

## Certificate of Analysis

**Product Name:** Paroxetine maleate

**Catalog No.:** 2141

**Batch No.:** 2

CAS Number: 64006-44-6

IUPAC Name: (3*S*,4*R*)-3-[(1,3-Benzodioxol-5-yloxy)methyl]-4-(4-fluorophenyl)-piperidine maleate

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>19</sub>H<sub>20</sub>FNO<sub>3</sub>·C<sub>4</sub>H<sub>4</sub>O<sub>4</sub>

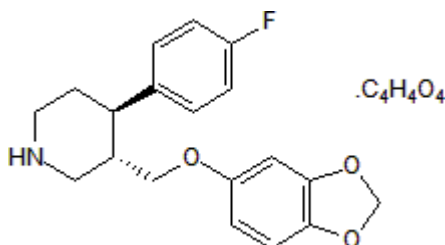
**Batch Molecular Weight:** 445.44

**Physical Appearance:** Light pink solid

**Solubility:** ethanol to 100 mM  
DMSO to 100 mM

**Storage:** Store at RT

**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.3 (Dichloromethane:Methanol [9:1])

**HPLC:** Shows >99.5% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Optical Rotation:** [α]<sub>D</sub> = -70.42 (Concentration = 0.14, Solvent = Ethanol)

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	62.02	5.43	3.14
Found	62.01	5.45	3.05

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**Description:**

Highly potent and selective 5-HT uptake inhibitor that binds with high affinity to the serotonin transporter ( $K_i = 0.05$  nM).  $K_i$  values are 1.1, 350 and 1100 nM for inhibition of [<sup>3</sup>H]-5-HT, [<sup>3</sup>H]-I-NA and [<sup>3</sup>H]-DA uptake respectively. Displays minimal affinity for  $\alpha_1$ -,  $\alpha_2$ - or  $\beta$ -adrenoceptors, 5-HT<sub>2A</sub>, 5-HT<sub>1A</sub>, D<sub>2</sub> or H<sub>1</sub> receptors at concentrations below 1000 nM, however displays weak affinity for muscarinic ACh receptors ( $K_i = 42$  nM). Antidepressant and anxiolytic in vivo.

**Physical and Chemical Properties:**

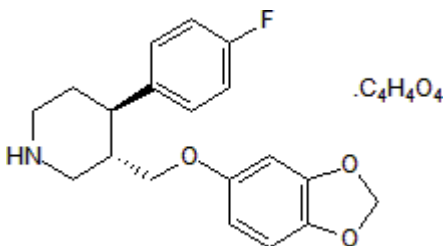
Batch Molecular Formula: C<sub>19</sub>H<sub>20</sub>FNO<sub>3</sub>·C<sub>4</sub>H<sub>4</sub>O<sub>4</sub>

Batch Molecular Weight: 445.44

Physical Appearance: Light pink solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at RT

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

**Solubility & Usage Info:**

ethanol 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:**

**Thomas et al** (1987) Biochemical effects of the antidepressant paroxetine, a specific 5-hydroxytryptamine uptake inhibitor. *Psychopharmacology* **93** 193. PMID: 2962217.

**Owens et al** (1997) Neurotransmitter receptor and transporter binding profile of antidepressants and their metabolites. *J.Pharmacol.Exp.Ther.* **283** 1305. PMID: 9400006.

**Bourin et al** (2001) Paroxetine: a review. *CNS Drug Rev.* **7** 25. PMID: 11420571.

**Fujishiro et al** (2002) Comparison of the anticholinergic effects of the serotonergic antidepressants, paroxetine, fluvoxamine and clomipramine. *Eur.J.Pharmacol.* **454** 183. PMID: 12421645.

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**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel: +1 612 379 2956