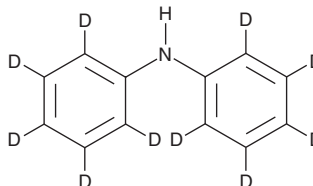


PRODUCT INFORMATION



Diphenylamine-d₁₀ Item No. 45569

CAS Registry No.: 37055-51-9
Formal Name: N-(phenyl-2,3,4,5,6-d₅)-benzen-2,3,4,5,6-d₅-amine
MF: C₁₂H₁₀D₁₀N
FW: 179.3
Chemical Purity: ≥98% Diphenylamine
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₁₀); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Diphenylamine-d₁₀ is intended for use as an internal standard for the quantification of diphenylamine (Item No. 24250) 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).

Diphenylamine-d₁₀ is supplied as a solid. A stock solution may be made by dissolving the diphenylamine-d₁₀ in the solvent of choice, which should be purged with an inert gas. Diphenylamine-d₁₀ is soluble (≥10 mg/ml) in DMSO and ethanol.

Description

Diphenylamine is an antioxidant and a pesticide.¹ It inhibits the oxidation of α-farnesene in solution as well as in the coating of Granny Smith apples postharvest. Diphenylamine (1,000 ppm) prevents superficial scald in several varieties of apples when applied by dipping or wrapping postharvest.² It is active against various benomyl-resistant or -sensitive isolates of the plant pathogenic fungus *P. expansum* (EC₅₀S = <2-12.8 and 22.9-78.5 µg/ml, respectively).³ Diphenylamine (0.25%) induces mortality in sheep keds (*M. ovinus*).⁴ It has been found as a contaminant in various jellies and jams and seawater.^{5,6} Formulations containing diphenylamine have been used in the control of fungi and insects in agriculture and in the preservation of postharvest apples from scald.

References

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5. Makni, Y., Diallo, T., Areskou, F., et al. *Food Chem.* **425**, 136448 (2023).
6. Wang, S., Wu, L., Wang, Z., et al. *Sci. Total Environ.* **860**, 160487 (2023).

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.

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