**Nernst potentials**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ion concentrations according to Mongiat 2009** | **Inside**  **[mM]** | **Outside**  **[mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K)** | **140** | **2.5** | **-102.68** |
| **Sodium (Na)** | **5** | **156.4** | **87.76** |
| **Calcium (Ca)** | **0.0000000001202** | **2** | **~130** |
| **Magnesium (Mg)** | **4** | **1.3** | **-14.38** |
| **Chloride (Cl)** | **33** | **134.1** | **-35.99** |
| **Gluconate** | **140** | **0** | **-** |
| **LJP: 12.1 mV @ 23 °C (Clampex LJP calculator)** | |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Ion concentrations according to SH07** | **Inside**  **[mM]** | **Outside**  **[mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K)** | **140** | **2.5** | **-103.2** |
| **Sodium (Na)** | **6** | **151.25** | **82.59** |
| **Calcium (Ca)** | **0** | **2** | **~130** |
| **Magnesium (Mg)** | **2** | **1** | **-8.87** |
| **Chloride (Cl)** | **24** | **133.5** | **-43.92** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ion concentrations according to SH08** | **Inside**  **[mM]** | **Outside young**  **[mM]** | **Outside adult [mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K)** | **140** | **2.5** | **2.5** | **-103.2** |
| **Sodium (Na)** | **6.3-22.3** | **151.25** | **138.25** | **81.07-48.86 / 78.78-46.54** |
| **Calcium (Ca)** | **0** | **2** | **0.5** | **~130 / 108** |
| **Magnesium (Mg)** | **2** | **1** | **7** | **-8.87 / 15.98** |
| **Chloride (Cl)** | **24** | **133.5** | **102** | **-43.92 / -36.91** |
| **Gluconate** | **115** | **0** | **0** | **-** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Ion concentrations according to SH10** | **Inside**  **[mM]** | **Outside**  **[mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K) / Cesium** | **130** | **2.5** | **-100.79** |
| **Sodium (Na)** | **28** | **151.25** | **42.89** |
| **Calcium (Ca)** | **0** | **2** | **~130** |
| **Magnesium (Mg)** | **4** | **1** | **-17,68** |
| **Chloride (Cl)** | **138.5 !!!** | **131.5** | **1.32 !!!** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Ion concentrations according to Riazanski (Kv3.4)** | **Inside**  **[mM]** | **Outside**  **[mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K)** | **140** | **2.5** | **-103.2** |
| **Sodium (Na)** | **4** | **152.25** | **82.59** |
| **Calcium (Ca)** | **0** | **2** | **~130** |
| **Magnesium (Mg)** | **2** | **1** | **-8.87** |
| **Chloride (Cl)** | **24** | **133.5** | **-43.92** |

**10 EGTA**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ion concentrations according to Krueppel** | **Inside**  **[mM]** | **Outside**  **[mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K)** | **150** | **3.5** | **-96.50** |
| **Sodium (Na)** | **4** | **152.25** | **92.83** |
| **Calcium (Ca)** | **0** | **2** | **~130** |
| **Magnesium (Mg)** | **2** | **2** | **0** |
| **Chloride (Cl)** | **20** | **136.5** | **-49.23** |
| **LJP: 13.56 mV @ 23°C (real 33 °C.. 14.5 mV laut Paper)** | |  |  |

**0.16 EGTA**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ion concentrations according to MateosAparicio 2014** | **Inside**  **[mM]** | **Outside**  **[mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K)** | **130** | **2.5** | **-101.5** |
| **Sodium (Na)** | **20.3** | **151.25 woher weiß ich das???** | **51.57** |
| **Calcium (Ca)** | **0** | **1.6** | **124.29** |
| **Magnesium (Mg)** | **4** | **1** | **-17.8** |
| **Chloride (Cl)** | **10** | **130** | **-65.87** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Ion concentrations according to Hanuschkin 2012** | **Inside**  **[mM]** | **Outside**  **[mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K)** | **155** | **2.5** | **-105.98** |
| **Sodium (Na)** | **4** | **151.25** | **93.29** |
| **Calcium (Ca)** | **0.0000000001202** | **2** | **~130** |
| **Magnesium (Mg)** | **2** | **1** | **-8.90** |
| **Chloride (Cl)** | **24** | **133.5** | **-44.07** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Ion concentrations according to Brenner 2005** | **Inside**  **[mM]** | **Outside**  **[mM]** | **🡪Nernst potential [mV]** |
| **Potassium (K)** | **140** | **2** | **-109.10** |
| **Sodium (Na)** | **0** | **151.25** | **Zw 150 und 180** |
| **Calcium (Ca)** | **0** | **2** | **127.16** |
| **Magnesium (Mg)** | **2** | **2** | **0** |
| **Chloride (Cl)** | **20** | **128** | **-47.67** |

|  |  |  |
| --- | --- | --- |
| **ML thickness of adult dorsal HC** | **Rat** | **Mouse** |
| **General** | **250 (HC Book)** | **160-190 (ca 188 Vuksic)** |
| **IML** | **83** | **38** |
| **MML** | **83** | **75** |
| **OML** | **83** | **75** |
| **GCL** | **60 (HC Book)** | **~ 45** |