



LKT Laboratories, Inc.

Moniliformin

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Product Information

Product ID M5853

CAS No. 31876-38-7

Chemical Name 3-hydroxycyclobut-3-ene-1,2-dione

Synonym

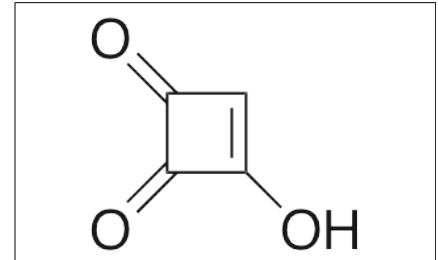
Formula C₄H₂O₃

Formula Wt. 98.06

Melting Point 345-355C (dec)

Purity ≥98%

Solubility water, methanol



Bulk quantities available upon request

Product ID	Size
M5853	1 mg
M5853	5 mg

Store Temp 4° C

Ship Temp Ambient

Description Moniliformin is a mycotoxin initially produced by species of *Fusarium* that can be found in grain and vegetable products. Moniliformin may damage myocardial tissue as a result of decreasing glutathione peroxidase and reductase activities, preventing glutathione radical scavenging. Moniliformin also decreases collagen synthesis and upregulates expression of matrix metalloproteinases 1 and 13 (MMP1/13), inhibiting chondrocyte viability in vitro. In macrophages and dendritic cells, moniliformin alters CD surface marker expression and decreases endocytosis ability. Moniliformin may also inhibit pyruvate dehydrogenase.

References Scarpino V, Blandino M, Negre M, et al. Moniliformin analysis in maize samples from North-West Italy using multifunctional clean-up columns and the LC-MS/MS detection method. *Food Addit Contam Part A Chem Anal Control Expo Risk Assess.* 2013;30(5):876-84. PMID: 23731218.

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von Bargaen KW, Lohrey L, Cramer B, et al. Analysis of the *Fusarium* mycotoxin moniliformin in cereal samples using 13C₂-moniliformin and high-resolution mass spectrometry. *J Agric Food Chem.* 2012 Apr 11;60(14):3586-91. PMID: 22428531.

Zhang A, Cao JL, Yang B, et al. Effects of moniliformin and selenium on human articular cartilage metabolism and their potential relationships to the pathogenesis of Kashin-Beck disease. *J Zhejiang Univ Sci B.* 2010 Mar;11(3):200-8. PMID: 20205306.

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Gathercole PS, Thiel PG, Hofmeyr JH. Inhibition of pyruvate dehydrogenase complex by moniliformin. *Biochem J.* 1986 Feb 1;233(3):719-23. PMID: 3707519.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.