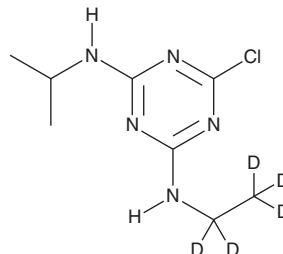


PRODUCT INFORMATION



Atrazine-d₅ Item No. 39551

CAS Registry No.: 163165-75-1
Formal Name: 6-chloro-N-(ethyl-d₅)-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine
Synonym: ATR-d₅
MF: C₈H₉ClD₅N₅
FW: 220.7
Chemical Purity: ≥98% (Atrazine-d₅)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤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

Atrazine-d₅ is intended for use as an internal standard for the quantification of atrazine (Item No. 13375) 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).

Atrazine-d₅ is supplied as a solid. A stock solution may be made by dissolving the atrazine-d₅ in the solvent of choice, which should be purged with an inert gas. Atrazine-d₅ is slightly soluble in ethanol, DMSO, and methanol (heated).

Description

Atrazine is an herbicide.¹ It inhibits the emergence of hood canarygrass (*P. paradoxa*), ryegrass (*L. rigidum*), and slender foxtail (*A. myosuroides*) in field studies when applied at a concentration of 0.25 or 0.5 kg/ha.² Atrazine (25 ppb) decreases serum levels of testosterone and increases the incidence of hermaphroditism in adult male frogs during larval development.³ It decreases uterine size and reduces serum levels of estrogen, progesterone, luteinizing hormone, follicle-stimulating hormone (FSH), and prolactin in female rats when administered at a dose of 300 mg/kg per day.⁴ Dietary administration of atrazine (1000 ppm) increases the incidence of mammary tumors in rats.⁵ Formulations containing atrazine have been used as herbicides in agriculture.

References

1. Rahman, A., Burney, B., and Honore, E.N. Weed control in maize on high organic matter soils. *P. NZ Weed P.* **33**, 245-248 (1980).
2. Yaacoby, T., Schonfeld, M., and Rubin, B. Characteristics of atrazine-resistant biotypes of three grass weeds. *Weed Sci.* **34**(2), 181-184 (1986).
3. Hayes, T.B., Collins, A., Lee, M., et al. Hermaphroditic, demasculinized frogs after exposure to the herbicide atrazine at low ecologically relevant doses. *Proc. Natl. Acad. Sci. USA* **99**(8), 5476-5480 (2002).
4. Goldman, J.M., Stoker, T.E., and Cooper, R.L. Neuroendocrine and reproductive effects of contemporary-use pesticides. *Toxicol. Ind. Health* **15**(1-2), 26-36 (1999).
5. Eldridge, J.C., Wetzel, L.T., Stevens, J.T., et al. The mammary tumor response in triazine-treated female rats: A threshold-mediated interaction with strain and species-specific reproductive senescence. *Steroids* **64**(9), 672-678 (1999).

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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