



## CERTIFICATE OF ANALYSIS

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### 1. Identification

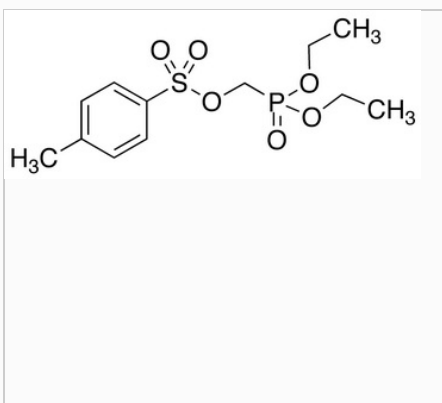
**Catalogue Number:** D445260

**CAS Number:** 31618-90-3

**Product:** Diethyl p-Toluenesulfonyloxymethylphosphonate

**Synonym:** P-[[[(4-Methylphenyl)sulfonyl]oxy]methyl]phosphonic Acid Diethyl Ester; Tosyloxymethyl Diethyl Phosphonate; [[[(4-Tolyl)sulfonyl]oxy]methyl]phosphonic Acid Diethyl Ester; Diethoxyphosphorylmethyl Tosylate; Diethyl (Tosyloxy)methylphosphonate; DESMP; Diethyl [[[(4-Tolyl)sulfonyl]oxy]methyl]phosphonate;

**Structure:**



**Molecular Formula:**

C<sub>12</sub>H<sub>19</sub>O<sub>6</sub>PS

**Molecular weight:**

322.31

**Source of Product:**

N/A

**Solubility:**

Chloroform (Sparingly),  
Dichloromethane, Ethyl  
Acetate, Methanol (Sparingly)

**Lot Number:** 3-CTZ-117-1

**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	Colourless to Pale Yellow Oil	Clear Colourless Oil
Elemental Analysis	Conforms	%C: 44.88, %H: 6.09
NMR	Conforms to Structure	Conforms
P NMR	Conforms to Structure	Conforms
MS	Conforms to Structure	Conforms
HPLC Purity	Report Result	99.36% (230 nm)

**Additional Information:** N/A

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
Neha Khanna	Toni Rantanen	Chanell Chu	3/30/2022	3/28/2026
				