



>>Entry Name: Telluric acid (H_2TeO_3), 11Cl

Synonym(s): Tellurous acid

CAS Registry Number: 10049-23-7

Related CAS Registry Numbers(s): 15852-22-9

$\text{O}=\text{Te}(\text{OH})_2$

Molecular Formula: $\text{H}_2\text{O}_3\text{Te}$

Molecular Weight: 177.614

Accurate Mass: 179.906624

Percentage Composition: H 1.13%; O 27.02%; Te 71.84%

Source/Synthesis: Synth. from $\text{TeCl}_4 + \text{H}_2\text{O}$ or $\text{K}_2\text{TeO}_3 + \text{HNO}_3$

Physical Description: White cryst. or powder. Forms acid and neutral salts. May be oxidised to tellurates or reduced to Te. Readily dehydrated

Solubility: Sl. sol. H_2O ; sol. dil. acid or alkali

pKa Value: $\text{p}K_{\text{a}1}$ 2.7; $\text{p}K_{\text{a}2}$ 7.7 (25°)

>>Derivative: Di-Na salt

Synonym(s): Sodium tellurite (Na_2TeO_3). Sodium tellurate(IV) (Na_2TeO_3)

CAS Registry Number: 10102-20-2

Extra CAS Registry Numbers(s): 22451-06-5

Molecular Formula: $\text{Na}_2\text{O}_3\text{Te}$

Molecular Weight: 221.578

Accurate Mass: 223.870508

Percentage Composition: Na 20.75%; O 21.66%; Te 57.59%

Physical Description: White powder

Solubility: Sol. H_2O

Other Data: $H_{\text{f}298}$ (per Na_2TeO_3) $-1001 \text{ kJ mol}^{-1}$

Hazard & Toxicity: Poison

Aldrich: 40068-8

>>Derivative: Di-K salt

>>Derivative: Di-Rb salt

CAS Registry Number: 15885-40-2

Molecular Formula: $\text{O}_3\text{Rb}_2\text{Te}$

Molecular Weight: 346.534

Accurate Mass: 347.714562

Percentage Composition: O 13.85%; Rb 49.33%; Te 36.82%

Other Data: ΔH_{f} (per Rb_2TeO_3) $-1001 \text{ kJ mol}^{-1}$

References:

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **1**, 437, (synth)

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Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, SKC500