

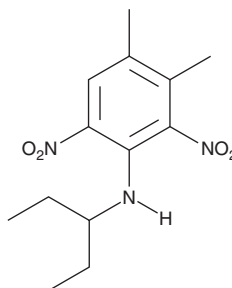
PRODUCT INFORMATION



Pendimethalin

Item No. 34557

CAS Registry No.: 40487-42-1
Formal Name: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitro-benzenamine
Synonym: AC-92553
MF: C₁₃H₁₉N₃O₄
FW: 281.3
Purity: ≥98%
UV/Vis.: λ_{max}: 239 nm
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

Pendimethalin is supplied as a solid. A stock solution may be made by dissolving the pendimethalin in the solvent of choice, which should be purged with an inert gas. Pendimethalin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of pendimethalin in ethanol is approximately 25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

Pendimethalin is a dinitroaniline herbicide.¹ It controls johnsongrass and increases seed cotton yield when used at concentrations ranging from 0.56 to 1.12 kg/ha. Pendimethalin (25-500 μM) induces the production of reactive oxygen species (ROS) and genotoxicity in isolated human peripheral lymphocytes.² *In vivo*, pendimethalin (62.5, 125, and 250 mg/kg) increases renal and hepatic protein carbonylation, lipid peroxidation, necrosis, leukocyte infiltration, and formation of pyknotic nuclei in rats.³ Formulations containing pendimethalin have been used in the control of annual grasses in agriculture.

References

1. Jordan, T.N., Baker, R.S., and Barrentine, W.L. Comparative toxicity of several dinitroaniline herbicides. *Weed Sci.* **26(1)**, 72-75 (1978).
2. Kiliç, Z.S., Aydin, S., Bucurgat, Ü.Ü., *et al.* *In vitro* genotoxicity assessment of dinitroaniline herbicides pendimethalin and trifluralin. *Food Chem. Toxicol.* **113**, 90-98 (2018).
3. Ahmad, M.I., Zafeer, M.F., Javed, M., *et al.* Pendimethalin-induced oxidative stress, DNA damage and activation of anti-inflammatory and apoptotic markers in male rats. *Sci. Rep.* **8(1)**, 17139 (2018).

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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