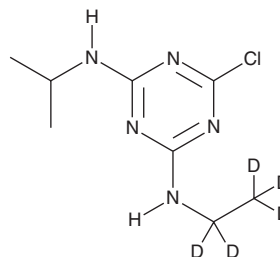


# PRODUCT INFORMATION



## Atrazine-d<sub>5</sub> Item No. 39551

**CAS Registry No.:** 163165-75-1  
**Formal Name:** 6-chloro-N-(ethyl-d<sub>5</sub>)-N'-(1-methylethyl)-1,3,5-triazine-2,4-diamine  
**Synonym:** ATR-d<sub>5</sub>  
**MF:** C<sub>8</sub>H<sub>9</sub>ClD<sub>5</sub>N<sub>5</sub>  
**FW:** 220.7  
**Chemical Purity:** ≥98% (Atrazine-d<sub>5</sub>)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**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-d<sub>5</sub> 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-d<sub>5</sub> is supplied as a solid. A stock solution may be made by dissolving the atrazine-d<sub>5</sub> in the solvent of choice, which should be purged with an inert gas. Atrazine-d<sub>5</sub> is slightly soluble in ethanol, DMSO, and methanol (heated).

### Description

Atrazine is an herbicide.<sup>1</sup> It induces lethality in poppy plants (*P. somniferum*) when applied at a concentration of 250 g AI/ha.<sup>2</sup> Atrazine (1.6% AI/L at planting) inhibits the emergence of summer grass (*D. sanguinalis*), barnyard grass (*E. crus-galli*), smooth witchgrass (*P. dichotomiflorum*), and paspalum (*P. dilatatum*) and increases maize yields in field trials.<sup>1</sup> It decreases serum levels of testosterone and increases the incidence of hermaphroditism in adult male frogs when used at a concentration of 25 ppb in the water during larval development.<sup>3</sup> It decreases uterine size and reduces serum levels of estrogen, progesterone, luteinizing hormone, follicle-stimulating hormone, and prolactin in female rats when administered at a dose of 300 mg/kg per day.<sup>4</sup> Dietary administration of atrazine (1,000 ppm) increases the incidence of mammary tumors in rats.<sup>5</sup> Formulations containing atrazine have been used as herbicides in agriculture.

### References

1. Rahman, A., Burney, B., and Honore, E.N. *P. NZ Weed P.* **33**, 245-248 (1980).
2. Horowitz, M. *Bull. Narc.* **32(1)**, 33-43 (1980).
3. Hayes, T.B., Collins, A., Lee, M., et al. *Proc. Natl. Acad. Sci. USA* **99(8)**, 5476-5480 (2002).
4. Goldman, J.M., Stoker, T.E., and Cooper, R.L. *Toxicol. Ind. Health* **15(1-2)**, 26-36 (1999).
5. Eldridge, J.C., Wetzel, L.T., Stevens, J.T., et al. *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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#### 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