

Product Name: Deoxynivalenol

Catalog No.: 3976

Batch No.: 4

CAS Number: 51481-10-8

IUPAC Name: 3 α ,7 α ,15-Trihydroxy-12,13-epoxytrichothec-9-en-8-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₂₀O₆

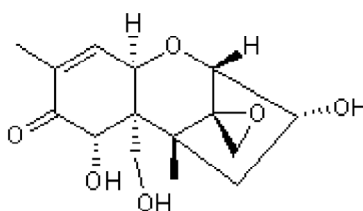
Batch Molecular Weight: 296.32

Physical Appearance: White solid

Solubility: ethanol to 30 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: At 155°C

HPLC: Shows 100% purity

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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CAS Number: 51481-10-8

IUPAC Name: 3 α ,7 α ,15-Trihydroxy-12,13-epoxytrichothec-9-en-8-one

Description:

Deoxynivalenol is a tricothecene mycotoxin and potent protein synthesis inhibitor. Exhibits cytotoxic activity in vivo via the ribotoxic stress response. Induces p38-mediated gene expression and apoptosis in leukocytes; activity results in systemic expression of interleukin-6 (IL-6) and other proinflammatory cytokines. Also induces migration of NF- κ B into the nucleus.

Physical and Chemical Properties:

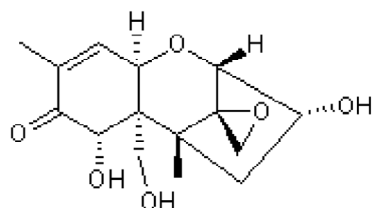
Batch Molecular Formula: C₁₅H₂₀O₆

Batch Molecular Weight: 296.32

Physical Appearance: White solid

Minimum Purity: \geq 98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

ethanol to 30 mM

This product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Krishnaswamy et al (2010) Lutein protects HT-29 cells against deoxynivalenol-induced oxidative stress and apoptosis: prevention of NF- κ B nuclear localization and down regulation of NF- κ B and cyclo-oxygenase-2 expression. *Free Radic.Biol.Med.* **49** 50. PMID: 20347963.

Shi et al (2009) Role of GRP78/BiP degradation and ER stress in deoxynivalenol-induced interleukin-6 upregulation in the macrophage. *Toxicol.Sci.* **109** 247. PMID: 19336499.

Bae and Pestka (2008) Deoxynivalenol induces p38 interaction with the ribosome in monocytes and macrophages. *Toxicol.Sci.* **105** 59. PMID: 18502741.

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