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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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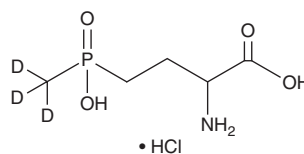
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PRODUCT INFORMATION

Glufosinate-d₃ (hydrochloride)

Item No. 34447

CAS Registry No.: 1323254-05-2
Formal Name: 2-amino-4-(hydroxy(methyl-d₃)phosphoryl)butanoic acid, monohydrochloride
MF: C₅H₉D₃NO₄P • HCl
FW: 220.6
Chemical Purity: ≥95% (Glufosinate)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Glufosinate-d₃ (hydrochloride) is intended for use as an internal standard for the quantification of glufosinate (Item No. 16675) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Glufosinate-d₃ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the Glufosinate-d₃ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Glufosinate-d₃ (hydrochloride) is slightly soluble in methanol (heated, sonicated).

Description

Glufosinate is a broad-spectrum herbicide and 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_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 ED₅₀ 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.

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