TOCRIS
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Print Date: Aug 18th 2022

Certificate of Analysis

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Product Name: **Taxol** **Catalog No.: 1097** **Batch No.: 9**

CAS Number: 33069-62-4

IUPAC Name: [2a*R*-[2aα,4β,4aβ,6α,9α(α*R**,β*S**),11α,12α,12aα,12bα]]-β-(Benzoylamino)-α-hydroxy-6,12b-*bis*(acetyloxy)-12-(benzoyloxy)-2a,3,4,4a,5,6,9,10,11,12,12,12b-dodecahydro-4,11-dihydroxy-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: $C_{47}H_{51}NO_{14}.¼H_2O$

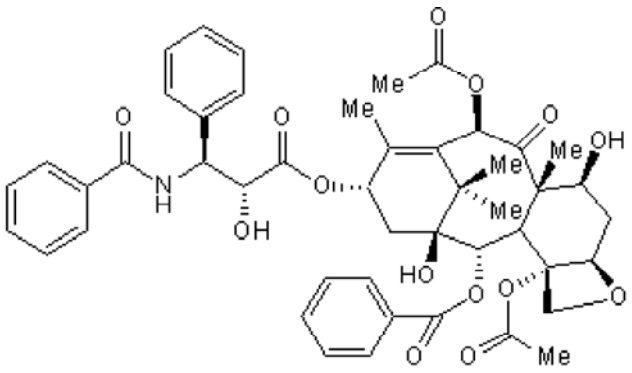
Batch Molecular Weight: 858.42

Physical Appearance: White solid

Solubility: ethanol to 25 mM with gentle warming
DMSO to 100 mM with gentle warming

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	65.76	6.05	1.63
Found	65.49	6.02	1.64

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Taxol, also known as paclitaxel, promotes and stabilizes tubulin polymerization, causing cell cycle arrest. In CCRF-HSB-2 cells, Taxol induces autocatalytic activation of caspase-10, triggering apoptosis. Taxol is an antitumor agent. In a mouse model of bladder cancer Taxol decreases tumor growth. Taxol also prolongs survival of mice transplanted with human ovarian carcinoma xenografts. Taxol improves neurological outcome and magnetic resonance imaging biomarkers after traumatic brain injury in mice.

Physical and Chemical Properties:

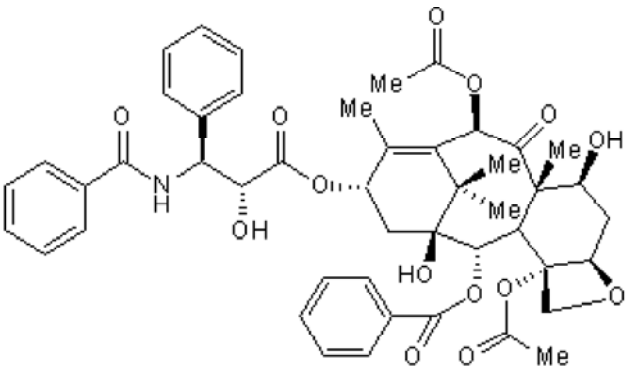
Batch Molecular Formula: $C_{47}H_{51}NO_{14}.¼H_2O$

Batch Molecular Weight: 858.42

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

ethanol to 25 mM with gentle warming
DMSO to 100 mM with gentle warming

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. Our standard recommendations are:

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:

Cross *et al* (2015) PacT improves outcome from traumatic brain injury. Brain Res. ***1618*** 299. PMID: 26086366.

Park *et al* (2004) Taxol induces caspase-10-dependent apoptosis. J.Biol.Chem. ***279*** 51057. PMID: 15452117.

Rao *et al* (1999) Characterization of the Tax. binding site on the microtubule. J.Biol.Chem. ***274*** 37990. PMID: 10608867.