4-Fluoroamphetamine (hydrochloride)

Item No. 11156

CAS Registry No.: 64609-06-9
Formal Name: 4-fluoro-α-methyl-benzeneethanamine, monohydrochloride
Synonyms: 4-FA, p-FA
MF: C9H12FN • HCl
FW: 189.7
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures

For long term storage, we suggest that 4-fluoroamphetamine (4-FA) (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

4-FA (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-FA (hydrochloride) in the solvent of choice. 4-FA (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 4-FA (hydrochloride) in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 4-FA (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 4-FA (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Halogenated amphetamines, including FAs, are psychostimulatory designer drugs.1,2 4-FA (hydrochloride) inhibits the uptake of dopamine, serotonin, and norepinephrine with IC50 values of 0.77, 6.8, and 0.42 μM, respectively, indicating potency comparable to cocaine or methamphetamine.3 Methodology for detecting 4-FA in serum and urine using GC/MS has recently been described.4 This product is intended for forensic purposes.

References

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