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# DATASHEET

aCSF Instant Powder (Mg<sup>2+</sup>/Ca<sup>2+</sup> free) (packets)

### **Product overview**

Name Cat No Biological description aCSF Instant Powder (Mg<sup>2+</sup>/Ca<sup>2+</sup> free) (packets) HB16218 Artificial cerebrospinal fluid (aCSF) is a widely used buffer in electrophysiological experiments to

sustain *ex-vivo* brain sections. This kit contains 20 instant powder packets. Simply dissolve the contents of each packet in dH<sub>2</sub>O to a final volume of 1L, mix, add the desired concentration of Mg<sup>2+</sup> and Ca<sup>2+</sup> and bubble with carbogen to make 1L of aCSF at physiological pH. Please note: This formulation does not contain any Mg<sup>2+</sup> or Ca<sup>2+</sup> so that this can be specified by the experimenter.

#### Key features:

- Save time by using preformulated individual aCSF powder packets each packet dissolves in seconds
- More reproducible with each pack's highly accurate formulation less error for better data.
- Extensively validated in a range of patch clamp electrophysiology experiments.
- Does not contain Mg<sup>2+</sup> or Ca<sup>2+</sup> to allow manipulation by the experimenter. For complete aCSF containing Mg<sup>2+</sup> and Ca<sup>2+</sup> please see HB9200 aCSF Instant Powder (packets)

Biological action Description

Images

Contains (in mM): NaCl 124. Glucose 10, NaHCO<sub>3</sub> 24, KCl 3, NaH<sub>2</sub>PO<sub>4</sub> 1.25 Buffer Preformulated instant powder packets to make artificial cerebrospinal fluid (aCSF) without Mg<sup>2+</sup> or Ca<sup>2+</sup>



# Solubility & Handling

Storage instructions	RT. Dissolve each pack in dH <sub>2</sub> O to 1L final volume.
Handling	Dissolve the contents of each packet in dH <sub>2</sub> O, add the desired quantity of $Mg^{2+}$ and $Ca^{2+}$ then bring the final volume to 1000ml and bubble with carbogen (10-15 minutes) to make 1L of aCSF at physiological pH. Warm to 37°C before use.
Important	Use immediately once opened. This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

# **Chemical Data**

Kit contents	
pH after carbogenation	
pH before carbogenation	

Preformulated packets. Each makes 1L of aCSF. 7.2 7.5

## References

Reduced expression of the psychiatric risk gene DLG2 (PSD93) impairs hippocampal synaptic integration and plasticity.

Griesius S et al (2022) Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology 47
PubMedID 35115661

The development of synaptic plasticity induction rules and the requirement for postsynaptic spikes in rat hippocampal CA1 pyramidal neurones.

Buchanan KA et al (2007) The Journal of physiology 585**PubMedID**17932146