Urolithin A  
**Item No. 22607**

- **CAS Registry No.:** 1143-70-0  
- **Formal Name:** 3,8-dihydroxy-6H-dibenzo[b,d]pyran-6-one  
- **Synonyms:** 2',7-Dihydroxy-3,4-benzocoumarin, 3,8-Dihydroxy Urolithin  
- **MF:** C_{13}H_{8}O_{4}  
- **FW:** 228.2  
- **Purity:** ≥98%  
- **UV/Vis.:** λ_{max}: 221, 233, 282, 308, 357 nm  
- **Supplied as:** A crystalline solid  
- **Storage:** -20°C  
- **Stability:** ≥2 years

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

**Laboratory Procedures**

Urolithin A is supplied as a crystalline solid. A stock solution may be made by dissolving the urolithin A in the solvent of choice. Urolithin A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. Urolithin A is slightly soluble in ethanol and has a solubility of approximately 30 mg/ml in DMSO and DMF.

Urolithin A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, urolithin A should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Urolithin A has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

Urolithin A is a secondary metabolite of ellagic acid (Item No. 10569), a polyphenolic antioxidant, that has antiproliferative, anti-inflammatory, and anti-oxidant properties.\(^1\) It decreases proliferation in ECC-1, Ishikawa, and HEC-1A human endometrial cancer cell lines at a concentration of 1 µM, arrests the cell cycle at the G₂/M transition, and modulates estrogen receptor-regulated gene expression.\(^2\) It also potentiates the antiproliferative effect of 5-fluorouracil (Item No. 14416) in Caco-2, SW480, and HT-29 cells.\(^3\) In a rat model of colitis, urolithin A reduces inflammation, decreasing prostaglandin E₂ (PGE₂; Item No. 14010) levels and preventing upregulation of COX-2 gene expression and protein levels in colonic mucosa.\(^4\) It also induces mitophagy in *C. elegans*, C2C12 myoblasts, and Mode-K intestinal cells in correlation with improved fitness and extended lifespan in *C. elegans* and increased exercise capacity in mice.\(^5\)

**References**