

**Product Name:** Docetaxel

**Catalog No.:** 4056

**Batch No.:** 3

CAS Number: 114977-28-5

IUPAC Name: [2a*R*-[2a $\alpha$ ,4 $\beta$ ,4a $\beta$ ,6 $\beta$ ,9 $\alpha$ ( $\alpha$ R\*, $\beta$ S\*),11 $\alpha$ ,12 $\alpha$ ,12a $\alpha$ ,12b $\alpha$ ]]- $\beta$ -[[[(1,1-Dimethylethoxy)carbonyl]amino]- $\alpha$ -hydroxy-12b-(acetyloxy)-12-(benzyloxy)-2a,3,4,4a,5,6,9,10,11,12,12a,12b-dodecahydro-4,6,11-trihydroxy-4a,8,13,13-tetramethyl-5-oxo-7,11-methano-1*H*-cyclodeca[3,4]benz[1,2-*b*]oxet-9-yl ester benzenepropanoic acid

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>43</sub>H<sub>53</sub>NO<sub>14</sub>·¼H<sub>2</sub>O

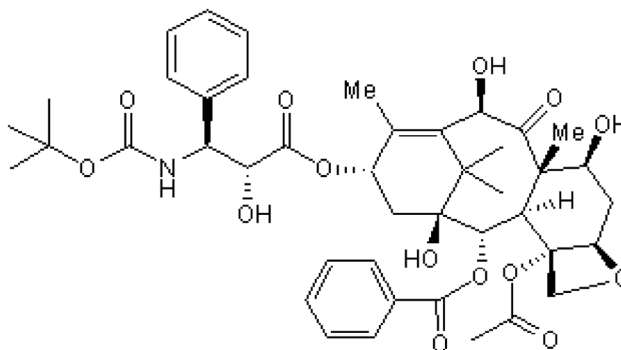
**Batch Molecular Weight:** 812.38

**Physical Appearance:** White solid

**Solubility:** DMSO to 100 mM  
ethanol to 100 mM

**Storage:** Store at +4°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.8% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	63.57	6.64	1.72
Found	63.35	6.54	1.87

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**Description:**

Binds and stabilizes microtubules; leads to cell cycle arrest and apoptosis. Displays significant antitumor activity in ovarian and gastric tumors. Prevents microtubule depolymerization and disassembly in the absence of GTP. Exhibits cytotoxic activity.

**Physical and Chemical Properties:**

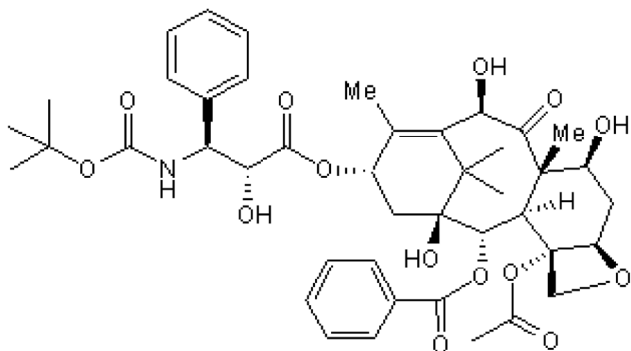
Batch Molecular Formula: C<sub>43</sub>H<sub>53</sub>NO<sub>14</sub>·1/4H<sub>2</sub>O

Batch Molecular Weight: 812.38

Physical Appearance: White solid

**Minimum Purity:** ≥99%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Ramaswamy and Puhalla (2006)** Docetaxel: a tubulin-stabilizing agent approved for the management of several solid tumors. *Drugs Today (Barc)* **42** 265. PMID: 16703123.

**Lyseng-Williamson and Fenton (2005)** Docetaxel: a review of its use in metastatic breast cancer. *Drugs* **65** 2513. PMID: 16296875.

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