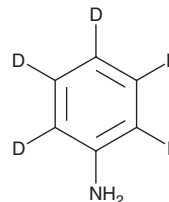


PRODUCT INFORMATION



Aniline-d₅ Item No. 35131

CAS Registry No.: 4165-61-1
Formal Name: benzen-2,3,4,5,6-d₅-amine
Synonyms: Aminobenzene-d₅, Phenyl-d₅ amine, Benzenamine-d₅
MF: C₆H₂D₅N
FW: 98.2
Chemical Purity: ≥98% (Aniline)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
UV/Vis.: λ_{max}: 235 nm
Supplied as: A liquid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Aniline-d₅ is intended for use as an internal standard for the quantification of aniline by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Aniline-d₅ is supplied as a liquid. A stock solution may be made by dissolving the aniline-d₅ in the solvent of choice, which should be purged with an inert gas. Aniline-d₅ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of aniline-d₅ in these solvents is approximately 3, 10, and 15 mg/ml, respectively.

Description

Aniline is an aromatic amine that has been used as a starting material in the synthesis of a wide variety of precursors to dyes and pigments, rubber processing chemicals, and agricultural chemicals.¹ It increases the levels of reactive oxygen species (ROS) and malondialdehyde (MDA) and decreases the levels of glutathione and catalase, as well as the activity of superoxide dismutase (SOD), in primary rat hepatocytes when used at concentrations of 5 and 10 µg/ml.² Aniline (0.3 and 0.6% of the diet) induces splenic sarcomas in rats and is neurotoxic to rats when administered at doses of 750 and 1,000 mg/kg.^{3,4} Formulations containing aniline have been used in the synthesis of pharmaceuticals.

References

1. Kahl, T., Schröder, K.-Q., Lawrence, F.R., *et al.* Aniline. *Ullmann's Encyclopedia of Industrial Chemistry*. 6th edition (2011).
2. Wang, Y., Gao, H., Na, X.-L., *et al.* Aniline induces oxidative stress and apoptosis of primary cultured hepatocytes. *Int. J. Environ. Res. Public Health* **13**(12), 1188 (2016).
3. Goodman, D.G., Ward, J.M., and Reichardt, W.D. Splenic fibrosis and sarcomas in F344 rats fed diets containing aniline hydrochloride, *p*-chloroaniline, azobenzene, *o*-toluidine hydrochloride, 4,4'-sulfonyldianiline, or D & C red No. 9. *J. Natl. Cancer Inst.* **73**(1), 265-273 (2019).
4. Okazaki, Y., Yamashita, K., Sudo, M., *et al.* Neurotoxicity induced by a single oral dose of aniline in rats. *J. Vet. Med. Sci.* **63**(5), 539-546 (2001).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/17/2026

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM