

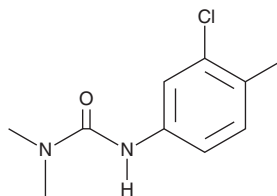
PRODUCT INFORMATION



Chlorotoluron

Item No. 24225

CAS Registry No.: 15545-48-9
Formal Name: N'-(3-chloro-4-methylphenyl)-N,N-dimethyl-urea
MF: C₁₀H₁₃ClN₂O
FW: 212.7
Purity: ≥98%
UV/Vis.: λ_{max}: 244 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

Chlorotoluron is supplied as a crystalline solid. A stock solution may be made by dissolving the chlorotoluron in the solvent of choice, which should be purged with an inert gas. Chlorotoluron is slightly soluble in chloroform and methanol.

Description

Chlorotoluron is a phenylurea herbicide.¹ It is genotoxic, inducing the formation of chromosome aberrations and sister chromatid exchange (SCE) in CHEL liver epithelial cells in a concentration-dependent manner.² Chlorotoluron (625-5,000 mg/kg) induces testicular anaplasia as well as loosening and incrustation to the basement membrane that destroys the blood-testis barrier, increases superoxide dismutase (SOD) activity, and degrades testis mitochondria in mice.³ It reduces food intake and body weight and induces hemolytic anemia, hemosiderosis of the spleen, and brown atrophy in dogs when administered at a dose of 9,200 ppm in the diet.⁴

References

1. Banyiova, K., Cup, P., and Kohoutek, J. An experimentally refined tool to assess the risks of the human dermal exposure to herbicide chlorotoluron. *Environ. Sci. Pollut. Res. Int.* **22**(14), 10713-10720 (2015).
2. Federico, C., Motta, S., Palmieri, C., *et al.* Phenylurea herbicides induce cytogenetic effects in Chinese hamster cell lines. *Mutat. Res.* **721**(1), 89-94 (2011).
3. Mu, H., Zhang, P., and Xu, J. Testicular toxicity and mechanisms of chlorotoluron compounds in the mouse. *Toxicol. Mech. Methods* **17**(8), 483-488 (2007).
4. Zak, F. and Sachsse, K. Oral toxicity of the herbicide chlortoluron [N-(3-chloro-4-methylphenyl)-N,N'-dimethylurea] in rats and dogs. *Proc. Eur. Soc. Study Drug Tox.* **12**, 272-281 (1971).

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