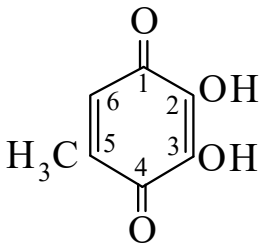
>>**Entry Name: 2,3-Dihydroxy-5-methyl-1,4-benzoquinone**
**Synonym(s):** 2,3-Dihydroxy-5-methyl-2,5-cyclohexadiene-1,4-dione, 9CI. 5,6-Dihydroxy-*p*-toluquinone. 3,4-Dihydroxy-2,5-toluquinone




**CAS Registry Number:** 825-33-2

**Molecular Formula:** $C_7H_6O_4$
**Molecular Weight:** 154.122
**Accurate Mass:** 154.02661
**Percentage Composition:** C 54.55%; H 3.92%; O 41.52%
**Biological Source:** Prod. by *Aspergillus fumigatus* and *Penicillium spinulosum*
**Physical Description:** Amorph. violet substance
**Melting Point:** Mp 157-159°
**Other Data:** $\lambda_{max}$ 279, 385 nm ($CHCl_3$)

>>**Derivative:** 2-Me ether
**Synonym(s):** 3-Hydroxy-2-methoxy-5-methyl-1,4-benzoquinone. **Fumigatin**

**CAS Registry Number:** 484-89-9

**Molecular Formula:** $C_8H_8O_4$
**Molecular Weight:** 168.149
**Accurate Mass:** 168.04226
**Percentage Composition:** C 57.14%; H 4.80%; O 38.06%
**Biological Source:** Prod. by *Aspergillus fumigatus*
**Use/Importance:** Inhibits gram-positive and -negative bacteria
**Physical Description:** Maroon cryst. (petrol)
**Melting Point:** Mp 114°
**Solubility:** BERDY SOL: Sol. MeOH, Py, bases, $Et_2O$; fairly sol. hexane, $Et_2O$, toluene; poorly sol. $H_2O$
**UV:** [neutral] $\lambda_{max}$ 265 (ε 13800); 450 (ε 912) (EtOH) (Berdy)
**Other Data:** Subl. undec.

>>**Derivative:** 2-Me ether, 3-Ac

**Molecular Formula:** $C_{10}H_{10}O_5$
**Molecular Weight:** 210.186
**Accurate Mass:** 210.052825
**Percentage Composition:** C 57.14%; H 4.80%; O 38.06%
**Physical Description:** Canary-yellow cryst. (petrol)
**Melting Point:** Mp 96-97°

>>**Derivative:** 2-Me ether, 5,6-epoxide
**Synonym(s):** 3-Hydroxy-4-methoxy-1-methyl-7-oxabicyclo[4.1.0]hept-3-ene-2,5-dione, 8CI. **Fumigatin epoxide.** Fumigatin oxide

**CAS Registry Number:** 1716-19-4

**Molecular Formula:** $C_8H_8O_5$
**Molecular Weight:** 184.148
**Accurate Mass:** 184.037175
**Percentage Composition:** C 52.18%; H 4.38%; O 43.44%
**Biological Source:** From *Aphistreptus fumigatus*
**Physical Description:** Unstable cryst.
**Melting Point:** Mp 74°
**Optical Rotation:** $[\alpha]_D^{14}$+28.5 (EtOH)
**Solubility:** BERDY SOL: Sol. MeOH, $C_6H_6$; poorly sol. $H_2O$
**UV:** [neutral] $\lambda_{max}$ 216 (ε 11200); 330 (ε 6160) (EtOH) (Berdy) [acid] $\lambda_{max}$ 315 (); 374 () (pH 1 buffer) (Berdy)
**Hazard & Toxicity:** BERDY HAZD : $LD_{50}$ (mus, ivn) 114 - 226 mg/kg