

# CERTIFICATE OF ANALYSIS

20 Martin Ross Ave., Toronto, ON. M3J 2K8 Canada Tel: (416) 665-9696 E-mail: Orders.TRC@LGCGroup.com Website: www.trc-canada.com

## 1. Identification

**CAS Number:**

3627-48-3

**Catalogue Number:**

TRC-P292503

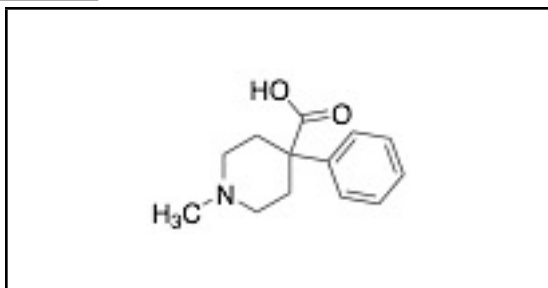
**Product:**

Pethidine Intermediate C

**Synonyms:**

1-Methyl-4-phenyl-4-piperidinecarboxylic Acid; 1-Methyl-4-phenylisonipecotic Acid; 1-Methyl-4-phenylpiperidine-4-carboxylic Acid; 4-Carboxy-1-methyl-4-phenylpiperidine;  
Meperidine Acid; Meperidinic Acid; NSC 400459; Pethidinic Acid

**Structure:**



**Molecular Formula:**

C<sub>13</sub>H<sub>17</sub>NO<sub>2</sub>

**Molecular Weight:**

219.28

**Source of Product:**

Synthetic

## 2. Analytical Information

**Lot Number:**

14-XAL-2-1

**Atmosphere:**

Air

**Melting Point:**

>253°C (dec.)

**Solubility**

Aqueous Acid (Slightly), Aqueous Base (Slightly)

**Appearance of Product:**

White Solid

**Stability**

Not Determined

**Method for Determining Identity:**

<sup>1</sup>H NMR (D<sub>2</sub>O + DCl, D<sub>2</sub>O + NaOD) and MS

**Long Term Storage Condition:**

-20°C, Inert atmosphere

**Purity:**

97%

**Shipping Condition**

This Product Is Stable To Be Shipped At Room Temperature

98.22% by HPLC

**Additional Information:**

TLC Conditions: C<sub>18</sub>; Acetonitrile : Water : Ammonium Hydroxide = 8 : 2 : 0.2; Visualized with AMCS and KMnO<sub>4</sub>; Single Spot, R<sub>f</sub> = 0.25.

<sup>1</sup>H NMR and MS conform to structure.

Elemental Analysis: (Found) %C: 69.40, %H: 7.91, %N: 6.23; (Calculated) %C: 71.21, %H: 7.81, %N: 6.39

Purity is based on the analytical results of the tests performed. NMR and Elemental Analysis (if available) may have an accuracy of ± 2%. Isotopic purity is based on mass distribution observed.

The contents of the specifications are subject to change without advance notice, and the specification values displayed here are the most up to date values.



Philip Chan, Head of Quality Assurance

**QC Test Date**

June 7, 2018

**Retest Date**

June 5, 2022