

## CERTIFICATE OF ANALYSIS

### 1-Hydroxyethylidene-1, 1-Diphosphonic Acid

Chemical name:HEDP

Batch No: 20220612

Items of Analysis	Standard Spec.	Analysis Result
Appearance	Clear,water-white to pale yellow solution	Clear,water-white to pale yellow solution
Total Active Acid,%	58.0-62.0	60.10%
Phosphorous Acid(as $\text{PO}_3^{3-}$ ),%	2.0 Maximum	1.30%
Phosphoric Acid(as $\text{PO}_4^{3-}$ ),%	0.8 Maximum	0.66%
Chloride(as $\text{Cl}^-$ ), %	1.0 Maximum	<1.0%
Specific gravity (at 20°C)	1.41-1.46	1.44
pH,(1% solution 25°C)	1.0-2.0	1.76
$\text{Ca}^{2+}$ Sequestration, (as $\text{CaCO}_3$ mg/g)	450 Minimum	520mg/g

