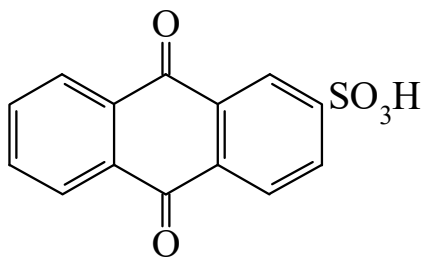




>>Entry Name: Anthraquinone-2-sulfonic acid

Synonym(s): 9,10-Dihydro-9,10-dioxo-2-anthracenesulfonic acid. β -Sulfoanthraquinone



CAS Registry Number: 84-48-0

Molecular Formula: $C_{14}H_8O_5S$

Molecular Weight: 288.28

Accurate Mass: 288.009245

Percentage Composition: C 58.33%; H 2.80%; O 27.75%; S 11.12%

Use/Importance: Used as 0.005% aq. soln. for photometric detn. of O_2 . Electron acceptor in biological redox systems

Physical Description: Leaflets + $3H_2O$ (H_2O by addn. of HCl)

Solubility: Sol. H_2O , EtOH; insol. Et_2O

pKa Value: pK_a 0.38 (20°)

>>Derivative: Na salt

Synonym(s): Sodium anthraquinone-2-sulfonate. Silver salt

CAS Registry Number: 131-08-8

Physical Description: Cryst. + $1H_2O$

Solubility: Spar. sol. H_2O

Hazard & Toxicity: Eye irritant

Aldrich: 12324-2

Fluka: 10670

>>Derivative: Me ester

Molecular Formula: $C_{15}H_{10}O_5S$

Molecular Weight: 302.307

Accurate Mass: 302.024895

Percentage Composition: C 59.60%; H 3.33%; O 26.46%; S 10.61%

Physical Description: Cryst. by subl.

Melting Point: Mp 163.6-164.2°

>>Derivative: Amide

Molecular Formula: $C_{14}H_9NO_4S$

Molecular Weight: 287.295

Accurate Mass: 287.025229

Percentage Composition: C 58.53%; H 3.16%; N 4.88%; O 22.28%; S 11.16%

Physical Description: Yellow cryst. (AcOH)

Melting Point: Mp 261°

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 510C, (ir)

Aldrich Library of NMR Spectra, 2nd edn., 1983, **2**, 830C, (nmr)

Fierz-David, H.E., *Helv. Chim. Acta*, 1927, **10**, 216, (synth)

Lauer, K., *J. Prakt. Chem.*, 1931, **130**, 185, (synth)

Stafford, C. *et al.*, *Anal. Chem.*, 1955, **27**, 2012

Karasek, F.W. *et al.*, *Anal. Chem.*, 1956, **28**, 233

Silverman, L. *et al.*, *Anal. Chim. Acta*, 1956, **14**, 514

Kolesnik, Yu.A. *et al.*, *CA*, 1967, **66**, 37202; **67**, 99896, (uv, ir, isol)

Kano, K. *et al.*, *CA*, 1974, **81**, 90793, (uv, epr)

Gamage, R.S.K.A. *et al.*, *Aust. J. Chem.*, 1993, **46**, 1595, (cryst struct)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, SER000