



>>Entry Name: Potassium tetrathionate

Synonym(s): Tetrathionic acid, dipotassium salt, 8Cl

CAS Registry Number: 13932-13-3

$K_2(O_3S-S-S-SO_3)$

Molecular Formula: $K_2O_6S_4$

Molecular Weight: 302.457

Accurate Mass: 301.785184

Percentage Composition: K 25.85%; O 31.74%; S 42.41%

Source/Synthesis: Obt. by addn. of KOH in EtOH soln. to the aq. soln. (at 0°) formed by addn. of S_2Cl_2 in pet. ether to a saturated aq. soln. of SO_2 . Alternatively prepd. by addn. of aq. $K_2S_2O_3$ to either iodine in EtOH (at 0°) or SO_2Cl_2 in CCl_4 (at -20°)

Physical Description: Colourless monoclinic cryst.

Solubility: Sol. H_2O

Other Data: Stable in neutral soln., but hydrol. in alk. soln. to give $K_2S_2O_3 + K_2S_3O_6$ mixtures

Aldrich: 41699-1

Fluka: 60593

Sigma: P2926

References:

Stamm, H. *et al.*, *Z. Anorg. Allg. Chem.*, 1942, **250**, 226, (*synth*)

Eucken, M. *et al.*, *Acta Phys. Austriaca*, 1948, **1**, 339, (*Raman*)

Eremenko, R.K. *et al.*, *Zh. Obshch. Khim.*, 1955, **25**, 1241, (*synth*)

Lecomte, J. *et al.*, *C. R. Hebd. Seances Acad. Sci.*, 1963, **257**, 326, (*ir, Raman*)

Schmidt, M. *et al.*, *Chem. Ber.*, 1964, **97**, 282, (*synth*)

Schmidt, M. *et al.*, *J. Inorg. Nucl. Chem.*, 1964, **26**, 1165; 1173; 1179, (*synth, ir, uv-vis*)

Jorgensen, C.K. *et al.*, *Mat.-Fys. Medd. - K. Dan. Vidensk. Selsk.*, 1972, **38**, 1, (*pes*)

Stewart, J.M. *et al.*, *Acta Cryst. B*, 1979, **35**, 1971, (*cryst struct*)