

ARTIFICIAL CEREBRAL SPINAL FLUID for RATS and MICE

ACSF FOR USE WITH AGAROSE (Modified from Kleinfeld and Delaney 1996; designed to be heated to 100°C without clouding agarose)

	<u>MW</u>	<u>g/L</u>
142 mM NaCl	58.5 g/M	8.30 g/L
5 mM KCl	74.6 g/M	0.370 g/L
10 mM Glucose	180 g/M	1.80 g/L
10 mM Hepes, Na Salt	260 g/M	2.60 g/L

Adjust pH to 7.4

3.1 mM Ca ⁺⁺ Stock	3.1 ml of 1M
1.3 mM Mg ⁺⁺ Stock	1.3 ml of 1M

Bring total volume to 1 liter.

ACSF from Llinas Laboratory (or *in vitro* perfusions)

121 mM NaCl	58.5 g/M	7.07 g/L
5 mM KCl	74.6 g/M	0.37 g/L
26 mM NaHCO ₃	84.0 g/M	2.18 g/L
1.2 mM NaH ₂ PO ₄ · 2H ₂ O	160 g/M	0.19 g/L
10 mM Glucose	180 g/M	1.80 g/L
5 mM Hepes, Na Salt	260 g/M	1.30 g/L

Adjust pH to 7.4

2.4 mM Ca ⁺⁺ Stock	2.4 ml of 1M
1.3 mM Mg ⁺⁺ Stock	1.3 ml of 1M

Bring total volume to 1 liter.

	<u>Concentration</u>	<u>MW</u>	<u>g/L</u>
<u>Mg⁺⁺ stock:</u>			
MgCl ₂ · 6H ₂ O	0.5M	203.31	102.0
MgSO ₄ · 7H ₂ O	0.5M	246.47	123.0
<u>Ca⁺⁺ stock:</u>			
CaCl ₂ · 6H ₂ O	1.0M	219.08	219.0
OR			
CaCl ₂ · 2H ₂ O	1.0M	147.02	147.0