

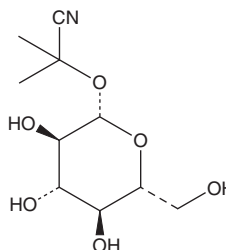
PRODUCT INFORMATION



Linamarin

Item No. 20532

CAS Registry No.: 554-35-8
Formal Name: 2-(β-D-glucopyranosyloxy)-2-methylpropanenitrile
Synonyms: α-hydroxy Isobutyronitrile β-D-glucose, Phaseolunatin
MF: C₁₀H₁₇NO₆
FW: 247.2
Purity: ≥98%
Supplied as: A crystalline 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

Linamarin is supplied as a crystalline solid. A stock solution may be made by dissolving the linamarin in the solvent of choice, which should be purged with an inert gas. Linamarin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of linamarin in these solvents is approximately 10, 30, and 25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of linamarin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of linamarin in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Linamarin is a glucoside of acetone cyanohydrin found in the leaves and roots of cassava, lima beans, and flax.¹ It is thought to function in the transport of nitrogen from plant leaves to roots in young plants but also serves as a plant defense mechanism. Linamarin is converted to toxic hydrocyanic acid or prussic acid when it comes into contact with linamarase, an enzyme that is released when the cells of cassava roots are ruptured.²

References

1. Jørgensen, K., Morant, A.V., Morant, M., *et al.* Biosynthesis of the cyanogenic glucosides linamarin and lotaustralin in cassava: isolation, biochemical characterization, and expression pattern of CYP71E7, the oxime-metabolizing cytochrome P450 enzyme. *Plant Physiol.* **155**(1), 282-292 (2011).
2. Cereda, M.P. and Mattos, M.C.Y. Linamarin: The toxic compound of Cassava. *J. Venom. Anim. Toxins* **2**(1), 6-12 (1996).

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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