

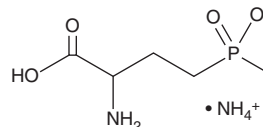
PRODUCT INFORMATION



Glufosinate (ammonium salt)

Item No. 16675

CAS Registry No.: 77182-82-2
Formal Name: 2-amino-4-(hydroxymethylphosphinyl)-butanoic acid, monoammonium salt
Synonyms: HOE 00661, HOE 39866
MF: $C_5H_{11}NO_4P \cdot NH_4$
FW: 198.2
Purity: $\geq 95\%$
Supplied as: A crystalline 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

Glufosinate (ammonium salt) is supplied as a crystalline solid. Aqueous solutions of glufosinate (ammonium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of glufosinate (ammonium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Glufosinate is a broad-spectrum herbicide and a racemic mixture of L-phosphinothricin, a phytotoxic compound, and D-phosphinothricin, its inactive enantiomer.¹ It is an irreversible inhibitor of glufosinate synthetase 1 (GS1) and GS2 (K_i s = 1.1. and 4.8 μM , respectively), enzymes that are required for nitrogen metabolism in plants. Glufosinate induces the production of reactive oxygen species (ROS) and lipid peroxidation in plant cell membranes. It reduces dry biomass of the weeds *E. canadensis* and *L. rigidum* with ED_{50} values of 26 and 763 g/hectare, respectively. Glufosinate has no observed adverse effects in rats and mice when administered at doses of 4.1 and 17 mg/kg per day for three months. Formulations containing glufosinate have been used as foliar herbicides in agriculture.

Reference

1. Takano, H.K. and Dayan, F.E. Glufosinate-ammonium: A review of the current state of knowledge. *Pest Manag. Sci.* **76**(12), 3911-3925 (2020).

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.

WARRANTY AND LIMITATION OF REMEDY

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