



>>Entry Name: 6-Amino-1-naphthalenesulfonic acid, 9Cl

Synonym(s): 2-Naphthylamine-5-sulfonic acid. 2-Naphthionic acid. Dahl acid. D Acid

CAS Registry Number: 81-05-0

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%

Physical Description: Needles (H₂O)

Solubility: Spar. sol. cold H₂O; mod. sol. hot

pKa Value: pK_a 4.03 (25°)

Other Data: Reddish-blue fluor. in aq. soln.

Rare Chemicals Library: S59100-9

>>Derivative: Na salt

CAS Registry Number: 58306-87-9

Use/Importance: Used as a 1% aq. soln. as acid-base fluorescent indicator (pH range: 12-13; colour change: blue→violet)

Physical Description: Needles (H₂O)

Solubility: Sol. H₂O

>>Derivative: S-Benzylthiuronium salt

Melting Point: Mp 172-174°

>>Derivative: Amide

Synonym(s): 6-Amino-1-naphthalenesulfonamide

CAS Registry Number: 1206-43-5

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: Used as 0.05% soln. in aq. EtOH. 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)

Physical Description: Needles

Melting Point: Mp 165°

pKa Value: pK_{a2} 10.27 (25°)

>>Derivative: N,N-Di-Et, hydrazide

Synonym(s): 6-(Diethylamino)-2-naphthalenesulfonyl hydrazide

CAS Registry Number: 100344-00-1

Molecular Formula: C₁₄H₁₉N₃O₂S

Molecular Weight: 293.389

Accurate Mass: 293.119797

Percentage Composition: C 57.31%; H 6.53%; N 14.32%; O 10.91%; S 10.93%

Use/Importance: Fluorescent reagent for hplc anal. of carbonyl compds.

References:

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

Collonge, J. *et al.*, *Bull. Soc. Chim. Fr.*, 1957, 1043, (*chromatog*)

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

Mayer, J. *et al.*, *Bull. Soc. Chim. Fr.*, 1971, 4129, (*pKa*,)

Bishop, E., *Indicators*, Pergamon, Oxford, 1972, 689, (*use, ind*)

Franc, J. *et al.*, *J. Chromatogr.*, 1979, **70**, 89, (*chromatog*)

Anderson, J.M., *Anal. Biochem.*, 1986, **152**, 146, (*6-Diethylamino-2-naphthalenesulfonyl hydrazide*)