

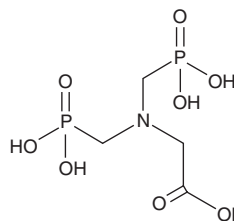
# PRODUCT INFORMATION



## 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:  $\geq 98\%$   
Supplied as: A solid  
Storage:  $-20^\circ\text{C}$   
Stability:  $\geq 4$  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.<sup>1</sup> It decreases chlorophyll  $\alpha/\beta$  levels in new fronds of duckweed (*L. gibba*) when used at a concentration of 500  $\mu\text{M}$ .<sup>1</sup> 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 ratoon, the stem and roots of the same plants.<sup>3</sup> It also increases the anti-insulin T cell response to an autoantigen peptide comprising insulin B residues 9-23 *in vitro* ( $\text{EC}_{50} = 70.6 \text{ nM}$ ).<sup>2</sup> 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).

#### 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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#### 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