

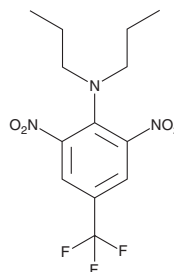
PRODUCT INFORMATION



Trifluralin

Item No. 35476

CAS Registry No.: 1582-09-8
Formal Name: 2,6-dinitro-N,N-dipropyl-4-(trifluoromethyl)-benzenamine
MF: $C_{13}H_{16}F_3N_3O_4$
FW: 335.3
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 273 nm
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

Trifluralin is supplied as a solid. A stock solution may be made by dissolving the trifluralin in the solvent of choice, which should be purged with an inert gas. Trifluralin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of trifluralin in these solvents is approximately 10, 25, and 20 mg/ml, respectively.

Description

Trifluralin is a dinitroaniline herbicide.^{1,2} It inhibits photosynthetic electron transport, ATP synthesis, and cytochrome *f* reduction in isolated spinach chloroplasts in a concentration-dependent manner.¹ Trifluralin (1.68 kg/ha) decreases cotton (*G. hirsutum*) plant height when applied to the soil prior to planting.² It induces reactive oxygen species (ROS) production in V79 Chinese hamster lung fibroblasts and genotoxicity in isolated human peripheral lymphocytes when used at concentrations ranging from 2.5 to 500 μM .³ Trifluralin has been found as a contaminant in freshwater fish.⁴ Formulations containing trifluralin have been used as herbicides in agricultural, residential, commercial, and industrial settings.

References

1. Robinson, S.J., Yocum, C.F., and Ikuma, H. Inhibition of chloroplast electron transport reactions by trifluralin and diallate. *Plant Physiol.* **60**(6), 840-844 (1977).
2. Kappelman, A.J., Jr. and Buchanan, A. Influence of fungicides, herbicides and combinations on emergence and seedling growth of cotton. *Agronomy* **60**, 660-662 (1968).
3. Kiliç, Z.S., Aydın, S., Bucurgat, Ü.Ü., et al. In vitro genotoxicity assessment of dinitroaniline herbicides pendimethalin and trifluralin. *Food Chem. Toxicol.* **113**, 90-98 (2018).
4. Camanzo, J., Rice, C.P., Jude, D.J., et al. Organic priority pollutants in nearshore fish from 14 lake Michigan tributaries and embayments, 1983. *J. Great Lakes Res.* **13**(3), 296-309 (1987).

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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