

**Product Name:** (S)-Duloxetine hydrochloride

**Catalog No.:** 4798

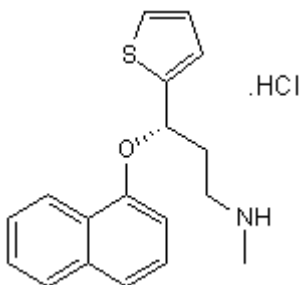
**Batch No.:** 1

CAS Number: 136434-34-9

IUPAC Name: (+)-(S)-N-Methyl-3-(1-naphthoxy)-3-(2-thienyl)propanamine hydrochloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>18</sub>H<sub>19</sub>NOS.HCl  
**Batch Molecular Weight:** 333.88  
**Physical Appearance:** Off-white solid  
**Solubility:** water to 10 mM with gentle warming  
DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.6% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = +117.8 (Concentration = 1, Solvent = Methanol)  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	64.75	6.04	4.2
Found	64.65	6.01	4.37

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

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**Description:**

High affinity, competitive 5-HT and noradrenaline (NA) re-uptake inhibitor ( $K_i$  values are 8.5 and 45 nM for 5-HT and NA reuptake respectively in cortical synaptosomes;  $IC_{50}$  values are 28 and 46 nM for 5-HT and NA reuptake respectively in rat hippocampal slices). Also blocks dopamine reuptake ( $K_i = 300$  nM in striatal synaptosomes). Exhibits antidepressant and anxiolytic effects. Orally bioavailable.

**Physical and Chemical Properties:**

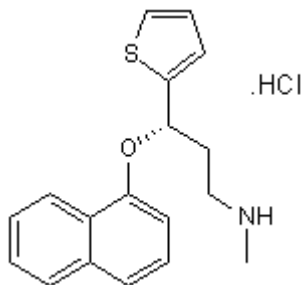
Batch Molecular Formula:  $C_{18}H_{19}NOS.HCl$

Batch Molecular Weight: 333.88

Physical Appearance: Off-white solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**References:**

**Wong *et al*** (1988) LY227942, an inhibitor of serotonin and norepinephrine uptake: biochemical pharmacology of a potential antidepressant drug. *Life Sci.* **43** 2049. PMID: 2850421.

**Kasamo *et al*** (1996) Blockade of the serotonin and norepinephrine uptake processes by duloxetine: in vitro and in vivo studies in the rat brain. *J.Pharmacol.Exp.Ther.* **277** 278. PMID: 8613930.

**Storage:** Store at RT

**Solubility & Usage Info:**

water to 10 mM with gentle warming  
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.

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