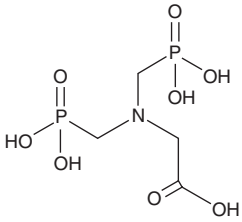
PRODUCT INFORMATION

Glyphosine

Item No. 14299

CAS Registry No.:	2439-99-8
Formal Name:	N,N-*bis*(phosphonomethyl)-glycine
Synonyms:	CP 41,845, Glycine Methyl Phosphonic Acid, NSC 18468
MF:	$C_4H_{11}NO_8P_2$
FW:	263.1
Purity:	≥98%
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

Glyphosine is supplied as a solid. Aqueous solutions of glyphosine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of glyphosine in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Glyphosine is an organophosphate plant growth regulator.[1] It decreases chlorophyll α/β levels in new fronds of duckweed (*L. gibba*) when used at a concentration of 500 µM.[1] Glyphosine (2.24, 4.48, and 6.72 kg/ha) increases the percentage of, and sucrose levels in, ripe sugarcane without inhibiting the growth of the post-harvest rattan, the stem and roots of the same plants.[3] It also increases the anti-insulin T cell response to an autoantigen peptide comprising insulin B residues 9-23 *in vitro* (EC_{50} = 70.6 nM).[2] Glyphosine (80 mg/kg per day) increases IL-10 levels produced by isolated mouse splenocytes and delays diabetes onset in a non-obese diabetic (NOD) mouse model of type 1 diabetes.

References

1. Slovin, J.P. and Tobin, E.M. Glyphosine, a plant growth regulator, affects chloroplast membrane proteins. *Biochim. Biophys. Acta* **637(1)**, 177-184 (1981).
2. Samuels, G. and Vélez-Ramos, A. Field experiments with Polaris as a chemical ripener of sugarcane in Puerto Rico, 1971-72. *J. Agr. U. Puerto Rico* **61(2)**, 242-249 (1977).
3. Michels, A.W., D.A., O., Zhang, L., *et al.* Structure-based selection of small molecules to alter allele-specific MHC class II antigen presentation. *J. Immunol.* **187(11)**, 5921-5930 (2011).

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