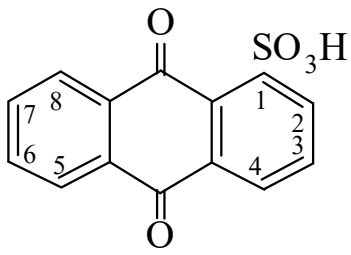
>>**Entry Name: Anthraquinone-1-sulfonic acid**

Synonym(s): 9,10-Dihydro-9,10-dioxo-1-anthracenesulfonic acid, 9Cl. α-Sulfoanthraquinone



CAS Registry Number: 82-49-5

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: Corrosion inhibitor, low acute mammalian toxicity
Physical Description: Yellow leaflets + $3H_2O$ (H_2O), anhyd. cryst. (AcOH)
Melting Point: Mp 218°
Solubility: V. sol. H_2O
pKa Value: pK_a 0.27 (20°)

Rare Chemicals Library: S12700-0

>>**Derivative:** Na salt

CAS Registry Number: 128-56-3
Physical Description: Yellow leaflets + $1H_2O$
Solubility: Spar. sol. H_2O
Hazard & Toxicity: Eye irritant

>>**Derivative:** Me ester

CAS Registry Number: 52868-98-1
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: Bright-orange cryst. by subl.
Melting Point: Mp 192-193°

>>**Derivative:** Chloride

Molecular Formula: $C_{14}H_7ClO_4S$
Molecular Weight: 306.726
Accurate Mass: 305.975357
Percentage Composition: C 54.82%; H 2.30%; Cl 11.56%; O 20.86%; S 10.45%
Physical Description: Yellow needles ($PhNO_2$)
Melting Point: Mp 216-218°

References:

Fierz-David, H.E.*, Helv. Chim. Acta*, 1927, **10**, 198, *(synth)*
Lauer, K.*, J. Prakt. Chem.*, 1931, **130**, 214; 1932, **135**, 173, *(synth)*
Org. Synth., Coll. Vol., 2, 1943, 539
Lewis, R.J.*, Sax's Dangerous Properties of Industrial Materials, 8th edn., Van Nostrand Reinhold*, 1992, DLJ800