**Product Name:** Norketamine hydrochloride  
**Catalog No.:** 1970  
**Batch No.:** 4  
**CAS Number:** 79499-59-5  
**IUPAC Name:** 2-Amino-2-(2-chlorophenyl)cyclohexanone hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

- **Batch Molecular Formula:** \( \text{C}_{12}\text{H}_{14}\text{ClNO.HCl.H}_{2}\text{O} \)
- **Batch Molecular Weight:** 278.18
- **Physical Appearance:** White solid
- **Solubility:** water to 100 mM phosphate buffered saline to 100 mM
- **Storage:** Desiccate at RT

### 2. ANALYTICAL DATA

- **TLC:** \( R_f = 0.3 \) (DCM / MeOH/NH4OH (19:0.9.0.1))
- **HPLC:** Shows >99.9% purity
- **\(^1\text{H NMR:}\)** Consistent with structure
- **Mass Spectrum:** Consistent with structure
- **Microanalysis:** Carbon Hydrogen Nitrogen  
  Theoretical 51.81 6.16 5.04  
  Found 51.76 6.49 5.34

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

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CAS Number: 79499-59-5
IUPAC Name: 2-Amino-2-(2-chlorophenyl)cyclohexanone hydrochloride

Description:
Major metabolite of ketamine that is a potent non-competitive NMDA receptor antagonist (Kᵢ = 3.6 μM for displacement of [³H]-MK 801 in rat brain). Antinociceptive and anesthetic in vivo. R-enantiomer and S-enantiomer also available.

Physical and Chemical Properties:
Batch Molecular Formula: C₁₂H₁₄ClNO.HCl.H₂O
Batch Molecular Weight: 278.18
Physical Appearance: White solid
Minimum Purity: >99%

Storage: Desiccate at RT

Solubility & Usage Info:
- water to 100 mM
- phosphate buffered saline to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival. Solutions should be made up as soon as the vial is opened.

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.

Other Information:
INFORMATION FOR CUSTOMERS IN THE UK ONLY
This product is a Schedule 2 Home Office controlled substance and customers in the UK are required to hold the relevant licence or be exempt from restrictions in order to purchase and possess this material.

INFORMATION FOR CUSTOMERS IN CANADA ONLY
This product is a Schedule I CDSA controlled substance and customers in Canada require an import permit to purchase this material.

Licensing Information:
Sold for research purposes under agreement from Pfizer Inc.

References: