PRODUCT INFORMATION

MPTP (hydrochloride)
Item No. 16377

CAS Registry No.: 23007-85-4
Formal Name: 1,2,3,6-tetrahydro-1-methyl-4-phenyl-pyridine, hydrochloride
Synonyms: 1-Methyl-4-phenyl-1,2,3,6-tetrahydropyridine, NSC 139654
MF: C_{12}H_{15}N • HCl
FW: 209.7
Purity: ≥95%
Supplied as: A crystalline solid
Storage: 4°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

MPTP (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the MPTP (hydrochloride) in water. The solubility of MPTP (hydrochloride) in water is approximately 21 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

MPTP is a neurotoxin used to cause selective destruction of dopaminergic neurons in animal models of parkinsonism.1–4 MPTP is metabolized by monoamine oxidase B to produce MPDP+ and MPP+, with MPP+ being the active toxic agent.5 MPP+ induces neurotoxicity primarily by inhibiting complex I of the mitochondrial electron transport chain, resulting in ATP depletion and increased oxidative stress.5 The key features of different neurotoxic models of Parkinson’s disease, including the MPTP model, have been detailed.5

References