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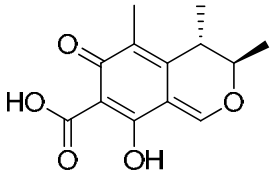
PRODUCT DATA SHEET

Citrinin

Code: **BIA-C1242**

Pack sizes: **1 mg, 5 mg**



Synonyms : **Meleamycin, Antimycin, Monascidin A**

Specifications

CAS #	:	**518-75-2**
Molecular Formula	:	**$C_{13}H_{14}O_6$**
Molecular Weight	:	**250.3**
Source	:	***Penicillum citrinum***
Appearance	:	**Yellow powder**
Purity	:	**> 99% by HPLC**
Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.**

Application Notes

Citrinin is a quinonemethine mycotoxin produced by diverse fungal genera, including *Aspergillus* and *Penicillium*. Citrinin has been extensively investigated. It is a potent nephrotoxin with hepatoxic and teratogenic activity. It is the causative agent of Balkan nephropathy and yellow rice fever in humans. At the molecular level, citrinin exhibits a range of effects including free radical damage to DNA and disruption to a wide variety of mitochrondrial membrane-bound enzymic activities and structural integrity. Specifically, citrinin is an inhibitor of NADH dehydrogenase in the mitochondrial electron transport chain and this action is responsible for recent reports of citrinin's apoptotic activity.

References

1. Studies in the biochemistry of micro-organisms. XI. On the production and chemical constitution of a new yellow colouring matter, citrinin, produced from glucose by *Penicillium citrinum Thom*. Hetherington A. C. & Raistrick H. Phil. Trans. Roy. Soc. Ser. B. 1931, 220:269.
2. Co-occurrence of ochratoxin A and citrinin in cereals from Bulgarian villages with a history of Balkan endemic nephropathy. Vrabcheva T. JAFC 2000, 48, 2483.
3. Yellow rice toxins. Luteoskyrin and related compounds, chlorine containing compounds, and citrinin. Saito M. et al. In: A. Ciegler, S. Kadis and S.J. Ajl (ed). Microbial Toxins. A Comprehensive Treatise. Vol. VI. Fungal Toxins, Academic Press, Inc., Baltimore 1971, 299.
4. Mechanism of citrinin-induced dysfunction of mitochondria. III. Effects on renal cortical and liver mitochondrial swelling. Chagas G. M. et al. J. Appl. Toxicol. 1995, 15, 91.

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