

PRODUCT INFORMATION



Zearalenone-¹³C₁₈

Item No. 31288

CAS Registry No.: 911392-43-3

Formal Name: (3S,11E)-3,4,5,6,9,10-hexahydro-14,16-dihydroxy-3-(methyl-¹³C)-1H-2-benzoxacyclotetradecin-1,7(8H)-dione-¹³C₁₇

Synonyms: FES-¹³C₁₈, Mycotoxin F2-¹³C₁₈, Toxin F2-¹³C₁₈, Zenone-¹³C₁₈

MF: [¹³C]₁₈H₂₂O₅

FW: 336.2

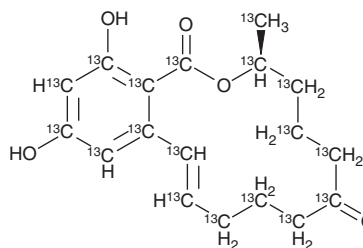
Purity: ≥98%

Supplied as: A 25 µg/ml solution in acetonitrile

Storage: -20°C

Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



Description

Zearalenone-¹³C₁₈ is intended for use as an internal standard for the quantification of zearalenone (Item No. 11353) by GC- or LC-MS. Zearalenone is a mycotoxin that has been found in *Fusarium* and has estrogenic activities.¹ It binds to human estrogen receptor α (ERα) and ERβ (IC₅₀s = 9 and 5.8 nM, respectively).² Zearalenone induces precocious development of mammary tissues in young female pigs and prepubertal enlargement in young male pigs.³ Zearalenone (1.5-5 mg/kg of diet) induces hyperestrogenism in pigs. It also induces degeneration of meiotic chromatin in oocytes and reduces fertility in pigs when administered at a dose of 200 µg/kg.⁴ Zearalenone has been found as a contaminant in wheat, maize, and barley and livestock feeds.^{3,4}

References

1. Zinedine, A., Soriano, J.M., Moltó, J.C., *et al.* Review on the toxicity, occurrence, metabolism, detoxification, regulations and intake of zearalenone: An oestrogenic mycotoxin. *Food Chem. Toxicol.* **45**(1), 1-18 (2007).
2. Kuiper, G.G.J.M., Lemmen, J.G., Carlsson, B., *et al.* Interaction of estrogenic chemicals and phytoestrogens with estrogen receptor β. *Endocrinology* **139**(10), 4252-4263 (1998).
3. Richard, J.L. Some major mycotoxins and their mycotoxicoses—an overview. *Int. J. Food Microbiol.* **119**(1-2), 3-10 (2007).
4. Tiemann, U. and Dänicke, S. *In vivo* and *in vitro* effects of the mycotoxins zearalenone and deoxynivalenol on different non-reproductive and reproductive organs in female pigs: A review. *Food Addit. Contam.* **24**(3), 306-314 (2007).

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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