8-Anilino-1-naphthalenesulfonic acid ammonium salt

Product Number  A 3125
Store at Room Temperature

Product Description
Molecular formula: C_{16}H_{16}N_{2}O_{3}S
Molecular weight: 316.4
CAS Number: 28836-03-5
$\lambda_{\text{max}}$: 350 nm
Extinction Coefficient: $E^{\text{nm}} = 4.95$ (0.1 M phosphate, pH 6.8)
Synonyms: ANS$^{1}$Ammonium salt, ANSA, 1,8-ANS NH$_{4}$

This product is a fluorescent probe for protein studies. Excitation of the unbound dye at 380 nm results in a low fluorescent emission with a maximum at 545 nm. The fluorescence intensity of ANS increases when the dye binds to the hydrophobic regions of a protein. The protein-ANS complex has an emission spectrum which is shifted to a broad maximum at 470 nm. At pH 8, protein causes a 40-fold increase in the relative quantum yield compared to free ANS in solution.$^{1}$

ANS has been used to monitor protein conformational changes by binding to the hydrophobic regions of a protein, to investigate the visual excitation process and structural aspects of photoreceptor cell membranes, and to probe (and disrupt) the structure of both high- and low-density lipoproteins. It has also been used as a substrate in a chemiluminescent enzyme immunoassay system and as a dye for yeast viability determination. The conformational states for apo- and holo- yeast alcohol dehydrogenase were reported under conditions of low pH using ANS fluorescence.$^{10}$

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in water (50 mg/ml).

References
