

Certificate of Analysis

Product Name: Pentylenetetrazole

CAS Number: 54-95-5

IUPAC Name: 6,7,8,9-Tetrahydro-5H-tetrazolo[1,5-a]azepine

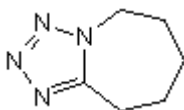
Catalog No.: 2687

Batch No.: 2

EC Number: 200-219-3

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆H₁₀N₄
Batch Molecular Weight: 138.17
Physical Appearance: White solid
Solubility: water to 100 mM
DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	52.16	7.29	40.55
Found	52.09	7.32	40.28

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

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Description:

CNS stimulant that induces kindling in vivo. Causes alterations in excitatory and inhibitory neurotransmitter systems.

Physical and Chemical Properties:

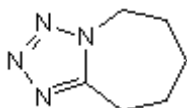
Batch Molecular Formula: C₆H₁₀N₄

Batch Molecular Weight: 138.17

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM

DMSO to 100 mM

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:

Rocha et al (1996) Pentylenetetrazol-induced kindling: early involvement of excitatory and inhibitory systems. *Epilepsy Res.* **26** 105. PMID: 8985692.

Walsh et al (1999) Acute pentylenetetrazol injection reduces rat GABA_A receptor mRNA levels and GABA stimulation of benzodiazepine binding with no effect on benzodiazepine binding site density. *J.Pharmacol.Exp.Ther.* **289** 1626. PMID: 10336561.

Dhir et al (2006) Effect of cyclooxygenase inhibitors on pentylenetetrazol (PTZ)-induced convulsions: possible mechanism of action. *Prog.Neuro-Psychopharm.Biol.Psychiat.* **30** 1478.

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