



>>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: C<sub>10</sub>H<sub>9</sub>NO<sub>3</sub>S

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 + 2H<sub>2</sub>O

Solubility: V. spar. sol. H<sub>2</sub>O

pKa Value: pK<sub>a</sub> 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. + 2H<sub>2</sub>O or plates + 4½ H<sub>2</sub>O

Solubility: Sol. H<sub>2</sub>O 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: C<sub>10</sub>H<sub>10</sub>N<sub>2</sub>O<sub>2</sub>S

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<sub>a2</sub> 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