



>>Entry Name: 5-Amino-2-naphthalenesulfonic acid, 9Cl
Synonym(s): 1-Naphthylamine-6-sulfonic acid. Cleve's acid

CAS Registry Number: 119-79-9

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, low acute mammalian toxicity
Physical Description: Needles + 2H₂O
Solubility: V. spar. sol. H₂O
pKa Value: pK_a 3.71 (25°)
Hazard & Toxicity: Eye irritant

Aldrich: 28507-2
Rare Chemicals Library: S57906-8
Sigma: A2389

>>Derivative: Na salt

CAS Registry Number: 28907-84-8
Physical Description: Cryst. + 2H₂O or plates + 4½ H₂O
Solubility: Sol. H₂O with blue fluor.
Hazard & Toxicity: Exp. reprod. and teratogenic effects

>>Derivative: Amide
Synonym(s): 5-Amino-2-naphthalenesulfonamide

CAS Registry Number: 13261-51-3

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 → green; pH range 9.6-13.0, colour change: green → no fluorescence). Used as a 0.05% soln. in aq. EtOH
Melting Point: Mp 218-219 dec.°
pKa Value: pK_{a2} 10.27 (25°)

References:

Erdmann, H., *Annalen*, 1893, **275**, 193, (*synth*)
Collonge, J. *et al.*, *Bull. Soc. Chim. Fr.*, 1957, 1043, (*chromatog*)
Schriever, K. *et al.*, *Chem. Ber.*, 1958, **91**, 414
Caullet, C. *et al.*, *CA*, 1967, **67**, 58864
Mayer, J. *et al.*, *Bull. Soc. Chim. Fr.*, 1971, 4129, (*pKa*)
Bishop, E., *Indicators*, Pergamon, Oxford, 1972, 689, (*use*)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, ALI250; ALI500