)	Human (In vivo-forearm) Current study measurements		
	ε′	ε″	σ (S/m)
1.090E+8	6.000E+1	9.257E+1	5.600E-1
1.310E+8	5.900E+1	7.850E+1	5.700E-1
1.570E+8	5.800E+1	6.653E+1	5.800E-1
1.890E+8	5.700E+1	5.649E+1	5.900E-1
1.940E+8	5.750E+1	5.770E+1	6.200E-1
2.150E+8	5.650E+1	5.287E+1	6.300E-1
2.380E+8	5.624E+1	4.844E+1	6.400E-1
2.630E+8	5.530E+1	4.459E+1	6.500E-1
2.910E+8	5.442E+1	4.110E+1	6.700E-1
3.220E+8	5.345E+1	3.783E+1	6.800E-1
3.560E+8	5.269E+1	3.481E+1	6.900E-1
3.940E+8	5.196E+1	3.206E+1	7.000E-1
4.350E+8	5.131E+1	2.966E+1	7.200E-1
4.810E+8	5.072E+1	2.736E+1	7.300E-1
5.330E+8	5.018E+1	2.526E+1	7.500E-1
5.890E+8	4.980E+1	2.346E+1	7.700E-1
6.510E+8	4.943E+1	2.193E+1	7.900E-1
7.200E+8	4.893E+1	2.053E+1	8.200E-1
7.970E+8	4.851E+1	1.918E+1	8.500E-1
8.810E+8	4.818E+1	1.800E+1	8.800E-1
9.740E+8	4.780E+1	1.700E+1	9.200E-1
1.080E+9	4.752E+1	1.613E+1	9.700E-1
1.190E+9	4.722E+1	1.536E+1	1.020E+0
1.320E+9	4.683E+1	1.469E+1	1.080E+0
1.460E+9	4.651E+1	1.414E+1	1.150E+0
1.610E+9	4.619E+1	1.370E+1	1.230E+0
1.780E+9	4.584E+1	1.335E+1	1.320E+0
1.970E+9	4.548E+1	1.305E+1	1.430E+0
2.180E+9	4.505E+1	1.287E+1	1.560E+0
2.410E+9	4.463E+1	1.280E+1	1.720E+0
2.670E+9	4.422E+1	1.278E+1	1.900E+0
2.950E+9	4.377E+1	1.282E+1	2.100E+0
3.260E+9	4.334E+1	1.294E+1	2.350E+0
3.610E+9	4.287E+1	1.313E+1	2.640E+0
3.990E+9	4.236E+1	1.341E+1	2.980E+0
4.410E+9	4.179E+1	1.378E+1	3.380E+0
4.880E+9	4.113E+1	1.421E+1	3.860E+0
5.400E+9	4.030E+1	1.467E+1	4.410E+0
5.970E+9	3.941E+1	1.517E+1	5.040E+0
6.600E+9	3.848E+1	1.569E+1	5.770E+0
7.300E+9	3.747E+1	1.618E+1	6.580E+0
8.080E+9	3.636E+1	1.665E+1	7.480E+0
8.940E+9	3.512E+1	1.712E+1	8.510E+0
9.880E+9	3.380E+1	1.756E+1	9.650E+0
1.090E+10	3.243E+1	1.789E+1	1.088E+1
1.210E+10	3.107E+1	1.819E+1	1.223E+1
1.340E+10	2.970E+1	1.840E+1	1.368E+1
1.480E+10	2.821E+1	1.852E+1	1.523E+1
1.640E+10	2.667E+1	1.863E+1	1.695E+1
1.810E+10	2.515E+1	1.868E+1	1.879E+1
2.000E+10	2.367E+1	1.870E+1	2.081E+1

Small Intestine

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.089E+6	3.720E+3	1.653E+4	9.993E-1
1.194E+6	3.390E+3	1.553E+4	1.033E+0
1.310E+6	4.117E+3	1.440E+4	1.050E+0
1.436E+6	3.387E+3	1.240E+4	9.910E-1
1.574E+6	3.050E+3	1.210E+4	1.060E+0
1.726E+6	2.847E+3	1.147E+4	1.100E+0
1.893E+6	2.770E+3	1.013E+4	1.070E+0
2.075E+6	2.317E+3	9.117E+3	1.053E+0
2.276E+6	2.613E+3	8.930E+3	1.130E+0
2.495E+6	2.117E+3	8.453E+3	1.177E+0
2.736E+6	1.843E+3	7.383E+3	1.123E+0
3.000E+6	1.867E+3	7.327E+3	1.223E+0
3.289E+6	1.787E+3	6.283E+3	1.150E+0
3.607E+6	1.620E+3	6.343E+3	1.273E+0
3.955E+6	1.357E+3	5.580E+3	1.227E+0
4.336E+6	1.163E+3	5.297E+3	1.277E+0
4.755E+6	1.117E+3	4.773E+3	1.263E+0
5.213E+6	1.027E+3	4.373E+3	1.270E+0
5.716E+6	1.013E+3	4.203E+3	1.337E+0
6.268E+6	9.427E+2	3.830E+3	1.337E+0
6.873E+6	8.927E+2	3.573E+3	1.367E+0
7.536E+6	7.753E+2	3.240E+3	1.360E+0
8.263E+6	6.783E+2	2.983E+3	1.370E+0
9.060E+6	6.287E+2	2.747E+3	1.383E+0
9.934E+6	5.850E+2	2.607E+3	1.440E+0
1.089E+7	5.410E+2	2.390E+3	1.450E+0
1.194E+7	5.027E+2	2.180E+3	1.447E+0
1.310E+7	4.507E+2	2.030E+3	1.477E+0
1.436E+7	4.070E+2	1.870E+3	1.497E+0
1.574E+7	3.897E+2	1.730E+3	1.513E+0
1.726E+7	3.460E+2	1.597E+3	1.530E+0
1.893E+7	3.210E+2	1.467E+3	1.547E+0
2.075E+7	2.923E+2	1.357E+3	1.567E+0
2.276E+7	2.650E+2	1.250E+3	1.583E+0
2.495E+7	2.493E+2	1.143E+3	1.590E+0
2.736E+7	2.340E+2	1.067E+3	1.620E+0
3.000E+7	2.177E+2	9.737E+2	1.627E+0
3.289E+7	2.017E+2	9.017E+2	1.653E+0
3.607E+7	1.860E+2	8.223E+2	1.650E+0
3.955E+7	1.757E+2	7.593E+2	1.670E+0
4.336E+7	1.623E+2	7.023E+2	1.697E+0
4.755E+7	1.527E+2	6.413E+2	1.697E+0
5.213E+7	1.457E+2	5.910E+2	1.713E+0
5.716E+7	1.360E+2	5.423E+2	1.723E+0
6.268E+7	1.293E+2	4.977E+2	1.737E+0
6.873E+7	1.237E+2	4.567E+2	1.747E+0
7.536E+7	1.180E+2	4.200E+2	1.760E+0
8.263E+7	1.130E+2	3.860E+2	1.773E+0
9.060E+7	1.080E+2	3.540E+2	1.783E+0
9.934E+7	1.037E+2	3.247E+2	1.793E+0
1.089E+8	9.980E+1	2.987E+2	1.807E+0
1.194E+8	9.677E+1	2.740E+2	1.823E+0
1.310E+8	9.397E+1	2.513E+2	1.833E+0
1.436E+8	9.107E+1	2.313E+2	1.847E+0
1.574E+8	8.913E+1	2.120E+2	1.857E+0
1.726E+8	8.733E+1	1.947E+2	1.873E+0
1.893E+8	8.550E+1	1.793E+2	1.887E+0
2.075E+8	8.373E+1	1.647E+2	1.897E+0
2.276E+8	8.170E+1	1.510E+2	1.913E+0
2.495E+8	8.017E+1	1.390E+2	1.930E+0

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
2.736E+8	7.897E+1	1.283E+2	1.950E+0
3.000E+8	7.793E+1	1.177E+2	1.967E+0
3.289E+8	7.683E+1	1.087E+2	1.980E+0
3.607E+8	7.570E+1	1.000E+2	2.010E+0
3.955E+8	7.493E+1	9.230E+1	2.030E+0
4.336E+8	7.410E+1	8.520E+1	2.053E+0
4.755E+8	7.307E+1	7.887E+1	2.087E+0
5.213E+8	7.253E+1	7.307E+1	2.117E+0
5.716E+8	7.163E+1	6.777E+1	2.157E+0
6.268E+8	7.097E+1	6.310E+1	2.200E+0
6.873E+8	7.023E+1	5.880E+1	2.250E+0
7.536E+8	6.957E+1	5.493E+1	2.303E+0
8.263E+8	6.863E+1	5.157E+1	2.370E+0
9.060E+8	6.770E+1	4.762E+1	2.400E+0
9.934E+8	6.677E+1	4.397E+1	2.430E+0
1.025E+9	6.308E+1	4.315E+1	2.460E+0
1.078E+9	6.278E+1	4.153E+1	2.490E+0
1.133E+9	6.220E+1	3.997E+1	2.520E+0
1.192E+9	6.205E+1	3.845E+1	2.550E+0
1.254E+9	6.178E+1	3.685E+1	2.570E+0
1.318E+9	6.143E+1	3.545E+1	2.600E+0
1.386E+9	6.093E+1	3.395E+1	2.620E+0
1.458E+9	6.063E+1	3.293E+1	2.673E+0
1.533E+9	6.033E+1	3.200E+1	2.730E+0
1.612E+9	6.010E+1	3.118E+1	2.798E+0
1.696E+9	5.963E+1	3.043E+1	2.873E+0
1.783E+9	5.920E+1	2.965E+1	2.945E+0
1.875E+9	5.895E+1	2.900E+1	3.028E+0
1.972E+9	5.868E+1	2.830E+1	3.103E+0
2.074E+9	5.828E+1	2.775E+1	3.200E+0
2.181E+9	5.795E+1	2.718E+1	3.295E+0
2.294E+9	5.760E+1	2.683E+1	3.423E+0
2.412E+9	5.730E+1	2.640E+1	3.538E+0
2.537E+9	5.690E+1	2.595E+1	3.660E+0
2.668E+9	5.655E+1	2.553E+1	3.790E+0
2.806E+9	5.618E+1	2.523E+1	3.943E+0
2.951E+9	5.598E+1	2.483E+1	4.073E+0
3.103E+9	5.563E+1	2.470E+1	4.263E+0
3.263E+9	5.523E+1	2.453E+1	4.448E+0
3.432E+9	5.483E+1	2.438E+1	4.653E+0
3.609E+9	5.440E+1	2.415E+1	4.850E+0
3.796E+9	5.410E+1	2.415E+1	5.105E+0
3.992E+9	5.358E+1	2.410E+1	5.355E+0
4.198E+9	5.325E+1	2.418E+1	5.648E+0
4.415E+9	5.270E+1	2.418E+1	5.938E+0
4.643E+9	5.228E+1	2.450E+1	6.323E+0
4.883E+9	5.180E+1	2.463E+1	6.688E+0
5.135E+9	5.118E+1	2.470E+1	7.050E+0
5.400E+9	5.050E+1	2.490E+1	7.480E+0
5.679E+9	4.993E+1	2.518E+1	7.955E+0
5.972E+9	4.923E+1	2.513E+1	8.360E+0
6.281E+9	4.848E+1	2.535E+1	8.860E+0
6.605E+9	4.783E+1	2.550E+1	9.368E+0
6.946E+9	4.708E+1	2.568E+1	9.923E+0
7.305E+9	4.648E+1	2.598E+1	1.053E+1
7.682E+9	4.558E+1	2.630E+1	1.120E+1
8.079E+9	4.488E+1	2.663E+1	1.195E+1
8.496E+9	4.390E+1	2.688E+1	1.270E+1
8.935E+9	4.308E+1	2.713E+1	1.348E+1
9.397E+9	4.193E+1	2.738E+1	1.433E+1

Small Intestine

Frequency (Hz)	Human @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
9.882E+9	4.080E+1	2.760E+1	1.518E+1
1.039E+10	3.983E+1	2.780E+1	1.605E+1
1.093E+10	3.893E+1	2.785E+1	1.695E+1
1.149E+10	3.770E+1	2.813E+1	1.798E+1
1.209E+10	3.680E+1	2.815E+1	1.895E+1
1.271E+10	3.555E+1	2.833E+1	2.005E+1
1.337E+10	3.440E+1	2.828E+1	2.103E+1
1.406E+10	3.310E+1	2.845E+1	2.225E+1
1.478E+10	3.200E+1	2.823E+1	2.323E+1
1.555E+10	3.075E+1	2.818E+1	2.440E+1
1.635E+10	2.980E+1	2.805E+1	2.550E+1
1.720E+10	2.863E+1	2.823E+1	2.703E+1
1.808E+10	2.735E+1	2.798E+1	2.818E+1
1.902E+10	2.598E+1	2.770E+1	2.930E+1
2.000E+10	2.480E+1	2.753E+1	3.063E+1

Spleen

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	4.770E+7	8.127E+7	4.521E-2
1.122E+1	4.501E+7	7.635E+7	4.765E-2
1.259E+1	4.143E+7	7.102E+7	4.974E-2
1.350E+1	3.898E+7	6.644E+7	5.221E-2
1.585E+1	3.598E+7	6.204E+7	5.470E-2
1.778E+1	3.279E+7	5.805E+7	5.743E-2
1.995E+1	2.985E+7	5.400E+7	5.994E-2
2.239E+1	2.683E+7	5.058E+7	6.299E-2
2.512E+1	2.369E+7	4.706E+7	6.577E-2
2.818E+1	2.110E+7	4.364E+7	6.843E-2
3.162E+1	1.837E+7	4.048E+7	7.122E-2
3.548E+1	1.595E+7	3.740E+7	7.383E-2
3.981E+1	1.371E+7	3.437E+7	7.613E-2
4.467E+1	1.168E+7	3.156E+7	7.843E-2
5.012E+1	9.964E+6	2.886E+7	8.047E-2
5.623E+1	8.463E+6	2.635E+7	8.244E-2
6.310E+1	7.159E+6	2.400E+7	8.424E-2
7.079E+1	6.047E+6	2.182E+7	8.595E-2
7.943E+1	5.097E+6	1.984E+7	8.769E-2
8.913E+1	4.244E+6	1.790E+7	8.877E-2
1.000E+2	3.563E+6	1.620E+7	9.010E-2
1.122E+2	2.975E+6	1.464E+7	9.140E-2
1.259E+2	2.477E+6	1.319E+7	9.240E-2
1.413E+2	2.079E+6	1.188E+7	9.332E-2
1.585E+2	1.727E+6	1.068E+7	9.414E-2
1.778E+2	1.452E+6	9.605E+6	9.502E-2
1.995E+2	1.198E+6	8.612E+6	9.560E-2
2.239E+2	1.005E+6	7.759E+6	9.664E-2
2.512E+2	8.401E+5	6.958E+6	9.724E-2
2.818E+2	6.937E+5	6.240E+6	9.784E-2
3.162E+2	5.848E+5	5.584E+6	9.824E-2
3.548E+2	4.852E+5	5.007E+6	9.883E-2
3.981E+2	4.071E+5	4.486E+6	9.935E-2
4.467E+2	3.429E+5	4.010E+6	9.966E-2
5.012E+2	2.841E+5	3.589E+6	1.001E-1
5.623E+2	2.426E+5	3.211E+6	1.005E-1
6.310E+2	2.004E+5	2.870E+6	1.007E-1
7.079E+2	1.703E+5	2.565E+6	1.010E-1
7.943E+2	1.442E+5	2.293E+6	1.013E-1
8.913E+2	1.239E+5	2.048E+6	1.015E-1
1.000E+3	1.036E+5	1.831E+6	1.018E-1
1.122E+3	9.095E+4	1.635E+6	1.020E-1
1.259E+3	7.845E+4	1.459E+6	1.022E-1
1.413E+3	6.841E+4	1.304E+6	1.025E-1
1.585E+3	6.110E+4	1.166E+6	1.028E-1
1.778E+3	5.309E+4	1.040E+6	1.029E-1
1.995E+3	4.714E+4	9.293E+5	1.031E-1
2.239E+3	4.246E+4	8.297E+5	1.033E-1
2.512E+3	3.811E+4	7.413E+5	1.036E-1
2.818E+3	3.445E+4	6.630E+5	1.040E-1
3.162E+3	3.129E+4	5.924E+5	1.042E-1
3.548E+3	2.853E+4	5.297E+5	1.046E-1
3.981E+3	2.610E+4	4.737E+5	1.049E-1
4.467E+3	2.397E+4	4.232E+5	1.052E-1
5.012E+3	2.196E+4	3.782E+5	1.055E-1
5.623E+3	2.020E+4	3.383E+5	1.058E-1
6.310E+3	1.870E+4	3.025E+5	1.062E-1
7.079E+3	1.724E+4	2.706E+5	1.066E-1
7.943E+3	1.603E+4	2.422E+5	1.070E-1
8.913E+3	1.486E+4	2.166E+5	1.074E-1

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	1.379E+4	1.938E+5	1.078E-1
1.122E+4	1.281E+4	1.735E+5	1.083E-1
1.259E+4	1.193E+4	1.553E+5	1.087E-1
1.413E+4	1.113E+4	1.390E+5	1.092E-1
1.585E+4	1.037E+4	1.244E+5	1.097E-1
1.778E+4	9.727E+3	1.113E+5	1.101E-1
1.995E+4	9.112E+3	9.972E+4	1.107E-1
2.239E+4	8.564E+3	8.938E+4	1.113E-1
2.512E+4	8.049E+3	8.006E+4	1.119E-1
2.818E+4	7.593E+3	7.171E+4	1.124E-1
3.162E+4	7.162E+3	6.424E+4	1.130E-1
3.548E+4	6.771E+3	5.754E+4	1.136E-1
3.981E+4	6.416E+3	5.158E+4	1.142E-1
4.467E+4	6.093E+3	4.625E+4	1.149E-1
5.012E+4	5.792E+3	4.145E+4	1.156E-1
5.623E+4	5.519E+3	3.718E+4	1.163E-1
6.310E+4	5.268E+3	3.336E+4	1.171E-1
7.079E+4	5.036E+3	2.995E+4	1.179E-1
7.943E+4	4.823E+3	2.689E+4	1.188E-1
8.913E+4	4.622E+3	2.416E+4	1.198E-1
1.000E+5	4.430E+3	2.172E+4	1.208E-1
1.122E+5	4.254E+3	1.955E+4	1.220E-1
1.259E+5	4.084E+3	1.759E+4	1.232E-1
1.413E+5	3.927E+3	1.586E+4	1.247E-1
1.585E+5	3.777E+3	1.431E+4	1.262E-1
1.778E+5	3.631E+3	1.292E+4	1.278E-1
1.995E+5	3.500E+3	1.168E+4	1.300E-1
2.239E+5	3.450E+3	1.057E+4	1.315E-1
2.512E+5	3.400E+3	9.581E+3	1.330E-1
2.818E+5	3.300E+3	8.698E+3	1.345E-1
3.000E+5	3.250E+3	7.759E+3	1.360E-1
3.289E+5	3.200E+3	7.301E+3	1.375E-1
3.607E+5	3.150E+3	6.496E+3	1.385E-1
3.955E+5	3.100E+3	6.305E+3	1.405E-1
4.336E+5	3.050E+3	5.726E+3	1.420E-1
4.755E+5	3.000E+3	5.445E+3	1.440E-1
5.213E+5	2.996E+3	5.008E+3	1.453E-1
5.716E+5	2.831E+3	4.653E+3	1.480E-1
6.268E+5	2.563E+3	4.432E+3	1.545E-1
6.873E+5	2.460E+3	4.311E+3	1.648E-1
7.536E+5	2.357E+3	3.820E+3	1.660E-1
8.263E+5	2.261E+3	3.520E+3	1.680E-1
9.060E+5	2.102E+3	3.427E+3	1.727E-1
9.934E+5	2.061E+3	3.143E+3	1.737E-1
1.089E+6	1.959E+3	2.882E+3	1.747E-1
1.194E+6	1.900E+3	2.698E+3	1.792E-1
1.310E+6	1.851E+3	2.595E+3	1.890E-1
1.436E+6	1.800E+3	2.521E+3	2.013E-1
1.574E+6	1.700E+3	2.301E+3	2.015E-1
1.726E+6	1.654E+3	2.219E+3	2.131E-1
1.893E+6	1.554E+3	2.147E+3	2.261E-1
2.075E+6	1.475E+3	1.967E+3	2.272E-1
2.276E+6	1.434E+3	1.975E+3	2.500E-1
2.495E+6	1.331E+3	1.816E+3	2.521E-1
2.736E+6	1.299E+3	1.789E+3	2.723E-1
3.000E+6	1.238E+3	1.734E+3	2.894E-1
3.289E+6	1.131E+3	1.625E+3	2.973E-1
3.607E+6	1.077E+3	1.567E+3	3.143E-1
3.955E+6	1.015E+3	1.483E+3	3.263E-1
4.336E+6	9.757E+2	1.412E+3	3.407E-1

Spleen

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
4.755E+6	9.128E+2	1.384E+3	3.661E-1
5.213E+6	8.217E+2	1.263E+3	3.663E-1
5.716E+6	7.215E+2	1.185E+3	3.767E-1
6.268E+6	6.862E+2	1.108E+3	3.862E-1
6.873E+6	6.639E+2	1.078E+3	4.123E-1
7.536E+6	6.681E+2	1.015E+3	4.257E-1
8.263E+6	5.965E+2	9.577E+2	4.402E-1
9.060E+6	5.231E+2	9.250E+2	4.662E-1
9.934E+6	4.954E+2	8.438E+2	4.664E-1
1.089E+7	4.583E+2	7.987E+2	4.840E-1
1.194E+7	4.238E+2	7.502E+2	4.985E-1
1.436E+7	3.706E+2	6.662E+2	5.322E-1
1.574E+7	3.390E+2	6.323E+2	5.538E-1
1.726E+7	3.126E+2	5.940E+2	5.705E-1
1.893E+7	2.930E+2	5.589E+2	5.885E-1
2.075E+7	2.635E+2	5.194E+2	5.998E-1
2.276E+7	2.475E+2	4.879E+2	6.177E-1
2.495E+7	2.272E+2	4.559E+2	6.329E-1
2.736E+7	2.125E+2	4.237E+2	6.449E-1
3.000E+7	1.949E+2	3.955E+2	6.600E-1
3.289E+7	1.824E+2	3.700E+2	6.772E-1
3.607E+7	1.690E+2	3.438E+2	6.899E-1
3.955E+7	1.588E+2	3.208E+2	7.058E-1
4.336E+7	1.475E+2	2.982E+2	7.193E-1
4.755E+7	1.378E+2	2.777E+2	7.345E-1
5.213E+7	1.295E+2	2.566E+2	7.442E-1
5.716E+7	1.214E+2	2.387E+2	7.591E-1
6.268E+7	1.141E+2	2.213E+2	7.716E-1
6.873E+7	1.078E+2	2.049E+2	7.835E-1
7.536E+7	1.022E+2	1.895E+2	7.945E-1
8.263E+7	9.722E+1	1.758E+2	8.083E-1
9.060E+7	9.252E+1	1.624E+2	8.183E-1
9.934E+7	8.869E+1	1.500E+2	8.290E-1
1.089E+8	8.505E+1	1.389E+2	8.415E-1
1.194E+8	8.208E+1	1.283E+2	8.523E-1
1.310E+8	7.939E+1	1.186E+2	8.643E-1
1.436E+8	7.660E+1	1.098E+2	8.768E-1
1.574E+8	7.442E+1	1.013E+2	8.872E-1
1.726E+8	7.222E+1	9.330E+1	8.960E-1
1.893E+8	7.055E+1	8.603E+1	9.060E-1
2.075E+8	6.892E+1	7.942E+1	9.170E-1
2.276E+8	6.740E+1	7.348E+1	9.303E-1
2.495E+8	6.602E+1	6.790E+1	9.426E-1
2.736E+8	6.490E+1	6.263E+1	9.533E-1
3.000E+8	6.390E+1	5.781E+1	9.649E-1
3.289E+8	6.289E+1	5.346E+1	9.784E-1
3.607E+8	6.208E+1	4.942E+1	9.917E-1
3.955E+8	6.135E+1	4.576E+1	1.007E+0
4.336E+8	6.062E+1	4.241E+1	1.041E+0
4.755E+8	5.999E+1	3.935E+1	1.060E+0
5.213E+8	5.937E+1	3.654E+1	1.082E+0
5.716E+8	5.925E+1	3.404E+1	1.107E+0
6.268E+8	5.910E+1	3.175E+1	1.132E+0
6.873E+8	5.890E+1	2.961E+1	1.174E+0
7.536E+8	5.875E+1	2.800E+1	1.220E+0
7.967E+8	5.860E+1	2.837E+1	1.257E+0
8.378E+8	5.845E+1	2.727E+1	1.271E+0
8.811E+8	5.830E+1	2.630E+1	1.289E+0
9.266E+8	5.815E+1	2.543E+1	1.311E+0
9.745E+8	5.807E+1	2.456E+1	1.331E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.025E+9	5.794E+1	2.387E+1	1.361E+0
1.078E+9	5.760E+1	2.315E+1	1.388E+0
1.133E+9	5.765E+1	2.240E+1	1.412E+0
1.192E+9	5.730E+1	2.180E+1	1.446E+0
1.254E+9	5.697E+1	2.138E+1	1.491E+0
1.318E+9	5.685E+1	2.093E+1	1.535E+0
1.386E+9	5.654E+1	2.038E+1	1.572E+0
1.458E+9	5.636E+1	1.993E+1	1.616E+0
1.533E+9	5.606E+1	1.961E+1	1.673E+0
1.612E+9	5.583E+1	1.931E+1	1.732E+0
1.696E+9	5.571E+1	1.882E+1	1.775E+0
1.783E+9	5.547E+1	1.857E+1	1.843E+0
1.875E+9	5.525E+1	1.829E+1	1.908E+0
1.972E+9	5.508E+1	1.801E+1	1.976E+0
2.074E+9	5.495E+1	1.780E+1	2.054E+0
2.181E+9	5.471E+1	1.756E+1	2.131E+0
2.294E+9	5.459E+1	1.733E+1	2.212E+0
2.412E+9	5.434E+1	1.708E+1	2.293E+0
2.537E+9	5.410E+1	1.681E+1	2.372E+0
2.668E+9	5.388E+1	1.670E+1	2.479E+0
2.806E+9	5.361E+1	1.651E+1	2.577E+0
2.951E+9	5.337E+1	1.641E+1	2.694E+0
3.103E+9	5.311E+1	1.632E+1	2.817E+0
3.263E+9	5.279E+1	1.630E+1	2.959E+0
3.432E+9	5.250E+1	1.639E+1	3.129E+0
3.609E+9	5.218E+1	1.655E+1	3.323E+0
3.796E+9	5.197E+1	1.683E+1	3.553E+0
3.992E+9	5.169E+1	1.696E+1	3.767E+0
4.198E+9	5.145E+1	1.722E+1	4.022E+0
4.415E+9	5.119E+1	1.744E+1	4.283E+0
4.643E+9	5.097E+1	1.765E+1	4.559E+0
4.883E+9	5.064E+1	1.782E+1	4.842E+0
5.135E+9	5.004E+1	1.783E+1	5.094E+0
5.400E+9	4.958E+1	1.808E+1	5.430E+0
5.679E+9	4.891E+1	1.860E+1	5.876E+0
5.972E+9	4.826E+1	1.889E+1	6.276E+0
6.281E+9	4.761E+1	1.934E+1	6.759E+0
6.605E+9	4.712E+1	1.963E+1	7.211E+0
6.946E+9	4.666E+1	1.982E+1	7.660E+0
7.305E+9	4.634E+1	1.979E+1	8.041E+0
7.682E+9	4.581E+1	1.985E+1	8.484E+0
8.079E+9	4.502E+1	2.034E+1	9.141E+0
8.496E+9	4.390E+1	2.089E+1	9.875E+0
8.935E+9	4.300E+1	2.150E+1	1.069E+1
9.397E+9	4.251E+1	2.177E+1	1.138E+1
9.882E+9	4.205E+1	2.174E+1	1.195E+1
1.039E+10	4.132E+1	2.183E+1	1.262E+1
1.093E+10	3.980E+1	2.198E+1	1.336E+1
1.149E+10	3.869E+1	2.257E+1	1.443E+1
1.209E+10	3.833E+1	2.253E+1	1.515E+1
1.271E+10	3.786E+1	2.246E+1	1.588E+1
1.337E+10	3.658E+1	2.268E+1	1.687E+1
1.406E+10	3.524E+1	2.294E+1	1.794E+1
1.478E+10	3.513E+1	2.301E+1	1.892E+1
1.555E+10	3.428E+1	2.290E+1	1.981E+1
1.635E+10	3.251E+1	2.300E+1	2.092E+1
1.720E+10	3.248E+1	2.343E+1	2.241E+1
1.808E+10	3.149E+1	2.314E+1	2.328E+1
1.902E+10	2.974E+1	2.312E+1	2.446E+1
2.000E+10	2.989E+1	2.369E+1	2.636E+1

Stomach

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.955E+6	6.553E+2	3.420E+3	7.527E-1
4.336E+6	6.017E+2	3.140E+3	7.577E-1
4.755E+6	5.917E+2	2.933E+3	7.757E-1
5.213E+6	5.313E+2	2.697E+3	7.820E-1
5.716E+6	4.580E+2	2.443E+3	7.773E-1
6.268E+6	4.270E+2	2.313E+3	8.057E-1
6.873E+6	3.753E+2	2.087E+3	7.983E-1
7.536E+6	3.553E+2	1.937E+3	8.117E-1
8.263E+6	3.327E+2	1.807E+3	8.307E-1
9.060E+6	2.960E+2	1.653E+3	8.333E-1
9.934E+6	2.987E+2	1.503E+3	8.320E-1
1.089E+7	2.687E+2	1.383E+3	8.380E-1
1.194E+7	2.390E+2	1.290E+3	8.580E-1
1.310E+7	2.280E+2	1.187E+3	8.667E-1
1.436E+7	2.223E+2	1.087E+3	8.683E-1
1.574E+7	2.080E+2	9.907E+2	8.683E-1
1.726E+7	1.843E+2	9.233E+2	8.867E-1
1.893E+7	1.753E+2	8.497E+2	8.950E-1
2.075E+7	1.617E+2	7.773E+2	8.973E-1
2.276E+7	1.513E+2	7.137E+2	9.037E-1
2.495E+7	1.430E+2	6.577E+2	9.130E-1
2.736E+7	1.373E+2	6.050E+2	9.210E-1
3.000E+7	1.277E+2	5.547E+2	9.257E-1
3.289E+7	1.227E+2	5.100E+2	9.333E-1
3.607E+7	1.140E+2	4.673E+2	9.383E-1
3.955E+7	1.110E+2	4.300E+2	9.460E-1
4.336E+7	1.053E+2	3.960E+2	9.557E-1
4.755E+7	1.002E+2	3.627E+2	9.587E-1
5.213E+7	9.610E+1	3.327E+2	9.653E-1
5.716E+7	9.300E+1	3.050E+2	9.700E-1
6.268E+7	9.017E+1	2.793E+2	9.740E-1
6.873E+7	8.737E+1	2.563E+2	9.800E-1
7.536E+7	8.500E+1	2.353E+2	9.857E-1
8.263E+7	8.260E+1	2.153E+2	9.900E-1
9.060E+7	8.040E+1	1.977E+2	9.943E-1
9.934E+7	8.015E+1	1.810E+2	1.002E+0
1.089E+8	7.980E+1	1.660E+2	1.004E+0
1.194E+8	7.945E+1	1.520E+2	1.013E+0
1.310E+8	7.910E+1	1.400E+2	1.020E+0
1.436E+8	7.875E+1	1.283E+2	1.023E+0
1.574E+8	7.840E+1	1.180E+2	1.033E+0
1.726E+8	7.805E+1	1.083E+2	1.033E+0
1.893E+8	7.770E+1	9.910E+1	1.043E+0
2.075E+8	7.735E+1	9.083E+1	1.050E+0
2.276E+8	7.700E+1	8.343E+1	1.053E+0
2.495E+8	7.665E+1	7.670E+1	1.063E+0
2.736E+8	7.630E+1	7.053E+1	1.073E+0
3.000E+8	7.595E+1	6.480E+1	1.083E+0
3.289E+8	7.560E+1	5.937E+1	1.083E+0
3.607E+8	7.525E+1	5.480E+1	1.100E+0
3.955E+8	7.490E+1	5.050E+1	1.113E+0
4.336E+8	7.455E+1	4.643E+1	1.120E+0
4.755E+8	7.420E+1	4.287E+1	1.133E+0
5.213E+8	7.385E+1	3.967E+1	1.150E+0
5.716E+8	7.350E+1	3.663E+1	1.163E+0
6.268E+8	7.315E+1	3.407E+1	1.187E+0
6.873E+8	7.280E+1	3.137E+1	1.200E+0
7.536E+8	7.245E+1	2.953E+1	1.240E+0
8.263E+8	7.210E+1	2.773E+1	1.273E+0
9.060E+8	7.175E+1	2.583E+1	1.303E+0

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
9.934E+8	7.140E+1	2.410E+1	1.333E+0
1.089E+9	7.105E+1	2.240E+1	1.350E+0
1.133E+9	7.070E+1	2.563E+1	1.400E+0
1.192E+9	7.000E+1	2.510E+1	1.500E+0
1.254E+9	6.987E+1	2.427E+1	1.600E+0
1.318E+9	6.967E+1	2.367E+1	1.700E+0
1.386E+9	6.960E+1	2.287E+1	1.760E+0
1.458E+9	6.937E+1	2.233E+1	1.813E+0
1.533E+9	6.927E+1	2.177E+1	1.850E+0
1.612E+9	6.917E+1	2.127E+1	1.910E+0
1.696E+9	6.910E+1	2.097E+1	1.977E+0
1.783E+9	6.877E+1	2.050E+1	2.033E+0
1.875E+9	6.867E+1	2.000E+1	2.090E+0
1.972E+9	6.847E+1	1.980E+1	2.173E+0
2.074E+9	6.843E+1	1.953E+1	2.253E+0
2.181E+9	6.827E+1	1.933E+1	2.350E+0
2.294E+9	6.810E+1	1.910E+1	2.437E+0
2.412E+9	6.807E+1	1.900E+1	2.547E+0
2.537E+9	6.773E+1	1.890E+1	2.667E+0
2.668E+9	6.753E+1	1.887E+1	2.803E+0
2.806E+9	6.733E+1	1.877E+1	2.927E+0
2.951E+9	6.730E+1	1.870E+1	3.070E+0
3.103E+9	6.700E+1	1.887E+1	3.257E+0
3.263E+9	6.683E+1	1.903E+1	3.450E+0
3.432E+9	6.653E+1	1.917E+1	3.660E+0
3.609E+9	6.637E+1	1.917E+1	3.853E+0
3.796E+9	6.613E+1	1.943E+1	4.110E+0
3.992E+9	6.600E+1	1.967E+1	4.367E+0
4.198E+9	6.567E+1	2.007E+1	4.690E+0
4.415E+9	6.523E+1	2.053E+1	5.043E+0
4.643E+9	6.483E+1	2.097E+1	5.420E+0
4.883E+9	6.450E+1	2.140E+1	5.810E+0
5.135E+9	6.383E+1	2.197E+1	6.270E+0
5.400E+9	6.313E+1	2.227E+1	6.697E+0
5.679E+9	6.267E+1	2.280E+1	7.193E+0
5.972E+9	6.213E+1	2.310E+1	7.680E+0
6.281E+9	6.147E+1	2.360E+1	8.237E+0
6.605E+9	6.097E+1	2.390E+1	8.797E+0
6.946E+9	6.037E+1	2.443E+1	9.440E+0
7.305E+9	5.970E+1	2.500E+1	1.016E+1
7.682E+9	5.933E+1	2.583E+1	1.103E+1
8.079E+9	5.840E+1	2.617E+1	1.177E+1
8.496E+9	5.770E+1	2.683E+1	1.270E+1
8.935E+9	5.700E+1	2.733E+1	1.360E+1
9.397E+9	5.567E+1	2.777E+1	1.450E+1
9.882E+9	5.510E+1	2.873E+1	1.577E+1
1.039E+10	5.387E+1	2.907E+1	1.680E+1
1.093E+10	5.353E+1	2.997E+1	1.820E+1
1.149E+10	5.203E+1	3.007E+1	1.920E+1
1.209E+10	5.147E+1	3.093E+1	2.080E+1
1.271E+10	4.943E+1	3.113E+1	2.203E+1
1.337E+10	4.917E+1	3.270E+1	2.430E+1
1.406E+10	4.843E+1	3.337E+1	2.610E+1
1.478E+10	4.657E+1	3.293E+1	2.707E+1
1.555E+10	4.493E+1	3.483E+1	3.013E+1
1.635E+10	4.340E+1	3.460E+1	3.150E+1
1.720E+10	4.267E+1	3.477E+1	3.330E+1
1.808E+10	4.103E+1	3.580E+1	3.600E+1
1.902E+10	3.890E+1	3.643E+1	3.853E+1
2.000E+10	3.670E+1	3.753E+1	4.177E+1

Tendon

Frequency (Hz)	Bovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	3.508E+7	5.466E+8	3.041E-1
1.122E+1	2.908E+7	4.826E+8	3.012E-1
1.259E+1	2.462E+7	4.254E+8	2.979E-1
1.350E+1	2.217E+7	3.751E+8	2.948E-1
1.585E+1	2.087E+7	3.320E+8	2.927E-1
1.778E+1	1.988E+7	2.937E+8	2.905E-1
1.995E+1	1.901E+7	2.598E+8	2.884E-1
2.239E+1	1.834E+7	2.300E+8	2.865E-1
2.512E+1	1.774E+7	2.037E+8	2.847E-1
2.818E+1	1.717E+7	1.806E+8	2.831E-1
3.162E+1	1.667E+7	1.602E+8	2.818E-1
3.548E+1	1.620E+7	1.423E+8	2.809E-1
3.981E+1	1.575E+7	1.266E+8	2.805E-1
4.467E+1	1.529E+7	1.130E+8	2.807E-1
5.012E+1	1.482E+7	1.010E+8	2.816E-1
5.623E+1	1.434E+7	9.051E+7	2.831E-1
6.310E+1	1.379E+7	8.133E+7	2.855E-1
7.079E+1	1.318E+7	7.328E+7	2.886E-1
7.943E+1	1.253E+7	6.621E+7	2.926E-1
8.913E+1	1.180E+7	5.996E+7	2.973E-1
1.000E+2	1.101E+7	5.443E+7	3.028E-1
1.122E+2	1.018E+7	4.948E+7	3.088E-1
1.259E+2	9.315E+6	4.500E+7	3.151E-1
1.413E+2	8.423E+6	4.095E+7	3.218E-1
1.585E+2	7.532E+6	3.726E+7	3.285E-1
1.778E+2	6.665E+6	3.388E+7	3.352E-1
1.995E+2	5.839E+6	3.079E+7	3.418E-1
2.239E+2	5.062E+6	2.794E+7	3.480E-1
2.512E+2	4.352E+6	2.532E+7	3.539E-1
2.818E+2	3.703E+6	2.292E+7	3.594E-1
3.162E+2	3.134E+6	2.071E+7	3.644E-1
3.548E+2	2.635E+6	1.869E+7	3.689E-1
3.981E+2	2.202E+6	1.683E+7	3.728E-1
4.467E+2	1.832E+6	1.514E+7	3.763E-1
5.012E+2	1.514E+6	1.361E+7	3.795E-1
5.623E+2	1.248E+6	1.222E+7	3.822E-1
6.310E+2	1.024E+6	1.095E+7	3.844E-1
7.079E+2	8.379E+5	9.812E+6	3.865E-1
7.943E+2	6.846E+5	8.787E+6	3.883E-1
8.913E+2	5.559E+5	7.860E+6	3.897E-1
1.000E+3	4.519E+5	7.028E+6	3.910E-1
1.122E+3	3.661E+5	6.280E+6	3.920E-1
1.259E+3	2.958E+5	5.610E+6	3.929E-1
1.413E+3	2.384E+5	5.009E+6	3.936E-1
1.585E+3	1.925E+5	4.472E+6	3.943E-1
1.778E+3	1.547E+5	3.990E+6	3.948E-1
1.995E+3	1.242E+5	3.560E+6	3.952E-1
2.239E+3	9.965E+4	3.176E+6	3.956E-1
2.512E+3	7.988E+4	2.833E+6	3.959E-1
2.818E+3	6.392E+4	2.526E+6	3.961E-1
3.162E+3	5.120E+4	2.252E+6	3.962E-1
3.548E+3	4.103E+4	2.008E+6	3.964E-1
3.981E+3	3.282E+4	1.790E+6	3.965E-1
4.467E+3	2.630E+4	1.596E+6	3.965E-1
5.012E+3	2.107E+4	1.423E+6	3.966E-1
5.623E+3	1.702E+4	1.268E+6	3.967E-1
6.310E+3	1.370E+4	1.130E+6	3.967E-1
7.079E+3	1.112E+4	1.007E+6	3.967E-1
7.943E+3	9.002E+3	8.978E+5	3.968E-1
8.913E+3	7.402E+3	8.001E+5	3.967E-1

Frequency (Hz)	Bovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	6.119E+3	7.132E+5	3.968E-1
1.122E+4	5.053E+3	6.357E+5	3.968E-1
1.259E+4	4.246E+3	5.665E+5	3.968E-1
1.413E+4	3.546E+3	5.050E+5	3.968E-1
1.585E+4	3.013E+3	4.501E+5	3.968E-1
1.778E+4	2.575E+3	4.012E+5	3.969E-1
1.995E+4	2.228E+3	3.576E+5	3.969E-1
2.239E+4	1.931E+3	3.188E+5	3.970E-1
2.512E+4	1.700E+3	2.841E+5	3.971E-1
2.818E+4	1.490E+3	2.533E+5	3.971E-1
3.162E+4	1.322E+3	2.258E+5	3.972E-1
3.548E+4	1.185E+3	2.013E+5	3.973E-1
3.981E+4	1.067E+3	1.794E+5	3.974E-1
4.467E+4	9.602E+2	1.599E+5	3.975E-1
5.012E+4	8.736E+2	1.426E+5	3.976E-1
5.623E+4	7.886E+2	1.271E+5	3.976E-1
6.310E+4	7.121E+2	1.133E+5	3.978E-1
7.079E+4	6.438E+2	1.010E+5	3.979E-1
7.943E+4	5.856E+2	9.008E+4	3.981E-1
8.913E+4	5.390E+2	8.030E+4	3.981E-1
1.000E+5	4.873E+2	7.156E+4	3.981E-1
1.122E+5	4.533E+2	6.378E+4	3.981E-1
1.259E+5	4.294E+2	5.685E+4	3.982E-1
1.413E+5	4.141E+2	5.068E+4	3.983E-1
1.585E+5	3.877E+2	4.518E+4	3.983E-1
1.778E+5	3.662E+2	4.030E+4	3.987E-1
1.995E+5	3.654E+2	3.592E+4	3.988E-1
2.239E+5	3.588E+2	3.206E+4	3.992E-1
2.512E+5	3.153E+2	2.857E+4	3.993E-1
2.818E+5	2.969E+2	2.548E+4	3.995E-1
3.162E+5	2.918E+2	2.274E+4	4.000E-1
3.548E+5	2.694E+2	2.027E+4	4.002E-1
3.981E+5	2.494E+2	1.807E+4	4.003E-1
4.467E+5	2.347E+2	1.611E+4	4.004E-1
5.012E+5	2.252E+2	1.438E+4	4.008E-1
5.623E+5	1.784E+2	1.279E+4	4.002E-1
6.310E+5	1.849E+2	1.139E+4	3.998E-1
7.079E+5	1.729E+2	1.016E+4	4.000E-1
7.943E+5	1.690E+2	9.048E+3	3.998E-1
8.913E+5	1.690E+2	8.065E+3	3.999E-1
1.000E+6	1.700E+2	7.189E+3	3.999E-1
1.122E+6	1.717E+2	6.407E+3	3.999E-1
1.259E+6	1.745E+2	5.714E+3	4.002E-1
1.413E+6	1.758E+2	5.102E+3	4.009E-1
1.585E+6	1.763E+2	4.553E+3	4.014E-1
1.778E+6	1.749E+2	4.067E+3	4.024E-1
1.995E+6	1.707E+2	3.636E+3	4.035E-1
2.239E+6	1.687E+2	3.249E+3	4.046E-1
2.512E+6	1.609E+2	2.915E+3	4.074E-1
2.818E+6	1.477E+2	2.609E+3	4.091E-1
3.162E+6	1.363E+2	2.334E+3	4.107E-1
3.548E+6	1.249E+2	2.089E+3	4.123E-1
3.981E+6	1.156E+2	1.867E+3	4.136E-1
4.467E+6	1.080E+2	1.667E+3	4.143E-1
5.012E+6	1.012E+2	1.488E+3	4.148E-1
5.623E+6	1.000E+2	1.326E+3	4.149E-1
6.310E+6	9.900E+1	1.183E+3	4.151E-1
7.079E+6	9.800E+1	1.053E+3	4.200E-1
7.943E+6	9.700E+1	9.402E+2	4.400E-1
8.913E+6	9.600E+1	8.376E+2	4.600E-1

Tendon

Frequency (Hz)	Bovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+7	9.500E+1	7.484E+2	4.800E-1
1.089E+7	9.400E+1	8.177E+2	4.900E-1
1.194E+7	9.300E+1	7.464E+2	4.959E-1
1.310E+7	9.200E+1	6.841E+2	4.984E-1
1.436E+7	9.100E+1	6.261E+2	5.001E-1
1.574E+7	9.000E+1	5.715E+2	5.005E-1
1.726E+7	8.900E+1	5.249E+2	5.041E-1
1.893E+7	8.800E+1	4.799E+2	5.053E-1
2.075E+7	8.700E+1	4.389E+2	5.068E-1
2.276E+7	8.600E+1	4.029E+2	5.101E-1
2.495E+7	8.500E+1	3.689E+2	5.121E-1
2.736E+7	8.348E+1	3.386E+2	5.154E-1
3.000E+7	8.202E+1	3.099E+2	5.172E-1
3.289E+7	8.016E+1	2.843E+2	5.202E-1
3.607E+7	7.913E+1	2.612E+2	5.242E-1
3.955E+7	7.770E+1	2.397E+2	5.274E-1
4.336E+7	7.597E+1	2.200E+2	5.308E-1
4.755E+7	7.517E+1	2.027E+2	5.362E-1
5.213E+7	7.381E+1	1.862E+2	5.400E-1
5.716E+7	7.237E+1	1.717E+2	5.460E-1
6.268E+7	7.083E+1	1.577E+2	5.500E-1
6.873E+7	6.989E+1	1.457E+2	5.570E-1
7.536E+7	6.842E+1	1.343E+2	5.632E-1
8.263E+7	6.715E+1	1.240E+2	5.699E-1
9.060E+7	6.591E+1	1.145E+2	5.770E-1
9.934E+7	6.473E+1	1.057E+2	5.842E-1
1.089E+8	6.355E+1	9.766E+1	5.918E-1
1.194E+8	6.232E+1	9.032E+1	6.001E-1
1.310E+8	6.133E+1	8.356E+1	6.088E-1
1.436E+8	6.015E+1	7.735E+1	6.179E-1
1.574E+8	5.913E+1	7.158E+1	6.270E-1
1.726E+8	5.805E+1	6.623E+1	6.361E-1
1.893E+8	5.706E+1	6.135E+1	6.460E-1
2.075E+8	5.617E+1	5.684E+1	6.563E-1
2.276E+8	5.530E+1	5.266E+1	6.667E-1
2.495E+8	5.451E+1	4.880E+1	6.774E-1
2.736E+8	5.372E+1	4.527E+1	6.891E-1
3.000E+8	5.299E+1	4.199E+1	7.008E-1
3.289E+8	5.231E+1	3.899E+1	7.135E-1
3.607E+8	5.169E+1	3.626E+1	7.275E-1
3.955E+8	5.105E+1	3.368E+1	7.410E-1
4.336E+8	5.053E+1	3.131E+1	7.554E-1
4.755E+8	5.004E+1	2.922E+1	7.729E-1
5.213E+8	4.948E+1	2.727E+1	7.908E-1
5.716E+8	4.904E+1	2.550E+1	8.108E-1
6.268E+8	4.861E+1	2.390E+1	8.332E-1
6.873E+8	4.819E+1	2.245E+1	8.585E-1
7.536E+8	4.773E+1	2.120E+1	8.886E-1
8.263E+8	4.722E+1	2.001E+1	9.199E-1
9.060E+8	4.668E+1	1.892E+1	9.538E-1
9.934E+8	4.608E+1	1.772E+1	9.795E-1
1.025E+9	4.726E+1	1.644E+1	9.376E-1
1.078E+9	4.695E+1	1.610E+1	9.656E-1
1.133E+9	4.693E+1	1.574E+1	9.925E-1
1.192E+9	4.668E+1	1.534E+1	1.017E+0
1.254E+9	4.649E+1	1.508E+1	1.052E+0
1.318E+9	4.642E+1	1.479E+1	1.085E+0
1.386E+9	4.624E+1	1.452E+1	1.120E+0
1.458E+9	4.593E+1	1.423E+1	1.154E+0
1.533E+9	4.582E+1	1.416E+1	1.208E+0

Frequency (Hz)	Bovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.612E+9	4.564E+1	1.386E+1	1.243E+0
1.696E+9	4.544E+1	1.383E+1	1.305E+0
1.783E+9	4.526E+1	1.367E+1	1.356E+0
1.875E+9	4.508E+1	1.356E+1	1.414E+0
1.972E+9	4.481E+1	1.347E+1	1.478E+0
2.074E+9	4.469E+1	1.342E+1	1.548E+0
2.181E+9	4.451E+1	1.336E+1	1.621E+0
2.294E+9	4.428E+1	1.341E+1	1.712E+0
2.412E+9	4.400E+1	1.345E+1	1.806E+0
2.537E+9	4.383E+1	1.334E+1	1.883E+0
2.668E+9	4.354E+1	1.351E+1	2.005E+0
2.806E+9	4.328E+1	1.352E+1	2.110E+0
2.951E+9	4.300E+1	1.361E+1	2.234E+0
3.103E+9	4.273E+1	1.364E+1	2.355E+0
3.263E+9	4.240E+1	1.378E+1	2.502E+0
3.432E+9	4.220E+1	1.390E+1	2.653E+0
3.609E+9	4.191E+1	1.404E+1	2.819E+0
3.796E+9	4.158E+1	1.420E+1	2.999E+0
3.992E+9	4.124E+1	1.441E+1	3.201E+0
4.198E+9	4.095E+1	1.461E+1	3.413E+0
4.415E+9	4.063E+1	1.484E+1	3.645E+0
4.643E+9	4.022E+1	1.519E+1	3.923E+0
4.883E+9	3.972E+1	1.542E+1	4.190E+0
5.135E+9	3.927E+1	1.572E+1	4.492E+0
5.400E+9	3.872E+1	1.594E+1	4.789E+0
5.679E+9	3.808E+1	1.620E+1	5.120E+0
5.972E+9	3.750E+1	1.644E+1	5.463E+0
6.281E+9	3.702E+1	1.662E+1	5.807E+0
6.605E+9	3.637E+1	1.677E+1	6.162E+0
6.946E+9	3.578E+1	1.705E+1	6.588E+0
7.305E+9	3.520E+1	1.724E+1	7.007E+0
7.682E+9	3.450E+1	1.744E+1	7.455E+0
8.079E+9	3.381E+1	1.772E+1	7.965E+0
8.496E+9	3.307E+1	1.785E+1	8.437E+0
8.935E+9	3.237E+1	1.798E+1	8.936E+0
9.397E+9	3.166E+1	1.811E+1	9.467E+0
9.882E+9	3.085E+1	1.819E+1	1.000E+1
1.039E+10	3.005E+1	1.826E+1	1.056E+1
1.093E+10	2.928E+1	1.826E+1	1.110E+1
1.149E+10	2.848E+1	1.821E+1	1.164E+1
1.209E+10	2.781E+1	1.821E+1	1.224E+1
1.271E+10	2.699E+1	1.808E+1	1.278E+1
1.337E+10	2.614E+1	1.801E+1	1.339E+1
1.406E+10	2.543E+1	1.768E+1	1.383E+1
1.478E+10	2.456E+1	1.761E+1	1.449E+1
1.555E+10	2.404E+1	1.749E+1	1.513E+1
1.635E+10	2.339E+1	1.732E+1	1.576E+1
1.720E+10	2.270E+1	1.719E+1	1.644E+1
1.808E+10	2.197E+1	1.707E+1	1.717E+1
1.902E+10	2.147E+1	1.683E+1	1.781E+1
2.000E+10	2.089E+1	1.665E+1	1.852E+1

Testis

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.089E+6	3.160E+3	1.033E+4	6.267E-1
1.194E+6	1.973E+3	9.027E+3	5.997E-1
1.310E+6	2.047E+3	8.487E+3	6.187E-1
1.436E+6	1.583E+3	8.393E+3	6.700E-1
1.574E+6	1.863E+3	7.413E+3	6.493E-1
1.726E+6	1.413E+3	7.100E+3	6.820E-1
2.075E+6	1.093E+3	6.237E+3	7.200E-1
2.276E+6	1.073E+3	5.153E+3	6.520E-1
2.495E+6	9.973E+2	4.560E+3	6.327E-1
2.736E+6	8.807E+2	4.430E+3	6.747E-1
3.000E+6	8.503E+2	4.060E+3	6.777E-1
3.289E+6	9.777E+2	3.940E+3	7.210E-1
3.607E+6	6.337E+2	3.467E+3	6.950E-1
3.955E+6	6.373E+2	3.250E+3	7.150E-1
4.336E+6	5.837E+2	2.987E+3	7.200E-1
4.755E+6	5.690E+2	2.787E+3	7.370E-1
5.213E+6	5.117E+2	2.567E+3	7.440E-1
5.716E+6	4.383E+2	2.327E+3	7.390E-1
6.268E+6	4.080E+2	2.197E+3	7.660E-1
6.873E+6	3.563E+2	1.987E+3	7.590E-1
7.536E+6	3.350E+2	1.843E+3	7.713E-1
8.263E+6	3.137E+2	1.713E+3	7.890E-1
9.060E+6	2.787E+2	1.573E+3	7.913E-1
9.934E+6	2.810E+2	1.427E+3	7.893E-1
1.089E+7	2.507E+2	1.313E+3	7.940E-1
1.194E+7	2.240E+2	1.223E+3	8.137E-1
1.310E+7	2.143E+2	1.123E+3	8.213E-1
1.436E+7	2.087E+2	1.033E+3	8.223E-1
1.574E+7	1.957E+2	9.370E+2	8.207E-1
1.726E+7	1.743E+2	8.717E+2	8.373E-1
1.893E+7	1.657E+2	8.023E+2	8.453E-1
2.075E+7	1.537E+2	7.330E+2	8.463E-1
2.276E+7	1.443E+2	6.730E+2	8.517E-1
2.495E+7	1.367E+2	6.190E+2	8.597E-1
2.736E+7	1.323E+2	5.690E+2	8.667E-1
3.000E+7	1.233E+2	5.217E+2	8.707E-1
3.289E+7	1.193E+2	4.797E+2	8.777E-1
3.607E+7	1.113E+2	4.393E+2	8.817E-1
3.955E+7	1.083E+2	4.043E+2	8.890E-1
4.336E+7	1.043E+2	3.723E+2	8.987E-1
4.755E+7	9.927E+1	3.410E+2	9.017E-1
5.213E+7	9.577E+1	3.130E+2	9.070E-1
5.716E+7	9.307E+1	2.870E+2	9.120E-1
6.268E+7	9.060E+1	2.630E+2	9.163E-1
6.873E+7	8.790E+1	2.417E+2	9.230E-1
7.536E+7	8.580E+1	2.217E+2	9.297E-1
8.263E+7	8.353E+1	2.037E+2	9.340E-1
9.060E+7	8.140E+1	1.867E+2	9.400E-1
9.934E+7	7.943E+1	1.717E+2	9.473E-1
1.089E+8	7.807E+1	1.573E+2	9.533E-1
1.194E+8	7.603E+1	1.447E+2	9.610E-1
1.310E+8	7.483E+1	1.333E+2	9.693E-1
1.436E+8	7.350E+1	1.223E+2	9.777E-1
1.574E+8	7.243E+1	1.123E+2	9.867E-1
1.726E+8	7.177E+1	1.033E+2	9.933E-1
1.893E+8	7.097E+1	9.510E+1	1.001E+0
2.075E+8	6.970E+1	8.743E+1	1.013E+0
2.276E+8	6.863E+1	8.040E+1	1.017E+0
2.495E+8	6.783E+1	7.407E+1	1.027E+0
2.736E+8	6.733E+1	6.830E+1	1.043E+0

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.000E+8	6.670E+1	6.293E+1	1.053E+0
3.060E+8	6.663E+1	6.393E+1	1.090E+0
3.218E+8	6.683E+1	6.097E+1	1.090E+0
3.384E+8	6.643E+1	5.873E+1	1.107E+0
3.559E+8	6.607E+1	5.593E+1	1.107E+0
3.743E+8	6.637E+1	5.333E+1	1.110E+0
3.936E+8	6.607E+1	5.120E+1	1.120E+0
4.140E+8	6.513E+1	4.867E+1	1.120E+0
4.354E+8	6.520E+1	4.693E+1	1.137E+0
4.578E+8	6.517E+1	4.517E+1	1.150E+0
4.815E+8	6.513E+1	4.263E+1	1.140E+0
5.064E+8	6.473E+1	4.100E+1	1.153E+0
5.325E+8	6.467E+1	3.933E+1	1.167E+0
5.600E+8	6.433E+1	3.790E+1	1.180E+0
5.889E+8	6.403E+1	3.647E+1	1.197E+0
6.194E+8	6.407E+1	3.503E+1	1.207E+0
6.513E+8	6.377E+1	3.377E+1	1.223E+0
6.850E+8	6.353E+1	3.257E+1	1.240E+0
7.204E+8	6.343E+1	3.147E+1	1.260E+0
7.576E+8	6.320E+1	3.013E+1	1.273E+0
7.967E+8	6.300E+1	2.927E+1	1.297E+0
8.378E+8	6.280E+1	2.837E+1	1.323E+0
8.811E+8	6.270E+1	2.717E+1	1.330E+0
9.266E+8	6.247E+1	2.633E+1	1.357E+0
9.745E+8	6.240E+1	2.553E+1	1.383E+0
1.025E+9	6.217E+1	2.460E+1	1.403E+0
1.078E+9	6.200E+1	2.407E+1	1.443E+0
1.133E+9	6.183E+1	2.327E+1	1.467E+0
1.192E+9	6.173E+1	2.287E+1	1.517E+0
1.254E+9	6.157E+1	2.207E+1	1.540E+0
1.318E+9	6.137E+1	2.163E+1	1.587E+0
1.386E+9	6.133E+1	2.107E+1	1.627E+0
1.458E+9	6.110E+1	2.067E+1	1.677E+0
1.533E+9	6.083E+1	2.007E+1	1.710E+0
1.612E+9	6.077E+1	1.970E+1	1.770E+0
1.696E+9	6.063E+1	1.953E+1	1.843E+0
1.783E+9	6.023E+1	1.917E+1	1.903E+0
1.875E+9	6.017E+1	1.883E+1	1.963E+0
1.972E+9	5.987E+1	1.863E+1	2.043E+0
2.074E+9	5.973E+1	1.847E+1	2.130E+0
2.181E+9	5.957E+1	1.833E+1	2.227E+0
2.294E+9	5.943E+1	1.810E+1	2.310E+0
2.412E+9	5.920E+1	1.807E+1	2.427E+0
2.537E+9	5.890E+1	1.803E+1	2.543E+0
2.668E+9	5.867E+1	1.807E+1	2.687E+0
2.806E+9	5.837E+1	1.800E+1	2.810E+0
2.951E+9	5.827E+1	1.807E+1	2.963E+0
3.103E+9	5.790E+1	1.817E+1	3.137E+0
3.263E+9	5.763E+1	1.827E+1	3.320E+0
3.432E+9	5.727E+1	1.847E+1	3.523E+0
3.609E+9	5.697E+1	1.857E+1	3.723E+0
3.796E+9	5.667E+1	1.877E+1	3.963E+0
3.992E+9	5.643E+1	1.893E+1	4.207E+0
4.198E+9	5.600E+1	1.913E+1	4.473E+0
4.415E+9	5.557E+1	1.950E+1	4.793E+0
4.643E+9	5.520E+1	1.983E+1	5.123E+0
4.883E+9	5.480E+1	2.023E+1	5.487E+0
5.135E+9	5.423E+1	2.063E+1	5.893E+0
5.400E+9	5.353E+1	2.107E+1	6.323E+0
5.679E+9	5.310E+1	2.143E+1	6.770E+0

Testis

Frequency (Hz)	Human @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
5.972E+9	5.243E+1	2.190E+1	7.273E+0
6.281E+9	5.153E+1	2.227E+1	7.780E+0
6.605E+9	5.093E+1	2.260E+1	8.303E+0
6.946E+9	5.023E+1	2.287E+1	8.837E+0
7.305E+9	4.943E+1	2.333E+1	9.487E+0
7.682E+9	4.887E+1	2.387E+1	1.017E+1
8.079E+9	4.800E+1	2.413E+1	1.083E+1
8.496E+9	4.717E+1	2.447E+1	1.157E+1
8.935E+9	4.633E+1	2.493E+1	1.240E+1
9.397E+9	4.503E+1	2.497E+1	1.303E+1
9.882E+9	4.430E+1	2.557E+1	1.403E+1
1.039E+10	4.320E+1	2.563E+1	1.483E+1
1.093E+10	4.250E+1	2.603E+1	1.580E+1
1.149E+10	4.137E+1	2.587E+1	1.657E+1
1.209E+10	4.067E+1	2.617E+1	1.760E+1
1.271E+10	3.910E+1	2.613E+1	1.847E+1
1.337E+10	3.870E+1	2.677E+1	1.993E+1
1.406E+10	3.810E+1	2.693E+1	2.110E+1
1.478E+10	3.677E+1	2.660E+1	2.187E+1
1.555E+10	3.563E+1	2.747E+1	2.373E+1
1.635E+10	3.453E+1	2.697E+1	2.457E+1
1.720E+10	3.400E+1	2.710E+1	2.597E+1
1.808E+10	3.290E+1	2.753E+1	2.773E+1
1.902E+10	3.157E+1	2.780E+1	2.940E+1
2.000E+10	3.030E+1	2.840E+1	3.163E+1

Thyroid

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.089E+6	2.554E+3	7.940E+3	4.811E-1
1.194E+6	1.593E+3	6.946E+3	4.615E-1
1.310E+6	1.629E+3	6.538E+3	4.763E-1
1.436E+6	1.256E+3	6.462E+3	5.162E-1
1.574E+6	1.456E+3	5.714E+3	5.005E-1
1.726E+6	1.083E+3	5.465E+3	5.249E-1
1.893E+6	6.373E+2	4.709E+3	4.959E-1
2.075E+6	8.119E+2	4.794E+3	5.535E-1
2.276E+6	7.918E+2	3.963E+3	5.017E-1
2.495E+6	7.295E+2	3.502E+3	4.862E-1
2.736E+6	6.290E+2	3.392E+3	5.163E-1
3.000E+6	6.054E+2	3.104E+3	5.181E-1
3.289E+6	6.966E+2	3.014E+3	5.515E-1
3.607E+6	4.378E+2	2.637E+3	5.291E-1
3.955E+6	4.391E+2	2.471E+3	5.436E-1
4.336E+6	4.003E+2	2.261E+3	5.454E-1
4.755E+6	3.902E+2	2.109E+3	5.578E-1
5.213E+6	3.477E+2	1.934E+3	5.610E-1
5.716E+6	2.959E+2	1.748E+3	5.560E-1
6.268E+6	2.762E+2	1.648E+3	5.745E-1
6.873E+6	2.425E+2	1.483E+3	5.672E-1
7.536E+6	2.291E+2	1.372E+3	5.752E-1
8.263E+6	2.160E+2	1.277E+3	5.870E-1
9.060E+6	1.939E+2	1.166E+3	5.877E-1
9.934E+6	1.964E+2	1.061E+3	5.863E-1
1.089E+7	1.767E+2	9.711E+2	5.885E-1
1.194E+7	1.572E+2	9.040E+2	6.007E-1
1.310E+7	1.526E+2	8.311E+2	6.055E-1
1.436E+7	1.508E+2	7.574E+2	6.050E-1
1.574E+7	1.437E+2	6.887E+2	6.032E-1
1.726E+7	1.285E+2	6.400E+2	6.147E-1
1.893E+7	1.244E+2	5.878E+2	6.190E-1
2.075E+7	1.168E+2	5.364E+2	6.193E-1
2.276E+7	1.107E+2	4.919E+2	6.228E-1
2.495E+7	1.062E+2	4.526E+2	6.282E-1
2.736E+7	1.037E+2	4.155E+2	6.324E-1
3.000E+7	9.824E+1	3.800E+2	6.342E-1
3.289E+7	9.573E+1	3.493E+2	6.391E-1
3.607E+7	9.045E+1	3.197E+2	6.416E-1
3.955E+7	8.915E+1	2.937E+2	6.461E-1
4.336E+7	8.591E+1	2.706E+2	6.528E-1
4.755E+7	8.298E+1	2.472E+2	6.540E-1
5.213E+7	8.069E+1	2.271E+2	6.587E-1
5.716E+7	7.896E+1	2.081E+2	6.618E-1
6.268E+7	7.740E+1	1.907E+2	6.651E-1
6.873E+7	7.563E+1	1.751E+2	6.695E-1
7.536E+7	7.429E+1	1.608E+2	6.742E-1
8.263E+7	7.283E+1	1.474E+2	6.777E-1
9.060E+7	7.144E+1	1.353E+2	6.821E-1
9.934E+7	7.028E+1	1.242E+2	6.866E-1
1.089E+8	6.943E+1	1.141E+2	6.916E-1
1.194E+8	6.813E+1	1.049E+2	6.969E-1
1.310E+8	6.741E+1	9.633E+1	7.018E-1
1.436E+8	6.648E+1	8.875E+1	7.090E-1
1.574E+8	6.573E+1	8.165E+1	7.152E-1
1.726E+8	6.517E+1	7.502E+1	7.205E-1
1.893E+8	6.466E+1	6.913E+1	7.280E-1
2.075E+8	6.384E+1	6.367E+1	7.352E-1
2.276E+8	6.310E+1	5.865E+1	7.426E-1
2.495E+8	6.255E+1	5.407E+1	7.507E-1

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
2.736E+8	6.215E+1	4.990E+1	7.596E-1
3.000E+8	6.163E+1	4.610E+1	7.695E-1
3.289E+8	6.114E+1	4.256E+1	7.788E-1
3.607E+8	6.070E+1	3.948E+1	7.921E-1
3.955E+8	6.035E+1	3.656E+1	8.044E-1
4.336E+8	6.002E+1	3.392E+1	8.183E-1
4.755E+8	5.958E+1	3.154E+1	8.342E-1
5.213E+8	5.935E+1	2.943E+1	8.537E-1
5.716E+8	5.895E+1	2.747E+1	8.736E-1
6.268E+8	5.865E+1	2.574E+1	8.976E-1
6.873E+8	5.841E+1	2.395E+1	9.156E-1
7.536E+8	5.819E+1	2.292E+1	9.609E-1
8.263E+8	5.772E+1	2.181E+1	1.003E+0
9.060E+8	5.726E+1	2.072E+1	1.045E+0
9.934E+8	5.666E+1	1.961E+1	1.084E+0
1.025E+9	5.938E+1	1.954E+1	1.114E+0
1.078E+9	5.925E+1	1.914E+1	1.148E+0
1.133E+9	5.901E+1	1.871E+1	1.180E+0
1.192E+9	5.880E+1	1.839E+1	1.220E+0
1.254E+9	5.869E+1	1.786E+1	1.245E+0
1.318E+9	5.855E+1	1.758E+1	1.289E+0
1.386E+9	5.843E+1	1.711E+1	1.319E+0
1.458E+9	5.819E+1	1.691E+1	1.371E+0
1.533E+9	5.801E+1	1.652E+1	1.409E+0
1.612E+9	5.786E+1	1.625E+1	1.458E+0
1.696E+9	5.777E+1	1.617E+1	1.526E+0
1.783E+9	5.740E+1	1.601E+1	1.589E+0
1.875E+9	5.732E+1	1.579E+1	1.647E+0
1.972E+9	5.714E+1	1.570E+1	1.723E+0
2.074E+9	5.695E+1	1.563E+1	1.804E+0
2.181E+9	5.677E+1	1.565E+1	1.899E+0
2.294E+9	5.658E+1	1.550E+1	1.978E+0
2.412E+9	5.638E+1	1.555E+1	2.087E+0
2.537E+9	5.611E+1	1.554E+1	2.194E+0
2.668E+9	5.588E+1	1.572E+1	2.334E+0
2.806E+9	5.563E+1	1.570E+1	2.450E+0
2.951E+9	5.548E+1	1.579E+1	2.592E+0
3.103E+9	5.522E+1	1.599E+1	2.761E+0
3.263E+9	5.499E+1	1.622E+1	2.944E+0
3.432E+9	5.465E+1	1.640E+1	3.131E+0
3.609E+9	5.435E+1	1.656E+1	3.325E+0
3.796E+9	5.399E+1	1.680E+1	3.548E+0
3.992E+9	5.381E+1	1.703E+1	3.781E+0
4.198E+9	5.345E+1	1.732E+1	4.045E+0
4.415E+9	5.304E+1	1.780E+1	4.372E+0
4.643E+9	5.259E+1	1.821E+1	4.704E+0
4.883E+9	5.232E+1	1.864E+1	5.063E+0
5.135E+9	5.168E+1	1.913E+1	5.464E+0
5.400E+9	5.104E+1	1.955E+1	5.873E+0
5.679E+9	5.040E+1	1.990E+1	6.286E+0
5.972E+9	4.976E+1	2.037E+1	6.767E+0
6.281E+9	4.900E+1	2.082E+1	7.276E+0
6.605E+9	4.832E+1	2.110E+1	7.751E+0
6.946E+9	4.760E+1	2.146E+1	8.295E+0
7.305E+9	4.685E+1	2.193E+1	8.913E+0
7.682E+9	4.613E+1	2.236E+1	9.558E+0
8.079E+9	4.518E+1	2.274E+1	1.022E+1
8.496E+9	4.450E+1	2.313E+1	1.093E+1
8.935E+9	4.351E+1	2.338E+1	1.162E+1
9.397E+9	4.238E+1	2.360E+1	1.234E+1

Thyroid

Frequency (Hz)	Human @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
9.882E+9	4.147E+1	2.404E+1	1.321E+1
1.039E+10	4.040E+1	2.413E+1	1.395E+1
1.093E+10	3.949E+1	2.434E+1	1.480E+1
1.149E+10	3.837E+1	2.426E+1	1.551E+1
1.209E+10	3.755E+1	2.450E+1	1.647E+1
1.271E+10	3.624E+1	2.423E+1	1.714E+1
1.337E+10	3.561E+1	2.460E+1	1.830E+1
1.406E+10	3.483E+1	2.461E+1	1.925E+1
1.478E+10	3.348E+1	2.448E+1	2.014E+1
1.555E+10	3.250E+1	2.469E+1	2.136E+1
1.635E+10	3.150E+1	2.453E+1	2.231E+1
1.720E+10	3.075E+1	2.444E+1	2.338E+1
1.808E+10	2.979E+1	2.456E+1	2.471E+1
1.902E+10	2.865E+1	2.441E+1	2.583E+1
2.000E+10	2.758E+1	2.456E+1	2.733E+1

Tongue

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
2.075E+6	8.584E+2	3.487E+3	4.026E-1
2.276E+6	9.524E+2	3.412E+3	4.320E-1
2.495E+6	7.466E+2	3.225E+3	4.477E-1
2.736E+6	6.377E+2	2.811E+3	4.279E-1
3.000E+6	6.360E+2	2.788E+3	4.653E-1
3.289E+6	6.034E+2	2.382E+3	4.359E-1
3.607E+6	5.287E+2	2.396E+3	4.809E-1
3.955E+6	4.351E+2	2.098E+3	4.617E-1
4.336E+6	3.563E+2	1.981E+3	4.779E-1
4.755E+6	3.457E+2	1.778E+3	4.704E-1
5.213E+6	3.130E+2	1.622E+3	4.703E-1
5.716E+6	3.065E+2	1.553E+3	4.938E-1
6.268E+6	2.869E+2	1.407E+3	4.907E-1
6.873E+6	2.710E+2	1.306E+3	4.993E-1
7.536E+6	2.344E+2	1.177E+3	4.932E-1
8.263E+6	2.036E+2	1.076E+3	4.946E-1
9.060E+6	1.911E+2	9.872E+2	4.976E-1
9.934E+6	1.778E+2	9.305E+2	5.142E-1
1.089E+7	1.667E+2	8.510E+2	5.157E-1
1.194E+7	1.577E+2	7.722E+2	5.131E-1
1.310E+7	1.422E+2	7.142E+2	5.203E-1
1.436E+7	1.312E+2	6.563E+2	5.242E-1
1.574E+7	1.295E+2	6.038E+2	5.288E-1
1.726E+7	1.167E+2	5.553E+2	5.333E-1
1.893E+7	1.110E+2	5.085E+2	5.355E-1
2.075E+7	1.035E+2	4.683E+2	5.408E-1
2.276E+7	9.669E+1	4.306E+2	5.451E-1
2.495E+7	9.328E+1	3.933E+2	5.460E-1
2.736E+7	8.961E+1	3.646E+2	5.550E-1
3.000E+7	8.608E+1	3.333E+2	5.562E-1
3.289E+7	8.220E+1	3.078E+2	5.633E-1
3.607E+7	8.000E+1	2.803E+2	5.624E-1
3.955E+7	7.900E+1	2.585E+2	5.688E-1
4.336E+7	7.800E+1	2.387E+2	5.759E-1
4.755E+7	7.700E+1	2.180E+2	5.765E-1
5.213E+7	7.600E+1	2.005E+2	5.816E-1
5.716E+7	7.500E+1	1.839E+2	5.849E-1
6.268E+7	7.400E+1	1.689E+2	5.888E-1
6.873E+7	7.300E+1	1.550E+2	5.926E-1
7.536E+7	7.200E+1	1.427E+2	5.982E-1
8.263E+7	7.100E+1	1.311E+2	6.026E-1
9.060E+7	7.000E+1	1.204E+2	6.066E-1
9.934E+7	6.900E+1	1.105E+2	6.200E-1
1.089E+8	6.800E+1	1.017E+2	6.400E-1
1.194E+8	6.700E+1	9.343E+1	6.600E-1
1.310E+8	6.600E+1	8.592E+1	6.800E-1
1.436E+8	6.550E+1	7.913E+1	7.000E-1
1.574E+8	6.500E+1	7.265E+1	7.200E-1
1.726E+8	6.450E+1	6.683E+1	7.400E-1
1.893E+8	6.400E+1	6.169E+1	7.600E-1
2.075E+8	6.350E+1	5.664E+1	7.800E-1
2.151E+8	6.300E+1	6.885E+1	8.000E-1
2.262E+8	6.209E+1	6.585E+1	8.100E-1
2.379E+8	6.161E+1	6.350E+1	8.200E-1
2.502E+8	6.126E+1	6.011E+1	8.300E-1
2.631E+8	6.080E+1	5.775E+1	8.350E-1
2.767E+8	6.089E+1	5.504E+1	8.400E-1
2.910E+8	6.064E+1	5.282E+1	8.450E-1
3.060E+8	6.069E+1	4.977E+1	8.500E-1
3.218E+8	6.010E+1	4.799E+1	8.550E-1

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.384E+8	5.964E+1	4.594E+1	8.600E-1
3.559E+8	5.935E+1	4.386E+1	8.700E-1
3.743E+8	5.948E+1	4.265E+1	8.750E-1
3.936E+8	5.913E+1	4.054E+1	8.800E-1
4.140E+8	5.866E+1	3.861E+1	8.900E-1
4.354E+8	5.879E+1	3.713E+1	8.993E-1
4.578E+8	5.852E+1	3.574E+1	9.103E-1
4.815E+8	5.824E+1	3.445E+1	9.229E-1
5.064E+8	5.821E+1	3.264E+1	9.195E-1
5.325E+8	5.815E+1	3.134E+1	9.284E-1
5.600E+8	5.747E+1	3.028E+1	9.433E-1
5.889E+8	5.738E+1	2.923E+1	9.576E-1
6.194E+8	5.727E+1	2.813E+1	9.692E-1
6.513E+8	5.726E+1	2.687E+1	9.736E-1
6.850E+8	5.714E+1	2.604E+1	9.922E-1
7.204E+8	5.671E+1	2.521E+1	1.010E+0
7.576E+8	5.663E+1	2.423E+1	1.021E+0
7.967E+8	5.673E+1	2.343E+1	1.039E+0
8.378E+8	5.644E+1	2.277E+1	1.061E+0
8.811E+8	5.639E+1	2.201E+1	1.079E+0
9.266E+8	5.613E+1	2.130E+1	1.098E+0
9.745E+8	5.594E+1	2.069E+1	1.122E+0
1.025E+9	5.592E+1	2.022E+1	1.153E+0
1.078E+9	5.573E+1	1.955E+1	1.172E+0
1.133E+9	5.550E+1	1.900E+1	1.198E+0
1.192E+9	5.547E+1	1.856E+1	1.231E+0
1.254E+9	5.529E+1	1.811E+1	1.263E+0
1.318E+9	5.517E+1	1.779E+1	1.305E+0
1.386E+9	5.490E+1	1.747E+1	1.347E+0
1.458E+9	5.474E+1	1.702E+1	1.381E+0
1.533E+9	5.463E+1	1.668E+1	1.423E+0
1.612E+9	5.448E+1	1.641E+1	1.472E+0
1.696E+9	5.428E+1	1.623E+1	1.531E+0
1.783E+9	5.409E+1	1.601E+1	1.588E+0
1.875E+9	5.398E+1	1.578E+1	1.647E+0
1.972E+9	5.387E+1	1.557E+1	1.709E+0
2.074E+9	5.363E+1	1.548E+1	1.786E+0
2.181E+9	5.347E+1	1.536E+1	1.864E+0
2.294E+9	5.328E+1	1.543E+1	1.970E+0
2.412E+9	5.312E+1	1.535E+1	2.060E+0
2.537E+9	5.290E+1	1.536E+1	2.168E+0
2.668E+9	5.272E+1	1.542E+1	2.288E+0
2.806E+9	5.249E+1	1.552E+1	2.423E+0
2.951E+9	5.242E+1	1.554E+1	2.551E+0
3.103E+9	5.216E+1	1.577E+1	2.722E+0
3.263E+9	5.188E+1	1.596E+1	2.898E+0
3.432E+9	5.151E+1	1.613E+1	3.081E+0
3.609E+9	5.123E+1	1.632E+1	3.277E+0
3.796E+9	5.091E+1	1.661E+1	3.508E+0
3.992E+9	5.048E+1	1.684E+1	3.741E+0
4.198E+9	5.018E+1	1.717E+1	4.010E+0
4.415E+9	4.970E+1	1.742E+1	4.279E+0
4.643E+9	4.937E+1	1.782E+1	4.601E+0
4.883E+9	4.894E+1	1.823E+1	4.953E+0
5.135E+9	4.839E+1	1.855E+1	5.299E+0
5.400E+9	4.778E+1	1.890E+1	5.678E+0
5.679E+9	4.725E+1	1.930E+1	6.097E+0
5.972E+9	4.659E+1	1.949E+1	6.476E+0
6.281E+9	4.600E+1	1.984E+1	6.932E+0
6.605E+9	4.534E+1	2.020E+1	7.422E+0

Tongue

Frequency (Hz)	Human @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
6.946E+9	4.466E+1	2.052E+1	7.929E+0
7.305E+9	4.409E+1	2.096E+1	8.519E+0
7.682E+9	4.321E+1	2.137E+1	9.135E+0
8.079E+9	4.251E+1	2.176E+1	9.780E+0
8.496E+9	4.167E+1	2.211E+1	1.045E+1
8.935E+9	4.080E+1	2.245E+1	1.116E+1
9.397E+9	3.977E+1	2.276E+1	1.190E+1
9.882E+9	3.877E+1	2.308E+1	1.269E+1
1.039E+10	3.782E+1	2.323E+1	1.343E+1
1.093E+10	3.681E+1	2.332E+1	1.418E+1
1.149E+10	3.582E+1	2.363E+1	1.511E+1
1.209E+10	3.495E+1	2.357E+1	1.585E+1
1.271E+10	3.383E+1	2.368E+1	1.674E+1
1.337E+10	3.277E+1	2.370E+1	1.762E+1
1.406E+10	3.178E+1	2.371E+1	1.854E+1
1.478E+10	3.079E+1	2.360E+1	1.941E+1
1.555E+10	2.979E+1	2.351E+1	2.034E+1
1.635E+10	2.891E+1	2.350E+1	2.138E+1
1.720E+10	2.796E+1	2.349E+1	2.248E+1
1.808E+10	2.689E+1	2.340E+1	2.354E+1
1.902E+10	2.588E+1	2.319E+1	2.454E+1
2.000E+10	2.495E+1	2.306E+1	2.566E+1

Trachea

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
3.000E+5	1.727E+3	1.970E+4	3.290E-1
3.289E+5	1.580E+3	1.807E+4	3.303E-1
3.607E+5	1.483E+3	1.653E+4	3.320E-1
3.955E+5	1.420E+3	1.520E+4	3.343E-1
4.336E+5	1.331E+3	1.390E+4	3.357E-1
4.755E+5	1.223E+3	1.280E+4	3.383E-1
5.213E+5	1.158E+3	1.173E+4	3.393E-1
5.716E+5	1.071E+3	1.073E+4	3.420E-1
6.268E+5	1.011E+3	9.837E+3	3.430E-1
6.873E+5	9.187E+2	9.023E+3	3.450E-1
7.536E+5	8.937E+2	8.267E+3	3.463E-1
8.263E+5	8.350E+2	7.617E+3	3.503E-1
9.060E+5	7.527E+2	7.000E+3	3.530E-1
9.934E+5	7.173E+2	6.423E+3	3.550E-1
1.089E+6	6.753E+2	5.880E+3	3.563E-1
1.194E+6	6.070E+2	5.403E+3	3.593E-1
1.310E+6	5.720E+2	4.957E+3	3.610E-1
1.436E+6	5.300E+2	4.553E+3	3.633E-1
1.574E+6	4.967E+2	4.173E+3	3.657E-1
1.726E+6	4.547E+2	3.843E+3	3.690E-1
1.893E+6	4.230E+2	3.527E+3	3.713E-1
2.075E+6	3.857E+2	3.243E+3	3.743E-1
2.276E+6	3.610E+2	2.973E+3	3.763E-1
2.495E+6	3.387E+2	2.723E+3	3.783E-1
2.736E+6	3.100E+2	2.497E+3	3.807E-1
3.000E+6	2.950E+2	2.290E+3	3.823E-1
3.289E+6	2.717E+2	2.110E+3	3.857E-1
3.607E+6	2.517E+2	1.937E+3	3.883E-1
3.955E+6	2.330E+2	1.773E+3	3.903E-1
4.336E+6	2.153E+2	1.627E+3	3.923E-1
4.755E+6	2.007E+2	1.497E+3	3.953E-1
5.213E+6	1.873E+2	1.367E+3	3.967E-1
5.716E+6	1.750E+2	1.253E+3	3.990E-1
6.268E+6	1.660E+2	1.153E+3	4.007E-1
6.873E+6	1.580E+2	1.050E+3	4.023E-1
7.536E+6	1.503E+2	9.657E+2	4.043E-1
8.263E+6	1.437E+2	8.843E+2	4.067E-1
9.060E+6	1.353E+2	8.147E+2	4.103E-1
9.934E+6	1.283E+2	7.480E+2	4.137E-1
1.089E+7	1.203E+2	6.863E+2	4.160E-1
1.194E+7	1.173E+2	6.277E+2	4.167E-1
1.310E+7	1.123E+2	5.760E+2	4.197E-1
1.436E+7	1.063E+2	5.273E+2	4.213E-1
1.574E+7	1.007E+2	4.827E+2	4.230E-1
1.726E+7	9.723E+1	4.433E+2	4.260E-1
1.893E+7	9.477E+1	4.067E+2	4.283E-1
2.075E+7	9.133E+1	3.740E+2	4.320E-1
2.276E+7	8.823E+1	3.430E+2	4.340E-1
2.495E+7	8.523E+1	3.140E+2	4.363E-1
2.736E+7	8.393E+1	2.887E+2	4.390E-1
3.000E+7	8.083E+1	2.660E+2	4.440E-1
3.289E+7	7.840E+1	2.443E+2	4.470E-1
3.607E+7	7.700E+1	2.250E+2	4.517E-1
3.955E+7	7.450E+1	2.070E+2	4.547E-1
4.336E+7	7.300E+1	1.900E+2	4.583E-1
4.755E+7	7.143E+1	1.757E+2	4.650E-1
5.213E+7	6.963E+1	1.623E+2	4.707E-1
5.716E+7	6.767E+1	1.497E+2	4.760E-1
6.268E+7	6.603E+1	1.390E+2	4.833E-1
6.873E+7	6.417E+1	1.287E+2	4.903E-1

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
7.536E+7	6.260E+1	1.187E+2	4.973E-1
8.263E+7	6.100E+1	1.097E+2	5.033E-1
9.060E+7	5.933E+1	1.013E+2	5.117E-1
9.934E+7	5.800E+1	9.403E+1	5.193E-1
1.089E+8	5.667E+1	8.673E+1	5.257E-1
1.194E+8	5.537E+1	8.033E+1	5.337E-1
1.310E+8	5.420E+1	7.463E+1	5.437E-1
1.436E+8	5.277E+1	6.887E+1	5.503E-1
1.574E+8	5.160E+1	6.387E+1	5.593E-1
1.726E+8	5.047E+1	5.913E+1	5.680E-1
1.893E+8	4.937E+1	5.477E+1	5.770E-1
2.075E+8	4.850E+1	5.087E+1	5.870E-1
2.276E+8	4.767E+1	4.707E+1	5.960E-1
2.495E+8	4.690E+1	4.350E+1	6.037E-1
2.736E+8	4.607E+1	4.030E+1	6.133E-1
3.000E+8	4.530E+1	3.737E+1	6.237E-1
3.289E+8	4.470E+1	3.480E+1	6.367E-1
3.607E+8	4.413E+1	3.220E+1	6.463E-1
3.955E+8	4.357E+1	2.983E+1	6.570E-1
4.336E+8	4.293E+1	2.790E+1	6.730E-1
4.755E+8	4.270E+1	2.590E+1	6.853E-1
5.213E+8	4.213E+1	2.427E+1	7.033E-1
5.716E+8	4.163E+1	2.263E+1	7.193E-1
6.268E+8	4.120E+1	2.103E+1	7.327E-1
6.873E+8	4.083E+1	1.963E+1	7.513E-1
7.536E+8	4.063E+1	1.833E+1	7.680E-1
8.263E+8	4.027E+1	1.747E+1	8.030E-1
9.060E+8	4.033E+1	1.627E+1	8.197E-1
9.934E+8	3.967E+1	1.580E+1	8.740E-1
1.089E+9	3.963E+1	1.493E+1	9.043E-1
1.194E+9	3.910E+1	1.463E+1	9.707E-1
1.310E+9	3.830E+1	1.417E+1	1.037E+0
1.436E+9	3.760E+1	1.320E+1	1.050E+0
1.574E+9	3.727E+1	1.263E+1	1.107E+0
1.726E+9	3.723E+1	1.173E+1	1.127E+0
1.893E+9	3.687E+1	1.127E+1	1.187E+0
2.075E+9	3.683E+1	1.113E+1	1.287E+0
2.276E+9	3.650E+1	1.110E+1	1.400E+0
2.495E+9	3.580E+1	1.100E+1	1.527E+0
2.736E+9	3.527E+1	1.078E+1	1.643E+0
3.000E+9	3.460E+1	1.056E+1	1.767E+0
3.103E+9	5.257E+1	1.483E+1	2.560E+0
3.263E+9	5.230E+1	1.487E+1	2.697E+0
3.432E+9	5.217E+1	1.490E+1	2.847E+0
3.609E+9	5.180E+1	1.493E+1	3.007E+0
3.796E+9	5.170E+1	1.500E+1	3.173E+0
3.992E+9	5.147E+1	1.520E+1	3.377E+0
4.198E+9	5.123E+1	1.537E+1	3.597E+0
4.415E+9	5.087E+1	1.573E+1	3.860E+0
4.643E+9	5.053E+1	1.593E+1	4.117E+0
4.883E+9	5.017E+1	1.637E+1	4.443E+0
5.135E+9	4.973E+1	1.667E+1	4.763E+0
5.400E+9	4.927E+1	1.690E+1	5.077E+0
5.679E+9	4.867E+1	1.713E+1	5.410E+0
5.972E+9	4.810E+1	1.750E+1	5.810E+0
6.281E+9	4.763E+1	1.770E+1	6.180E+0
6.605E+9	4.700E+1	1.800E+1	6.623E+0
6.946E+9	4.657E+1	1.823E+1	7.047E+0
7.305E+9	4.597E+1	1.843E+1	7.477E+0
7.682E+9	4.537E+1	1.880E+1	8.037E+0

Trachea

Frequency (Hz)	Ovine @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
8.079E+9	4.467E+1	1.893E+1	8.517E+0
8.496E+9	4.403E+1	1.923E+1	9.107E+0
8.935E+9	4.333E+1	1.967E+1	9.770E+0
9.397E+9	4.277E+1	2.007E+1	1.050E+1
9.882E+9	4.180E+1	2.020E+1	1.110E+1
1.039E+10	4.110E+1	2.063E+1	1.193E+1
1.093E+10	4.010E+1	2.070E+1	1.257E+1
1.149E+10	3.927E+1	2.090E+1	1.340E+1
1.209E+10	3.843E+1	2.093E+1	1.410E+1
1.271E+10	3.767E+1	2.107E+1	1.487E+1
1.337E+10	3.670E+1	2.080E+1	1.547E+1
1.406E+10	3.577E+1	2.120E+1	1.660E+1
1.478E+10	3.490E+1	2.143E+1	1.763E+1
1.555E+10	3.417E+1	2.113E+1	1.827E+1
1.635E+10	3.350E+1	2.150E+1	1.953E+1
1.720E+10	3.237E+1	2.147E+1	2.057E+1
1.808E+10	3.163E+1	2.140E+1	2.153E+1
1.902E+10	3.060E+1	2.140E+1	2.270E+1
2.000E+10	2.960E+1	2.107E+1	2.340E+1

Uterus

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	4.630E+7	3.653E+8	2.030E-1
1.122E+1	4.287E+7	3.230E+8	2.017E-1
1.259E+1	4.053E+7	2.863E+8	2.007E-1
1.350E+1	3.887E+7	2.547E+8	2.003E-1
1.585E+1	3.797E+7	2.273E+8	2.003E-1
1.778E+1	3.723E+7	2.033E+8	2.013E-1
1.995E+1	3.670E+7	1.823E+8	2.023E-1
2.239E+1	3.630E+7	1.640E+8	2.043E-1
2.512E+1	3.583E+7	1.473E+8	2.063E-1
2.818E+1	3.537E+7	1.337E+8	2.093E-1
3.162E+1	3.483E+7	1.213E+8	2.130E-1
3.548E+1	3.410E+7	1.103E+8	2.173E-1
3.981E+1	3.320E+7	1.005E+8	2.223E-1
4.467E+1	3.210E+7	9.177E+7	2.280E-1
5.012E+1	3.083E+7	8.407E+7	2.347E-1
5.623E+1	2.940E+7	7.723E+7	2.417E-1
6.310E+1	2.777E+7	7.110E+7	2.497E-1
7.079E+1	2.603E+7	6.550E+7	2.580E-1
7.943E+1	2.417E+7	6.043E+7	2.670E-1
8.913E+1	2.223E+7	5.583E+7	2.767E-1
1.000E+2	2.027E+7	5.150E+7	2.867E-1
1.122E+2	1.830E+7	4.753E+7	2.967E-1
1.259E+2	1.640E+7	4.387E+7	3.070E-1
1.413E+2	1.457E+7	4.040E+7	3.173E-1
1.585E+2	1.287E+7	3.717E+7	3.277E-1
1.778E+2	1.123E+7	3.410E+7	3.373E-1
1.995E+2	9.760E+6	3.127E+7	3.467E-1
2.239E+2	8.423E+6	2.857E+7	3.557E-1
2.512E+2	7.223E+6	2.603E+7	3.640E-1
2.818E+2	6.167E+6	2.370E+7	3.717E-1
3.162E+2	5.237E+6	2.153E+7	3.787E-1
3.548E+2	4.427E+6	1.953E+7	3.850E-1
3.981E+2	3.730E+6	1.767E+7	3.913E-1
4.467E+2	3.133E+6	1.597E+7	3.967E-1
5.012E+2	2.620E+6	1.440E+7	4.013E-1
5.623E+2	2.187E+6	1.297E+7	4.057E-1
6.310E+2	1.823E+6	1.167E+7	4.097E-1
7.079E+2	1.513E+6	1.050E+7	4.130E-1
7.943E+2	1.257E+6	9.420E+6	4.160E-1
8.913E+2	1.041E+6	8.453E+6	4.193E-1
1.000E+3	8.633E+5	7.580E+6	4.213E-1
1.122E+3	7.147E+5	6.793E+6	4.237E-1
1.259E+3	5.910E+5	6.080E+6	4.257E-1
1.413E+3	4.880E+5	5.443E+6	4.277E-1
1.585E+3	4.040E+5	4.867E+6	4.293E-1
1.778E+3	3.340E+5	4.353E+6	4.307E-1
1.995E+3	2.763E+5	3.893E+6	4.320E-1
2.239E+3	2.290E+5	3.480E+6	4.333E-1
2.512E+3	1.900E+5	3.107E+6	4.343E-1
2.818E+3	1.580E+5	2.773E+6	4.353E-1
3.162E+3	1.313E+5	2.480E+6	4.360E-1
3.548E+3	1.097E+5	2.210E+6	4.367E-1
3.981E+3	9.180E+4	1.977E+6	4.377E-1
4.467E+3	7.710E+4	1.763E+6	4.383E-1
5.012E+3	6.507E+4	1.573E+6	4.387E-1
5.623E+3	5.510E+4	1.403E+6	4.397E-1
6.310E+3	4.697E+4	1.250E+6	4.397E-1
7.079E+3	4.020E+4	1.117E+6	4.407E-1
7.943E+3	3.453E+4	9.980E+5	4.407E-1
8.913E+3	2.990E+4	8.903E+5	4.417E-1

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	2.597E+4	7.947E+5	4.423E-1
1.122E+4	2.267E+4	7.090E+5	4.427E-1
1.259E+4	1.990E+4	6.330E+5	4.433E-1
1.413E+4	1.757E+4	5.647E+5	4.437E-1
1.585E+4	1.553E+4	5.040E+5	4.447E-1
1.778E+4	1.380E+4	4.497E+5	4.447E-1
1.995E+4	1.233E+4	4.013E+5	4.457E-1
2.239E+4	1.103E+4	3.583E+5	4.463E-1
2.512E+4	9.910E+3	3.197E+5	4.470E-1
2.818E+4	8.913E+3	2.857E+5	4.477E-1
3.162E+4	8.043E+3	2.550E+5	4.487E-1
3.548E+4	7.263E+3	2.277E+5	4.493E-1
3.981E+4	6.580E+3	2.033E+5	4.497E-1
4.467E+4	5.977E+3	1.813E+5	4.507E-1
5.012E+4	5.430E+3	1.620E+5	4.517E-1
5.623E+4	4.950E+3	1.443E+5	4.523E-1
6.310E+4	4.513E+3	1.290E+5	4.533E-1
7.079E+4	4.127E+3	1.153E+5	4.537E-1
7.943E+4	3.780E+3	1.030E+5	4.547E-1
8.913E+4	3.477E+3	9.190E+4	4.557E-1
1.000E+5	3.200E+3	8.203E+4	4.563E-1
1.122E+5	2.953E+3	7.327E+4	4.573E-1
1.259E+5	2.733E+3	6.540E+4	4.583E-1
1.413E+5	2.540E+3	5.843E+4	4.593E-1
1.585E+5	2.367E+3	5.217E+4	4.600E-1
1.778E+5	2.210E+3	4.657E+4	4.610E-1
1.995E+5	2.070E+3	4.163E+4	4.620E-1
2.239E+5	1.947E+3	3.717E+4	4.630E-1
2.512E+5	1.837E+3	3.323E+4	4.643E-1
2.818E+5	1.733E+3	2.967E+4	4.653E-1
3.162E+5	1.643E+3	2.650E+4	4.663E-1
3.548E+5	1.553E+3	2.370E+4	4.677E-1
3.981E+5	1.477E+3	2.117E+4	4.693E-1
4.336E+5	1.717E+3	1.920E+4	4.630E-1
4.755E+5	1.653E+3	1.763E+4	4.657E-1
5.213E+5	1.597E+3	1.617E+4	4.693E-1
5.716E+5	1.573E+3	1.473E+4	4.683E-1
6.268E+5	1.483E+3	1.350E+4	4.717E-1
6.873E+5	1.420E+3	1.237E+4	4.733E-1
7.536E+5	1.413E+3	1.133E+4	4.760E-1
8.263E+5	1.353E+3	1.040E+4	4.783E-1
9.060E+5	1.310E+3	9.557E+3	4.817E-1
9.934E+5	1.253E+3	8.780E+3	4.850E-1
1.089E+6	1.220E+3	8.063E+3	4.887E-1
1.194E+6	1.177E+3	7.400E+3	4.917E-1
1.310E+6	1.120E+3	6.793E+3	4.950E-1
1.436E+6	1.083E+3	6.240E+3	4.983E-1
1.574E+6	1.047E+3	5.750E+3	5.037E-1
1.726E+6	9.993E+2	5.290E+3	5.080E-1
1.893E+6	9.670E+2	4.880E+3	5.140E-1
2.075E+6	9.207E+2	4.493E+3	5.187E-1
2.276E+6	8.923E+2	4.150E+3	5.253E-1
2.495E+6	8.423E+2	3.833E+3	5.313E-1
2.736E+6	7.950E+2	3.537E+3	5.383E-1
3.000E+6	7.620E+2	3.270E+3	5.457E-1
3.289E+6	7.243E+2	3.027E+3	5.533E-1
3.607E+6	6.817E+2	2.790E+3	5.600E-1
3.955E+6	6.433E+2	2.573E+3	5.670E-1
4.336E+6	6.153E+2	2.390E+3	5.763E-1
4.755E+6	5.757E+2	2.213E+3	5.857E-1

Uterus

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
5.213E+6	5.430E+2	2.047E+3	5.933E-1
5.716E+6	5.067E+2	1.900E+3	6.040E-1
6.268E+6	4.847E+2	1.760E+3	6.120E-1
6.873E+6	4.503E+2	1.630E+3	6.240E-1
7.536E+6	4.227E+2	1.510E+3	6.327E-1
8.263E+6	3.963E+2	1.390E+3	6.407E-1
9.060E+6	3.700E+2	1.297E+3	6.547E-1
9.934E+6	3.500E+2	1.203E+3	6.647E-1
1.089E+7	3.263E+2	1.113E+3	6.743E-1
1.194E+7	3.053E+2	1.030E+3	6.870E-1
1.310E+7	2.863E+2	9.563E+2	6.963E-1
1.436E+7	2.697E+2	8.837E+2	7.060E-1
1.574E+7	2.497E+2	8.177E+2	7.160E-1
1.726E+7	2.353E+2	7.553E+2	7.257E-1
1.893E+7	2.207E+2	7.010E+2	7.383E-1
2.075E+7	2.083E+2	6.480E+2	7.480E-1
2.276E+7	1.940E+2	5.987E+2	7.580E-1
2.495E+7	1.840E+2	5.537E+2	7.690E-1
2.736E+7	1.723E+2	5.130E+2	7.813E-1
3.000E+7	1.630E+2	4.733E+2	7.897E-1
3.289E+7	1.547E+2	4.373E+2	8.007E-1
3.607E+7	1.473E+2	4.037E+2	8.103E-1
3.955E+7	1.403E+2	3.750E+2	8.247E-1
4.336E+7	1.333E+2	3.463E+2	8.360E-1
4.755E+7	1.270E+2	3.200E+2	8.463E-1
5.213E+7	1.197E+2	2.960E+2	8.580E-1
5.716E+7	1.143E+2	2.737E+2	8.697E-1
6.268E+7	1.100E+2	2.527E+2	8.810E-1
6.873E+7	1.050E+2	2.333E+2	8.927E-1
7.536E+7	1.007E+2	2.157E+2	9.037E-1
8.263E+7	9.627E+1	1.990E+2	9.147E-1
9.060E+7	9.277E+1	1.837E+2	9.260E-1
9.934E+7	8.957E+1	1.697E+2	9.380E-1
1.089E+8	8.633E+1	1.563E+2	9.493E-1
1.194E+8	8.383E+1	1.443E+2	9.590E-1
1.310E+8	8.153E+1	1.330E+2	9.700E-1
1.436E+8	7.913E+1	1.230E+2	9.803E-1
1.574E+8	7.710E+1	1.130E+2	9.923E-1
1.726E+8	7.537E+1	1.043E+2	1.002E+0
1.893E+8	7.377E+1	9.590E+1	1.007E+0
2.075E+8	7.217E+1	8.840E+1	1.017E+0
2.276E+8	7.087E+1	8.157E+1	1.033E+0
2.495E+8	6.970E+1	7.517E+1	1.047E+0
2.736E+8	6.860E+1	6.923E+1	1.057E+0
3.000E+8	6.773E+1	6.393E+1	1.067E+0
3.289E+8	6.677E+1	5.887E+1	1.077E+0
3.607E+8	6.603E+1	5.433E+1	1.090E+0
3.955E+8	6.537E+1	5.023E+1	1.107E+0
4.336E+8	6.473E+1	4.637E+1	1.117E+0
4.755E+8	6.420E+1	4.287E+1	1.137E+0
5.213E+8	6.373E+1	3.983E+1	1.157E+0
5.716E+8	6.313E+1	3.690E+1	1.173E+0
6.268E+8	6.283E+1	3.437E+1	1.200E+0
6.873E+8	6.227E+1	3.190E+1	1.220E+0
7.536E+8	6.203E+1	2.983E+1	1.253E+0
8.263E+8	6.160E+1	2.790E+1	1.283E+0
9.060E+8	6.147E+1	2.607E+1	1.313E+0
9.934E+8	6.113E+1	2.457E+1	1.360E+0
1.089E+9	6.123E+1	2.337E+1	1.417E+0
1.194E+9	6.120E+1	2.257E+1	1.500E+0

Frequency (Hz)	Human @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.310E+9	6.077E+1	2.203E+1	1.603E+0
1.436E+9	5.970E+1	2.140E+1	1.707E+0
1.574E+9	5.933E+1	2.017E+1	1.767E+0
1.726E+9	5.917E+1	1.957E+1	1.883E+0
1.893E+9	5.907E+1	1.947E+1	2.047E+0
2.075E+9	5.820E+1	1.943E+1	2.243E+0
2.806E+9	5.830E+1	1.900E+1	2.970E+0
2.951E+9	5.807E+1	1.890E+1	3.107E+0
3.103E+9	5.783E+1	1.893E+1	3.270E+0
3.263E+9	5.750E+1	1.880E+1	3.417E+0
3.432E+9	5.733E+1	1.887E+1	3.603E+0
3.609E+9	5.707E+1	1.920E+1	3.853E+0
3.796E+9	5.677E+1	1.910E+1	4.033E+0
3.992E+9	5.633E+1	1.940E+1	4.303E+0
4.198E+9	5.610E+1	1.943E+1	4.547E+0
4.415E+9	5.553E+1	1.980E+1	4.860E+0
4.643E+9	5.517E+1	2.007E+1	5.173E+0
4.883E+9	5.467E+1	2.030E+1	5.510E+0
5.135E+9	5.420E+1	2.060E+1	5.883E+0
5.400E+9	5.350E+1	2.090E+1	6.277E+0
5.679E+9	5.300E+1	2.127E+1	6.710E+0
5.972E+9	5.237E+1	2.137E+1	7.107E+0
6.281E+9	5.170E+1	2.147E+1	7.503E+0
6.605E+9	5.107E+1	2.190E+1	8.047E+0
6.946E+9	5.047E+1	2.203E+1	8.513E+0
7.305E+9	4.963E+1	2.240E+1	9.110E+0
7.682E+9	4.917E+1	2.253E+1	9.630E+0
8.079E+9	4.817E+1	2.293E+1	1.033E+1
8.496E+9	4.737E+1	2.307E+1	1.093E+1
8.935E+9	4.663E+1	2.350E+1	1.170E+1
9.397E+9	4.563E+1	2.363E+1	1.237E+1
9.882E+9	4.490E+1	2.380E+1	1.307E+1
1.039E+10	4.407E+1	2.383E+1	1.380E+1
1.093E+10	4.323E+1	2.413E+1	1.470E+1
1.149E+10	4.223E+1	2.410E+1	1.537E+1
1.209E+10	4.167E+1	2.433E+1	1.640E+1
1.271E+10	4.087E+1	2.420E+1	1.710E+1
1.337E+10	4.013E+1	2.500E+1	1.860E+1
1.406E+10	3.907E+1	2.487E+1	1.940E+1
1.478E+10	3.830E+1	2.480E+1	2.037E+1
1.555E+10	3.737E+1	2.523E+1	2.180E+1
1.635E+10	3.653E+1	2.543E+1	2.313E+1
1.720E+10	3.553E+1	2.540E+1	2.430E+1
1.808E+10	3.437E+1	2.580E+1	2.597E+1
1.902E+10	3.353E+1	2.567E+1	2.717E+1
2.000E+10	3.247E+1	2.617E+1	2.913E+1

Vitreous Humour

Frequency (Hz)	Ovine @ 37°C Current study measurements		
	ε′	ε″	σ (S/m)
1.300E+8	6.970E+1	2.096E+2	1.520E+0
1.440E+8	6.900E+1	1.901E+2	1.520E+0
1.590E+8	6.850E+1	1.722E+2	1.520E+0
1.760E+8	6.840E+1	1.560E+2	1.530E+0
1.940E+8	6.860E+1	1.413E+2	1.530E+0
2.150E+8	6.860E+1	1.280E+2	1.530E+0
2.380E+8	6.870E+1	1.159E+2	1.530E+0
2.630E+8	6.860E+1	1.051E+2	1.540E+0
2.910E+8	6.850E+1	9.530E+1	1.540E+0
3.220E+8	6.830E+1	8.620E+1	1.540E+0
3.560E+8	6.830E+1	7.810E+1	1.550E+0
3.940E+8	6.840E+1	7.100E+1	1.550E+0
4.350E+8	6.830E+1	6.450E+1	1.560E+0
4.810E+8	6.820E+1	5.870E+1	1.570E+0
5.330E+8	6.820E+1	5.340E+1	1.580E+0
5.890E+8	6.820E+1	4.870E+1	1.600E+0
6.510E+8	6.820E+1	4.450E+1	1.610E+0
7.200E+8	6.820E+1	4.070E+1	1.630E+0
7.970E+8	6.800E+1	3.730E+1	1.650E+0
8.810E+8	6.790E+1	3.430E+1	1.680E+0
9.740E+8	6.790E+1	3.160E+1	1.710E+0
1.080E+9	6.780E+1	2.920E+1	1.750E+0
1.190E+9	6.770E+1	2.710E+1	1.800E+0
1.320E+9	6.760E+1	2.520E+1	1.850E+0
1.460E+9	6.750E+1	2.360E+1	1.910E+0
1.610E+9	6.740E+1	2.210E+1	1.990E+0
1.780E+9	6.720E+1	2.100E+1	2.080E+0
1.970E+9	6.710E+1	2.000E+1	2.190E+0
2.180E+9	6.690E+1	1.920E+1	2.330E+0
2.410E+9	6.680E+1	1.860E+1	2.490E+0
2.670E+9	6.670E+1	1.810E+1	2.690E+0
2.950E+9	6.650E+1	1.780E+1	2.930E+0
3.260E+9	6.640E+1	1.770E+1	3.210E+0
3.610E+9	6.630E+1	1.780E+1	3.580E+0
3.990E+9	6.610E+1	1.820E+1	4.040E+0
4.410E+9	6.580E+1	1.880E+1	4.610E+0
4.880E+9	6.530E+1	1.950E+1	5.300E+0
5.400E+9	6.480E+1	2.050E+1	6.150E+0
5.970E+9	6.400E+1	2.160E+1	7.190E+0
6.600E+9	6.300E+1	2.290E+1	8.430E+0
7.300E+9	6.180E+1	2.440E+1	9.900E+0
8.080E+9	6.030E+1	2.580E+1	1.160E+1
8.940E+9	5.860E+1	2.720E+1	1.353E+1
1.210E+10	5.170E+1	3.120E+1	2.101E+1
1.340E+10	4.890E+1	3.250E+1	2.414E+1
1.480E+10	4.580E+1	3.330E+1	2.736E+1
1.640E+10	4.200E+1	3.400E+1	3.095E+1
1.810E+10	3.820E+1	3.390E+1	3.412E+1
2.000E+10	3.490E+1	3.300E+1	3.667E+1

White Matter

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+1	3.322E+7	4.448E+7	2.475E-2
1.122E+1	3.058E+7	4.322E+7	2.698E-2
1.259E+1	2.814E+7	4.171E+7	2.921E-2
1.350E+1	2.531E+7	3.987E+7	3.133E-2
1.585E+1	2.258E+7	3.775E+7	3.329E-2
1.778E+1	1.995E+7	3.566E+7	3.528E-2
1.995E+1	1.748E+7	3.344E+7	3.712E-2
2.239E+1	1.527E+7	3.132E+7	3.900E-2
2.512E+1	1.325E+7	2.916E+7	4.075E-2
2.818E+1	1.142E+7	2.705E+7	4.241E-2
3.162E+1	9.791E+6	2.499E+7	4.397E-2
3.548E+1	8.342E+6	2.302E+7	4.545E-2
3.981E+1	7.105E+6	2.113E+7	4.680E-2
4.467E+1	6.009E+6	1.932E+7	4.801E-2
5.012E+1	5.077E+6	1.762E+7	4.913E-2
5.623E+1	4.279E+6	1.605E+7	5.021E-2
6.310E+1	3.606E+6	1.457E+7	5.115E-2
7.079E+1	3.029E+6	1.319E+7	5.194E-2
7.943E+1	2.544E+6	1.193E+7	5.270E-2
8.913E+1	2.137E+6	1.077E+7	5.338E-2
1.000E+2	1.787E+6	9.701E+6	5.397E-2
1.122E+2	1.495E+6	8.756E+6	5.465E-2
1.259E+2	1.252E+6	7.884E+6	5.521E-2
1.413E+2	1.050E+6	7.106E+6	5.584E-2
1.585E+2	8.817E+5	6.382E+6	5.628E-2
1.778E+2	7.441E+5	5.733E+6	5.671E-2
1.995E+2	6.224E+5	5.137E+6	5.703E-2
2.239E+2	5.278E+5	4.617E+6	5.750E-2
2.512E+2	4.461E+5	4.132E+6	5.774E-2
2.818E+2	3.783E+5	3.702E+6	5.804E-2
3.162E+2	3.223E+5	3.315E+6	5.833E-2
3.548E+2	2.746E+5	2.973E+6	5.869E-2
3.981E+2	2.371E+5	2.666E+6	5.905E-2
4.467E+2	2.031E+5	2.387E+6	5.930E-2
5.012E+2	1.748E+5	2.135E+6	5.952E-2
5.623E+2	1.501E+5	1.908E+6	5.970E-2
6.310E+2	1.301E+5	1.707E+6	5.993E-2
7.079E+2	1.130E+5	1.525E+6	6.007E-2
7.943E+2	9.822E+4	1.363E+6	6.023E-2
8.913E+2	8.590E+4	1.219E+6	6.043E-2
1.000E+3	7.504E+4	1.089E+6	6.058E-2
1.122E+3	6.608E+4	9.739E+5	6.079E-2
1.259E+3	5.794E+4	8.701E+5	6.094E-2
1.413E+3	5.126E+4	7.781E+5	6.115E-2
1.585E+3	4.556E+4	6.959E+5	6.136E-2
1.778E+3	3.976E+4	6.226E+5	6.159E-2
1.995E+3	3.572E+4	5.587E+5	6.201E-2
2.239E+3	3.230E+4	5.008E+5	6.238E-2
2.512E+3	2.879E+4	4.479E+5	6.260E-2
2.818E+3	2.585E+4	4.010E+5	6.288E-2
3.162E+3	2.317E+4	3.590E+5	6.316E-2
3.548E+3	2.102E+4	3.216E+5	6.348E-2
3.981E+3	1.902E+4	2.878E+5	6.373E-2
4.467E+3	1.719E+4	2.575E+5	6.400E-2
5.012E+3	1.555E+4	2.304E+5	6.423E-2
5.623E+3	1.417E+4	2.064E+5	6.457E-2
6.310E+3	1.292E+4	1.851E+5	6.496E-2
7.079E+3	1.185E+4	1.658E+5	6.531E-2
7.943E+3	1.082E+4	1.486E+5	6.568E-2
8.913E+3	9.971E+3	1.331E+5	6.599E-2

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+4	9.105E+3	1.192E+5	6.630E-2
1.122E+4	8.455E+3	1.070E+5	6.680E-2
1.259E+4	7.833E+3	9.593E+4	6.719E-2
1.413E+4	7.207E+3	8.576E+4	6.739E-2
1.585E+4	6.645E+3	7.682E+4	6.773E-2
1.778E+4	6.165E+3	6.887E+4	6.813E-2
1.995E+4	5.726E+3	6.172E+4	6.851E-2
2.239E+4	5.324E+3	5.536E+4	6.895E-2
2.512E+4	4.961E+3	4.960E+4	6.931E-2
2.818E+4	4.601E+3	4.448E+4	6.975E-2
3.162E+4	4.295E+3	3.993E+4	7.025E-2
3.548E+4	3.997E+3	3.584E+4	7.074E-2
3.981E+4	3.742E+3	3.216E+4	7.124E-2
4.467E+4	3.487E+3	2.888E+4	7.177E-2
5.012E+4	3.262E+3	2.593E+4	7.229E-2
5.623E+4	3.054E+3	2.330E+4	7.290E-2
6.310E+4	2.851E+3	2.093E+4	7.346E-2
7.079E+4	2.658E+3	1.880E+4	7.404E-2
7.943E+4	2.497E+3	1.692E+4	7.476E-2
8.913E+4	2.334E+3	1.521E+4	7.542E-2
1.000E+5	2.190E+3	1.371E+4	7.625E-2
1.122E+5	2.052E+3	1.234E+4	7.701E-2
1.259E+5	1.925E+3	1.111E+4	7.785E-2
1.413E+5	1.807E+3	1.001E+4	7.868E-2
1.585E+5	1.686E+3	9.032E+3	7.964E-2
1.778E+5	1.595E+3	8.161E+3	8.073E-2
1.995E+5	1.498E+3	7.360E+3	8.170E-2
2.239E+5	1.404E+3	6.642E+3	8.272E-2
2.512E+5	1.317E+3	5.998E+3	8.382E-2
2.818E+5	1.236E+3	5.425E+3	8.506E-2
3.162E+5	1.158E+3	4.900E+3	8.620E-2
3.548E+5	1.086E+3	4.440E+3	8.765E-2
3.981E+5	1.019E+3	4.021E+3	8.905E-2
4.467E+5	9.561E+2	3.647E+3	9.062E-2
5.012E+5	8.969E+2	3.308E+3	9.223E-2
5.623E+5	8.401E+2	2.999E+3	9.383E-2
6.310E+5	7.872E+2	2.723E+3	9.557E-2
7.079E+5	7.379E+2	2.474E+3	9.742E-2
7.943E+5	6.907E+2	2.248E+3	9.932E-2
8.913E+5	6.467E+2	2.042E+3	1.013E-1
1.000E+6	6.051E+2	1.856E+3	1.033E-1
1.122E+6	5.662E+2	1.689E+3	1.054E-1
1.259E+6	5.305E+2	1.542E+3	1.080E-1
1.413E+6	4.970E+2	1.405E+3	1.104E-1
1.585E+6	4.630E+2	1.274E+3	1.123E-1
1.778E+6	4.335E+2	1.160E+3	1.148E-1
1.995E+6	4.071E+2	1.052E+3	1.168E-1
2.239E+6	3.957E+2	9.615E+2	1.197E-1
2.512E+6	3.648E+2	8.855E+2	1.237E-1
2.818E+6	3.388E+2	8.094E+2	1.269E-1
3.162E+6	3.169E+2	7.403E+2	1.302E-1
3.548E+6	2.960E+2	6.767E+2	1.336E-1
3.981E+6	2.776E+2	6.180E+2	1.369E-1
4.467E+6	2.605E+2	5.649E+2	1.404E-1
5.012E+6	2.439E+2	5.164E+2	1.440E-1
5.623E+6	2.287E+2	4.719E+2	1.476E-1
6.310E+6	2.150E+2	4.312E+2	1.514E-1
7.079E+6	2.028E+2	3.949E+2	1.555E-1
7.943E+6	1.902E+2	3.610E+2	1.595E-1
8.913E+6	1.800E+2	3.286E+2	1.629E-1

White Matter

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.000E+7	1.750E+2	3.004E+2	1.671E-1
1.089E+7	1.700E+2	2.888E+2	1.750E-1
1.194E+7	1.650E+2	2.806E+2	1.865E-1
1.310E+7	1.621E+2	2.661E+2	1.938E-1
1.436E+7	1.607E+2	2.518E+2	2.011E-1
1.574E+7	1.499E+2	2.415E+2	2.115E-1
1.726E+7	1.430E+2	2.170E+2	2.084E-1
1.893E+7	1.352E+2	2.027E+2	2.135E-1
2.075E+7	1.298E+2	1.920E+2	2.217E-1
2.276E+7	1.228E+2	1.793E+2	2.270E-1
2.495E+7	1.159E+2	1.697E+2	2.356E-1
2.736E+7	1.118E+2	1.591E+2	2.421E-1
3.000E+7	1.067E+2	1.477E+2	2.466E-1
3.289E+7	1.016E+2	1.398E+2	2.559E-1
3.607E+7	9.778E+1	1.305E+2	2.618E-1
3.955E+7	9.343E+1	1.235E+2	2.717E-1
4.336E+7	8.936E+1	1.165E+2	2.812E-1
4.755E+7	8.529E+1	1.089E+2	2.880E-1
5.213E+7	8.121E+1	1.025E+2	2.973E-1
5.716E+7	7.801E+1	9.614E+1	3.057E-1
6.268E+7	7.427E+1	9.031E+1	3.149E-1
6.873E+7	7.129E+1	8.472E+1	3.239E-1
7.536E+7	6.816E+1	7.932E+1	3.325E-1
8.263E+7	6.533E+1	7.436E+1	3.418E-1
9.060E+7	6.289E+1	6.948E+1	3.502E-1
9.934E+7	6.042E+1	6.519E+1	3.603E-1
1.089E+8	5.864E+1	6.123E+1	3.710E-1
1.194E+8	5.643E+1	5.748E+1	3.819E-1
1.310E+8	5.454E+1	5.391E+1	3.928E-1
1.436E+8	5.267E+1	5.065E+1	4.046E-1
1.574E+8	5.107E+1	4.726E+1	4.140E-1
1.726E+8	4.970E+1	4.400E+1	4.225E-1
1.893E+8	4.841E+1	4.122E+1	4.341E-1
2.075E+8	4.695E+1	3.849E+1	4.445E-1
2.276E+8	4.557E+1	3.596E+1	4.553E-1
2.495E+8	4.455E+1	3.354E+1	4.656E-1
2.736E+8	4.364E+1	3.129E+1	4.763E-1
3.000E+8	4.281E+1	2.923E+1	4.878E-1
3.289E+8	4.185E+1	2.725E+1	4.987E-1
3.607E+8	4.114E+1	2.535E+1	5.087E-1
3.955E+8	4.045E+1	2.376E+1	5.228E-1
4.336E+8	3.984E+1	2.213E+1	5.339E-1
4.755E+8	3.952E+1	2.058E+1	5.443E-1
5.213E+8	3.891E+1	1.956E+1	5.673E-1
5.716E+8	3.832E+1	1.828E+1	5.814E-1
6.268E+8	3.786E+1	1.710E+1	5.964E-1
6.873E+8	3.776E+1	1.628E+1	6.223E-1
7.536E+8	3.720E+1	1.487E+1	6.236E-1
8.263E+8	3.686E+1	1.472E+1	6.766E-1
9.060E+8	3.784E+1	1.317E+1	6.638E-1
9.934E+8	3.635E+1	1.373E+1	7.589E-1
1.089E+9	3.697E+1	1.245E+1	7.542E-1
1.194E+9	3.652E+1	1.289E+1	8.564E-1
1.310E+9	3.534E+1	1.290E+1	9.397E-1
1.436E+9	3.580E+1	1.228E+1	9.813E-1
1.574E+9	3.630E+1	1.100E+1	1.000E+0
1.612E+9	3.689E+1	1.117E+1	1.002E+0
1.696E+9	3.673E+1	1.104E+1	1.041E+0
1.783E+9	3.658E+1	1.083E+1	1.075E+0
1.875E+9	3.656E+1	1.067E+1	1.113E+0

Frequency (Hz)	Ovine @ 37°C Current study measurements ε′	ε″	σ (S/m)
1.972E+9	3.634E+1	1.050E+1	1.152E+0
2.074E+9	3.626E+1	1.036E+1	1.195E+0
2.181E+9	3.608E+1	1.022E+1	1.240E+0
2.294E+9	3.592E+1	1.019E+1	1.300E+0
2.412E+9	3.579E+1	1.016E+1	1.363E+0
2.537E+9	3.564E+1	1.009E+1	1.424E+0
2.668E+9	3.545E+1	1.001E+1	1.485E+0
2.806E+9	3.528E+1	1.003E+1	1.565E+0
2.951E+9	3.510E+1	1.002E+1	1.645E+0
3.103E+9	3.491E+1	9.962E+0	1.720E+0
3.263E+9	3.471E+1	9.964E+0	1.809E+0
3.432E+9	3.452E+1	1.001E+1	1.911E+0
3.609E+9	3.428E+1	1.003E+1	2.014E+0
3.796E+9	3.409E+1	9.991E+0	2.110E+0
3.992E+9	3.397E+1	1.007E+1	2.235E+0
4.198E+9	3.369E+1	1.028E+1	2.400E+0
4.415E+9	3.354E+1	1.046E+1	2.568E+0
4.643E+9	3.319E+1	1.054E+1	2.721E+0
4.883E+9	3.283E+1	1.070E+1	2.907E+0
5.135E+9	3.249E+1	1.097E+1	3.133E+0
5.400E+9	3.206E+1	1.101E+1	3.309E+0
5.679E+9	3.158E+1	1.114E+1	3.518E+0
5.972E+9	3.108E+1	1.118E+1	3.713E+0
6.281E+9	3.076E+1	1.137E+1	3.972E+0
6.605E+9	3.017E+1	1.128E+1	4.146E+0
6.946E+9	2.961E+1	1.125E+1	4.347E+0
7.305E+9	2.908E+1	1.124E+1	4.566E+0
7.682E+9	2.863E+1	1.109E+1	4.740E+0
8.079E+9	2.812E+1	1.111E+1	4.992E+0
8.496E+9	2.763E+1	1.097E+1	5.185E+0
8.935E+9	2.712E+1	1.086E+1	5.400E+0
9.397E+9	2.663E+1	1.064E+1	5.560E+0
9.882E+9	2.615E+1	1.040E+1	5.715E+0
1.039E+10	2.566E+1	1.009E+1	5.833E+0
1.093E+10	2.537E+1	9.892E+0	6.014E+0
1.149E+10	2.498E+1	9.555E+0	6.109E+0
1.209E+10	2.482E+1	9.259E+0	6.226E+0
1.271E+10	2.462E+1	9.006E+0	6.369E+0
1.337E+10	2.435E+1	8.587E+0	6.386E+0
1.406E+10	2.423E+1	8.469E+0	6.624E+0
1.478E+10	2.410E+1	8.306E+0	6.831E+0
1.555E+10	2.404E+1	7.994E+0	6.915E+0
1.635E+10	2.382E+1	7.889E+0	7.177E+0
1.720E+10	2.391E+1	7.728E+0	7.393E+0
1.808E+10	2.379E+1	7.782E+0	7.829E+0
1.902E+10	2.379E+1	7.693E+0	8.139E+0
2.000E+10	2.373E+1	7.687E+0	8.553E+0