

PRODUCT INFORMATION



Ochratoxin A-¹³C₂₀

Item No. 31295

CAS Registry No.: 911392-42-2

Formal Name: N-[[[(3R)-5-chloro-3,4-dihydro-8-hydroxy-3-(methyl-¹³C)-1-oxo-1H-2-benzopyran-7-yl-1,3,4,4a,5,6,7,8,8a-¹³C₉]carbonyl-¹³C]-L-phenylalanine-¹³C₉

Synonym: OTA-¹³C₂₀

MF: [¹³C]₂₀H₁₈ClNO₆

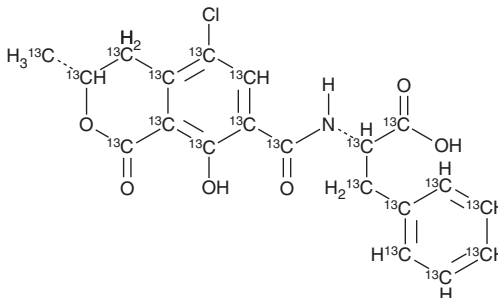
FW: 423.7

Purity: ≥98%

Supplied as: A 10 µg/ml solution in methanol

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

Ochratoxin A-¹³C₂₀ (OTA-¹³C₂₀) is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as acetonitrile purged with an inert gas can be used.

Description

OTA-¹³C₂₀ is intended for use as an internal standard for the quantification of OTA (Item No. 11439) by GC- or LC-MS. OTA is a mycotoxin that has been found in *Penicillium* and is an active metabolite of OTC (Item No. 20183).¹⁻³ It is formed from OTC *in vivo*, however, OTC can also be formed from OTA by gut microbiota.^{1,4} OTA (120 µg/kg) increases renal lipid peroxide levels and the number of apoptotic cells, as well as reduces renal superoxide dismutase (SOD) activity in rats.² Topical application of OTA (80 µg/animal) induces DNA damage, cell cycle arrest at the G₀/G₁ phase, and apoptosis in mouse skin cells.³ It also initiates tumor formation in a two-stage mouse skin tumorigenesis model. OTA has been found in food products and poultry feed.^{5,6}

References

1. Fuchs, R., Hult, K., Peraica, M., *et al.* Conversion of ochratoxin C into ochratoxin A *in vivo*. *Appl. Environ. Microbiol.* **48**(1), 41-42 (1984).
2. Petrik, J., Zanić-Grubisić, T., Barisić, K., *et al.* Apoptosis and oxidative stress induced by ochratoxin A in rat kidney. *Arch. Toxicol.* **77**(12), 685-693 (2003).
3. Kumar, R., Ansari, K.M., Chaudhari, B.P., *et al.* Topical application of ochratoxin A causes DNA damage and tumor initiation in mouse skin. *PLoS One* **7**(10), (2012).
4. Galtier, P. and Alvinerie, M. *In vitro* transformation of ochratoxin A by animal microbial florae. *Ann. Rech. Vet.* **7**(1), 91-98 (1976).
5. Al-Taher, F., Cappozzo, J., Zweigenbaum, J., *et al.* Detection and quantitation of mycotoxins in infant cereals in the U.S. market by LC-MS/MS using a stable isotope dilution assay. *Food Control* **72**(Part A), 27-35 (2017).
6. Ezekiel, C.N., Bandyopadhyay, R., Sulyok, M., *et al.* Fungal and bacterial metabolites in commercial poultry feed from Nigeria. *Food Addit. Contam. Part A Chem. Anal. Control Expo. Risk Assess.* **29**(8), 1288-1299 (2012).

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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