



>>Entry Name: 7-Amino-1-naphthalenesulfonic acid, 9CI

Synonym(s): 2-Naphthylamine-8-sulfonic acid. Badische acid. Baden acid

CAS Registry Number: 86-60-2

Molecular Formula: C₁₀H₉NO₃S

Molecular Weight: 223.252

Accurate Mass: 223.030314

Percentage Composition: C 53.80%; H 4.06%; N 6.27%; O 21.50%; S 14.36%

Use/Importance: Dyestuff intermediate

Physical Description: Prisms or needles (H₂O)

Solubility: V. spar. sol. cold H₂O; mod. sol. hot

pKa Value: pK_a 3.92 (25°)

Other Data: Blue fluor. in soln.

Hazard & Toxicity: Exp. neoplastigenic data

Rare Chemicals Library: S58882-2

>>Derivative: S-Benzylthiouronium salt

Melting Point: Mp 102-103°

>>Derivative: Amide

Synonym(s): 7-Amino-1-naphthalenesulfonamide, 9CI

CAS Registry Number: 53669-09-3

Molecular Formula: C₁₀H₁₀N₂O₂S

Molecular Weight: 222.267

Accurate Mass: 222.046298

Percentage Composition: C 54.04%; H 4.53%; N 12.60%; O 14.40%; S 14.43%

Use/Importance: Acid-base fluorescent indicator (pH range: 1.9-3.9, colour change: no fluorescence → blue; pH range: 9.6-13.0, colour change: blue → no fluorescence).

Used as a 0.05% soln. in aq. EtOH

Physical Description: Cryst.

pKa Value: pK_{a1} 2.97; pK_{a2} 10.17 (25°, μ = 0)

References:

Green, A.G. *et al.*, *J.C.S.*, 1918, **113**, 35, (*synth, amide*)

Hennion, G.F. *et al.*, *J.A.C.S.*, 1943, **65**, 2468, (*synth*)

Schriever, K. *et al.*, *Chem. Ber.*, 1958, **91**, 414

Caullet, C. *et al.*, *CA*, 1967, **67**, 58864, (*ir*)

Bishop, E., *Indicators*, Pergamon, Oxford, 1972, (*use, amide*)

Theiss, J.C. *et al.*, *J. Natl. Cancer Inst.*, 1981, **67**, 1299, (*carcinogenicity*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, ALI300