



Specification

**Ochratoxin A BioChemica**

**A7690**

<b>Physical Description:</b>	Solid
<b>Product Code:</b>	A7690
<b>Product Name:</b>	Ochratoxin A BioChemica
<b>Specifications:</b>	Assay (HPLC): min. 97 % $\lambda_{\text{max}}$ : 215, 333 nm Solubility (5 mg/ml MeOH): clear, yellowish
<b>Hazard pictograms</b>	 
<b>UN:</b>	3462
<b>Class/PG:</b>	6.1/II
<b>ADR:</b>	6.1/II
<b>IMDG:</b>	6.1/II
<b>IATA:</b>	6.1/II
<b>WGK:</b>	2
<b>Storage:</b>	2-8°C
<b>Signal Word:</b>	Danger
<b>GHS Symbols:</b>	GHS06 GHS08
<b>H Phrases:</b>	H300 H351 H413
<b>P Phrases:</b>	P264

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Specification

**Ochratoxin A BioChemica**

**A7690**

	P281 P301+P310
<b>Origin:</b>	from <i>Aspergillus ochraceus</i>
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>18</sub> ClNO <sub>6</sub>
<b>M:</b>	403.81 g/mol
<b>CAS:</b>	303-47-9
<b>CS:</b>	29322090
<b>Comment</b>	<p>Ochratoxin A is a mycotoxin from <i>Aspergillus ochraceus</i> and <i>Penicillium verrucosum</i>. It is the most abundant mycotoxin found as contamination in food worldwide and it is dreaded due to its carcinogenic and nephrotoxic activity. In addition, its stability in a body is extremely high. Various physiological effects were described: Immunosuppression in animals (1), photoactivatable DNA cleavage (2), formation of free radicals, leading to lipid peroxidation (3), activation of JNK (4) and MAPK (8) or induction of apoptosis (4,6,8), tumor formation (5), permeabilization of cells (7). <b>Solubility and Stability:</b> Ochratoxin A is soluble in DMSO (100 mg/ml), methanol and ethanol (10 - 50 mg/ml), and acetone (50 - 100 mg/ml). In water it is hardly soluble (1 mg/ml). Solutions of Ochratoxin A do not lose their activity even after storage for more than one year, protected from light and refrigerated.</p>
<b>Bibliography</b>	<p>(1)Luster, M.I. <i>et al.</i> (1987) <i>Cancer Res.</i> <b>47</b>, 2259-2263 Selective Immunosuppression in Mice of natural Killer Cell Activity by Ochratoxin A.(2)Gillman, I.G. <i>et al.</i> (1998) <i>Chem. Commun.</i>, 647-648 Ochratoxin A acts as a photoactivatable DNA cleaving agent.(3)Hoeher, D. <i>et al.</i> (1996) <i>J. Biol. Chem.</i> <b>271</b>, 27388-27394 Free Radical Generation as Induced by Ochratoxin A and Its Analogs in Bacteria (<i>Bacillus brevis</i>). (4)Gekle, M. <i>et al.</i> (2000) <i>J. Pharmacol. Exp. Ther.</i> <b>293</b>, 837-844 Ochratoxin A Induces JNK Activation and Apoptosis in MDCK-C7 Cells at Nanomolar Concentrations.(5)Zepnik, H. <i>et al.</i> (2001) <i>Toxicol. Sci.</i> <b>59</b>, 59-67 Ochratoxin A-Induced Tumor Formation: Is There a Role of Reactive Ochratoxin A Metabolites?(6)Assaf, H. <i>et al.</i> (2004) <i>Toxicol. Sci.</i> <b>79</b>, 335-344 Ochratoxin A Induces Apoptosis in Human Lymphocytes through Down Regulation of BCL-x<sub>L</sub>. (7)McLaughlin, J. <i>et al.</i> (2004) <i>Am. J. Physiol. Cell Physiol.</i> <b>287</b>, C1412-C1417 Ochratoxin A increases permeability through tight junctions by removal of specific claudin isoforms.(8)Sauvant, C. <i>et al.</i> (2005) <i>Cell Physiol. Biochem.</i> <b>15</b>, 125-134 The Nephrotoxin Ochratoxin A Induces Key Parameters of Chronic Interstitial Nephropathy in Renal Proximal Tubular Cells.</p>