



## CERTIFICATE OF ANALYSIS

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### 1. Identification

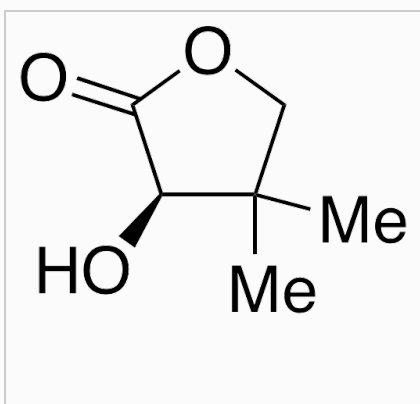
**Catalogue Number:** P182500

**CAS Number:** 599-04-2

**Product:** D-(-)-Pantolactone

**Synonym:** (3R)-Dihydro-3-hydroxy-4,4-dimethyl-2(3H)-furanone; (-)-(R)-Pantolactone; (-)-2-Hydroxy-3,3-dimethyl-γ-butyrolactone; (-)-Pantoyl Lactone; (3R)-Tetrahydro-3-hydroxy-4,4-dimethylfuran-2-one; Pantothenic Lactone; D-(-)-α-Hydroxy-β,β-dimethyl-γ-butyrolactone; (R)-α-Hydroxy-β,β-dimethyl-γ-butyrolactone;

**Structure:**



**Molecular Formula:**

C<sub>6</sub>H<sub>10</sub>O<sub>3</sub>

**Molecular weight:**

130.14

**Source of Product:**

N/A

**Solubility:**

Chloroform (Slightly), Ethyl Acetate (Slightly), Methanol (Sparingly), Water (SI

**Lot Number:** 1-LXM-169-1

**Purity:** 97%

**Shipping Condition:** This Product Is Stable To Be Shipped At Room Temperature

**Storage Condition:** 4°C

### 2. Warning

**Warning 1:**

**Warning 2:**

**Warning 3:**

### 3. Analytical Information

Tests:	Specifications:	Results:
Appearance	White to Off-White Solid	Off-White Solid
NMR	Conforms to Structure	Conforms
MS	Conforms to Structure	Conforms
GC Purity	Report Result	100.00%
Water Content	Report Result	0.7% by Karl Fischer
TGA	Report Result	See Additional Information
FT-IR	Conforms to Structure	Conforms

**Additional Information:**

The sample was tested by TGA, initiated in a nitrogen environment. The initial weight loss onset temperature was measured at 118.4°C. The environment was changed to air at 800.0°C. The sample had 2.7% of its weight remaining at 996.8°C.

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.

### 4. Signatures

Reviewed By	Reviewed By	C of A Approved By	Test Date	Retest Date
Farnaz Mahmoudi	Toni Rantanen	Christina Gouliaras	5/25/2023	5/23/2030
				