



>>Entry Name: Telluric acid (H₆TeO₆)

Synonym(s): Orthotelluric acid. Telluric(VI) acid

CAS Registry Number: 7803-68-1

Related CAS Registry Numbers(s): 72861-24-6

Te(OH)₆ (O_h)

Molecular Formula: H₆O₆Te

Molecular Weight: 229.644

Accurate Mass: 231.922669

Percentage Composition: H 2.63%; O 41.80%; Te 55.56%

Source/Synthesis: Synth. from TeO₂ + KMnO₄ + HNO₃

Use/Importance: Commercially available

Physical Description: White cryst. solid, stable to 140°. Exists in cubic (α) and monoclinic (β) forms

Melting Point: Mp 136°

Solubility: Sl. sol. H₂O; v. sol. dil. HNO₃; insol. org. solvs.

pKa Value: pK_{a1} 7.7; pK_{a2} 10.95 (25°)

Other Data: Many salts known

Aldrich: 30846-3

Fluka: 86375

>>Derivative: Tetrahydrate

Synonym(s): Tellurium(VI) methoxide

CAS Registry Number: 78228-86-1

Source/Synthesis: Formed below 10°

Physical Description: Cryst.

>>Derivative: Hexa-Me ester

Synonym(s): Hexamethoxytellurium

Molecular Formula: C₆H₁₈O₆Te

Molecular Weight: 313.805

Accurate Mass: 316.016569

Percentage Composition: C 22.97%; H 5.78%; O 30.59%; Te 40.66%

Source/Synthesis: Synth. from Te(OH)₆ + CH₂N₂

>>Derivative: Hexa-Na salt

CAS Registry Number: 28914-29-6

Molecular Formula: Na₆O₆Te

Molecular Weight: 361.535

Accurate Mass: 363.814321

Percentage Composition: Na 38.15%; O 26.55%; Te 35.29%

References:

Inorg. Synth., 1950, **3**, 145, (*synth*)

Lindqvist, O., *Acta Chem. Scand.*, 1970, **24**, 3178, (*cryst struct*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **1**, 438; 440, (*synth, acid, hexa Na salt*)

Gmelin Handbook Inorg. Chem., Syst. No. 11, 1976, **B1**, 116, (*rev, bibl*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, TAI750