

Instructions

The following solutions are at 10 times the final working concentration (i.e. 10x). Therefore, you will need to dilute the solutions 10-fold before use. Concentrations listed correspond to final working concentrations.

- **Slicing Solution.** Brain slices are cut in a *sucrose* solution containing a mixture of:
 - Sucrose solution
 - Electrolyte solution
 - Bicarbonate solution

- **Incubating/Recording Solution.** After slicing, brain slices are incubated/maintained in an Artificial Cerebrospinal Fluid (*ACSF*) solution containing:
 - ACSF solution
 - Bicarbonate solution

Sucrose (10X Slicing Stock)			
Owner:			
Date Made:			
Final Volume: 500 mL (add 238 mL H₂O)			
Ingredient	mM	MW	Grams
Glucose (dissolve first)	11	180.2	9.99
Sucrose	234	342.3	400.5
non-toxic			

Electrolyte for Sucrose (10X, minus bicarbonate) for Slicing Solution			
Owner:			
Date Made:			
Final Volume: 1 L			
Ingredient	mM	MW	Grams
KCl (potassium chloride)	2.5	74.56	1.864
NaH₂PO₄ • H₂O (sodium phosphate)	1.25	137.99	1.724
MgSO₄ • 7H₂O (magnesium sulfate)	10	246.48	24.648
CaCl₂ • 2H₂O (calcium chloride)	0.5	147.02	0.736
non-toxic			

Bicarbonate Stock (10X)			
Owner:			
Date Made:			
Final Volume: 2 L			
Ingredient	mM	MW	Grams
NaHCO₃ (sodium bicarbonate)	26	84.01	43.685
non-toxic			

ACSF (10X, minus bicarbonate)			
Owner:			
Date Made:			
Final Volume: 2 L			
Ingredient	mM	MW	Grams
KCl (potassium chloride)	2.5	74.56	3.728
Glucose	10	180.2	36.04
NaCl (sodium chloride)	126	58.44	147.25
NaH₂PO₄ • H₂O (sodium phosphate)	1.25	137.99	3.45
MgSO₄ • 7H₂O (magnesium sulfate)	1	246.48	4.93
CaCl₂ • 2H₂O (calcium chloride)	2	147.02	5.882
non-toxic			