

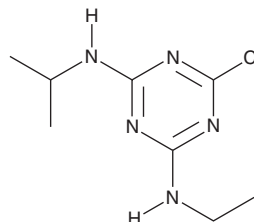
PRODUCT INFORMATION



Atrazine

Item No. 13375

CAS Registry No.: 1912-24-9
Formal Name: 6-chloro-N2-ethyl-N4-(1-methylethyl)-1,3,5-triazine-2,4-diamine
Synonym: ATR
MF: C₈H₁₄ClN₅
FW: 215.7
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 264 nm
Supplied as: A crystalline 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 is supplied as a crystalline solid. A stock solution may be made by dissolving the atrazine in the solvent of choice, which should be purged with an inert gas. Atrazine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of atrazine in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Atrazine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, atrazine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Atrazine has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

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 (1,000 ppm) increases the incidence of mammary tumors in rats.⁵ Formulations containing atrazine have been used as herbicides in agriculture.

References

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2. Yaacoby, T., Schonfeld, M., and Rubin, B. Characteristics of atrazine-resistant biotypes of three grass weeds. *Weed Sci.* **34**(2), 181-184 (1986).
4. 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).
5. Goldman, J.M., Stoker, T.E., and Cooper, R.L. Neuroendocrine and reproductive effects of contemporary-use pesticides. *Toxicology and Industrial Health* **15**, 26-36 (1999).
6. 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**, 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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