Clorgyline (hydrochloride)

**CAS Registry No.:** 17780-75-5

**Formal Name:** N-[3-(2,4-dichlorophenoxy)propyl]-N-methyl-2-propyn-1-amine, monohydrochloride

**Synonym:** N-2,4-Dichlorophenoxypropyl-N-methylpropargylamine

**MF:** C_{13}H_{15}Cl_{2}NO • HCl

**FW:** 308.6

**Purity:** ≥ 98%

**UV/Vis.:** \( \lambda_{\text{max}}: \) 229, 284 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥ 4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

**Laboratory Procedures**

Clorgyline (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the clorgyline (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Clorgyline (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of clorgyline (hydrochloride) in ethanol and DMF is approximately 15 mg/ml and approximately 10 mg/ml in DMSO.

Clorgyline (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, clorgyline (hydrochloride) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Clorgyline (hydrochloride) has a solubility of approximately 0.25 mg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

Clorgyline is a potent monoamine oxidase (MAO) inhibitor that preferentially targets MAO-A over MAO-B (K\(_{i}\)s = 0.054 and 58 µM, respectively).\(^1\,2\) This inhibition is irreversible.\(^1\) Clorgyline is without effect on serotonin (Item No. 14332) receptors, but it does inhibit the sigma receptor \(\sigma_1\) on Jurkat human T lymphocyte cells (IC\(_{50}\) = 31 nM).\(^3\,4\) As MAO-A preferentially oxidizes serotonin, selective MAO-A inhibitors have applications in ameliorating depression and anxiety.\(^1,5\)

**References**