



>>Entry Name: Potassium nitrosodisulfonate

Synonym(s): Nitrosodisulfonic acid potassium salt, 8Cl. Fremy's salt

CAS Registry Number: 14293-70-0

$\text{K}_2[\text{O}-\text{N}(\text{SO}_3)_2]$

Molecular Formula:  $\text{K}_2\text{NO}_7\text{S}_2$

Molecular Weight: 268.331

Accurate Mass: 267.839033

Percentage Composition: K 29.14%; N 5.22%; O 41.74%; S 23.90%

Source/Synthesis: Synth. e.g. by reaction of  $\text{NaNO}_2$ ,  $\text{NaHCO}_3$  and  $\text{SO}_2$  followed by oxidn. with  $\text{KMnO}_4$

Use/Importance: Commercially available. Reagent for oxidation of diverse phenols and anilines to quinones

Physical Description: Monoclinic yellow-orange needles or triclinic orange-brown rhombs

Hazard & Toxicity: Liable to detonate, esp. when impure

Aldrich: 22093-0

Sigma: N4511

References:

Murib, J.H. *et al.*, *J.A.C.S.*, 1952, **74**, 3394, (*synth, dec*)

Yamada, S. *et al.*, *Bull. Chem. Soc. Jpn.*, 1959, **32**, 721, (*uv, ir*)

Singh, R.P., *Can. J. Chem.*, 1966, **44**, 1994, (*synth*)

*Fieser and Fieser's Reagents for Organic Synthesis*, Wiley, 1967, **1**, 940

Moser, W. *et al.*, *J.C.S.(A)*, 1968, 3039, (*polymorphs, ir*)

Howie, R.A. *et al.*, *J.C.S.(A)*, 1968, 3043, (*struct, synth*)

Zimmer, H. *et al.*, *Chem. Rev.*, 1971, **71**, 229, (*uses*)

Wilson, B.J. *et al.*, *Inorg. Chem.*, 1976, **15**, 1702, (*dec*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, PLM750