



## CERTIFICATE OF ANALYSIS

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### 1. Identification

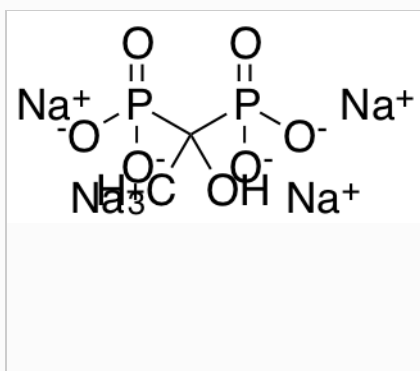
**Catalogue Number:** H538390

**CAS Number:** 3794-83-0

**Product:** (1-Hydroxyethylidene)bis-phosphonic Acid Tetrasodium Salt

**Synonym:** (Hydroxyethylidene)diphosphonic Acid Tetrasodium Salt; 1-Hydroxyethane-1,1-diphosphonic acid Tetrasodium Salt; 1-Hydroxyethylidene-1,1-diphosphonic Acid Tetrasodium Salt; Briquest ADPA 21SH; Chelest PH 214; DQ 2016; Defloc EN 43; Dequest 2016; Dequest 2016D; Encap 81105; Etidronic Acid Tetrasodium Salt; Feliox 115A Tetrasodium Salt; PH 214; SHEDN; Sequion 10Na4; Tarpinel 4NL; Tetrasodium (1-hydroxyethylidene)bis[phosphonate]; Tetrasodium (1-hydroxyethylidene)diphosphonate; Tetrasodium 1-hydroxy-

**Structure:**



**Molecular Formula:**

$C_2H_4O_7P_2Na_4$

**Molecular weight:**

293.96

**Source of Product:**

N/A

**Solubility:**

Aqueous Acid (Slightly),  
Water (Sparingly)

**Lot Number:** 2023-QIU-120

**Purity:** 98%

**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	White Solid
C NMR	Conforms to Structure	Conforms
P NMR	Conforms to Structure	Conforms
Elemental Analysis	Conforms	%C: 7.76, %H: 2.06
HPLC Purity	Report Result	99.58% (ELSD)
MS	Conforms to Structure	Conforms
NMR	Conforms to Structure	Conforms
Sodium Content	Report Result	27.26% by Ion Chromatography

**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  $\pm 2\%$ . 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
Henry Tieu	Toni Rantanen	Chanell Chu	3/15/2023	3/13/2027

