

## Certificate of Analysis

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**Product Name:** ACSF (Artificial Cerebrospinal Fluid)

**Catalog No.:** 3525

**Batch No.:** 123

**IUPAC Name:** Artificial cerebrospinal fluid

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Physical Appearance:** solution  
**Storage:** Store at RT

### 2. ANALYTICAL DATA

**Purity:** 99.5%  
**pH:** 7.2  
**Osmolarity:** 290 mOsm/L  
**Filter Integrity:** Pass

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**bio-techne.com**  
info@bio-techne.com  
techsupport@bio-techne.com

**North America**  
Tel: (800) 343 7475

**China**  
info.cn@bio-techne.com  
Tel: +86 (21) 52380373

**Europe Middle East Africa**  
Tel: +44 (0)1235 529449

**Rest of World**  
[www.tocris.com/distributors](http://www.tocris.com/distributors)  
Tel:+1 612 379 2956

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**IUPAC Name:** Artificial cerebrospinal fluid

**Description:**

Artificial cerebrospinal fluid (ACSF) is commonly used to maintain the oxygen supply, osmolarity and buffer pH of isolated neurons and brain slices in electrophysiology experiments. ACSF closely matches the electrolyte concentrations of cerebrospinal fluid and is prepared from high purity water and analytical grade reagents. Microfiltered and sterile. Final ion concentrations (in mM): Na<sup>+</sup> 150; K<sup>+</sup> 3.0; Ca<sup>2+</sup> 1.4; Mg<sup>2+</sup> 0.8; Phosphate 1.0; Cl<sup>-</sup> 155.

**Physical and Chemical Properties:**

Physical Appearance: solution

**Storage:** Store at RT

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Byun *et al*** (2012) Induction of neuronal death by microglial AGE-albumin: implications for Alzheimer's disease. *PLoS One* **7** e37917. PMID: 22662249.

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