

## Certificate of Analysis

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**Product Name:** Kainic acid

**Catalog No.:** 0222

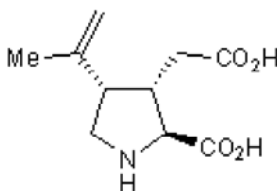
**Batch No.:** 72

CAS Number: 487-79-6

IUPAC Name: (2S,3S,4S)-Carboxy-4-(1-methylethenyl)-3-pyrrolidineacetic acid

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>10</sub>H<sub>15</sub>NO<sub>4</sub>·<sup>1</sup>/<sub>4</sub>H<sub>2</sub>O  
**Batch Molecular Weight:** 217.73  
**Physical Appearance:** White solid  
**Solubility:** 1eq. NaOH to 100 mM  
 water to 25 mM with gentle warming  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.4 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])  
**HPLC:** Shows 98.7% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = -17.5 (Concentration = 1, Solvent = Water)  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	55.16	7.17	6.43
Found	55.2	7.18	6.47

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**Description:**

Selective agonist at kainate receptors. Potent excitant and neurotoxin.

**Physical and Chemical Properties:**

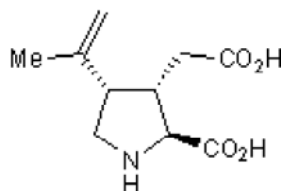
Batch Molecular Formula: C<sub>10</sub>H<sub>15</sub>NO<sub>4</sub>·¼H<sub>2</sub>O

Batch Molecular Weight: 217.73

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

1eq. NaOH to 100 mM  
water to 25 mM with gentle warming

When purchased as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**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. Our standard recommendations are:

**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:**

**Watkins and Evans** (1981) Excitatory amino acid transmitters. *Annu.Rev.Pharmacol.Toxicol.* **21** 165. PMID: 6112965.

**Watkins** (1978) Excitatory amino acids. Kainic acid as a Tool in Neurobiology. Edited by E 37.

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