

## Appendix B Data For Titanium

### B.0.1 Temperature and Resistance Data (Primary Set)

Temperature (°C)	Experimental Resistance ( $\Omega$ )	Theoretical Resistance ( $\Omega$ )
43.50	12.731	14.5640
45.50	13.079	14.6656
48.50	13.428	14.8180
52.75	13.428	15.0339
61.25	14.775	15.4657
69.94	16.664	15.9412
79.94	16.747	16.5120
87.19	15.528	16.9271
92.38	15.537	17.2111
93.81	15.537	17.2793

Table B.1 Comparison of experimental and theoretical resistance values of Titanium as a function of temperature.

### B.0.2 Resistance Data (Around 20 °C)

Temperature (°C)	Resistance( $R$ ( $\Omega$ ))
20.00	11.345
20.13	11.345
20.25	11.345
20.38	10.656
20.50	10.656
20.63	10.656
20.75	10.656

Table B.2 Measured resistance values for Titanium around 20 °C used for calculating  $R_0$ .



## Appendix C Data For Tungsten

### C.0.1 Temperature and Resistance Data (Primary Set)

Temperature ( $^{\circ}\text{C}$ )	Experimental Resistance ( $\Omega$ )	Theoretical Resistance ( $\Omega$ )
29.81	5.910	0.8375
29.94	5.910	0.8380
30.13	6.006	0.8387
33.63	6.245	0.8513
41.69	6.246	0.8804
48.63	6.379	0.9056
51.44	6.247	0.9161
56.75	7.043	0.9363
62.94	7.246	0.9588
78.75	8.006	1.0155
86.25	8.396	1.0414
92.38	8.006	1.0632
93.94	9.006	1.0690

Table C.1 Comparison of experimental and theoretical resistance values of Tungsten as a function of temperature.

### C.0.2 Resistance Data (Around $20^{\circ}\text{C}$ )

Temperature ( $^{\circ}\text{C}$ )	Resistance( $R$ ( $\Omega$ ))
20.13	6.245
20.25	6.245
20.38	6.245
20.50	6.245
20.63	5.910
20.81	5.910
20.94	5.910

Table C.2 Measured resistance values for tungsten around  $20^{\circ}\text{C}$  used for calculating  $R_0$ .