Print Date: Dec 1st 2022

# Certificate of Analysis

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**Product Name:** **Iloprost** **Catalog No.: 2038** **Batch No.: 7**

CAS Number: 78919-13-8

IUPAC Name: (5*E*)-5-[(3a*S*,4*R*,5*R*,6a*S*)-Hexahydro-5-hydroxy-4-[(1*E*,3*S*)-3-hydroxy-4-methyl-1-octen-6-ynyl]-2(1*H*)-pentalenylidene]pentanoic acid

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** $C_{22}H_{32}O_4$

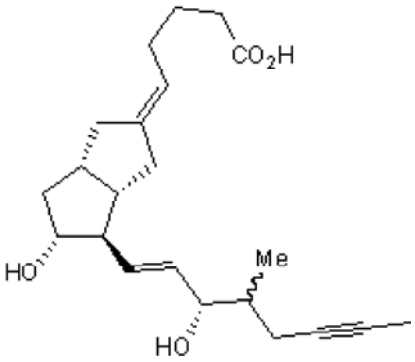
**Batch Molecular Weight:** 360.49

**Physical Appearance:** Clear liquid

**Solubility:** Soluble in methyl acetate (supplied pre-dissolved - 5mg/ml)

**Storage:** Store at -20°C

**Batch Molecular Structure:**




## 2. ANALYTICAL DATA

**HPLC:** Shows 99.2% purity

**Mass Spectrum:** Consistent with structure



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**Description:**

Iloprost is a prostacyclin ($PGI_2$) analog that binds with high affinity to IP, $EP_1$ and $EP_3$ receptors ($K_i$ values are 11, 11, 56, 284, 619, 1035, 1870 and 6487 nM for IP, $EP_1$, $EP_3$, $EP_4$, FP, DP, $EP_2$ and TP receptors respectively). Inhibits platelet aggregation induced by collagen, thrombin and ADP ($IC_{50}$ values are 0.24, 0.71 and 1.07 nM respectively).

**Physical and Chemical Properties:**

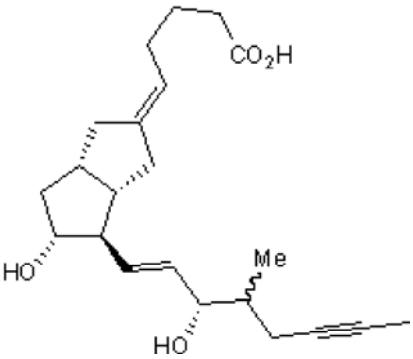
Batch Molecular Formula: $C_{22}H_{32}O_4$

Batch Molecular Weight: 360.49

Physical Appearance: Clear liquid

**Minimum Purity:** ≥97%

**Batch Molecular Structure:**




**Storage:** Store at -20°C

**Solubility & Usage Info:**

Soluble in methyl acetate (supplied pre-dissolved - 5mg/ml)

This compound is supplied pre-dissolved in Methyl acetate (5mg/ml). To change the solvent, evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the chosen solvent (preferably purged with nitrogen beforehand). The solubility of Iloprost is greater than 50mM in both DMSO and Ethanol. These stock solutions can then be diluted further into aqueous solutions, as required. We do not recommend storing aqueous solutions for more than a day.

**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:**

**Della Bella** *et al* (2001) Novel mode of action of iloprost: in vitro down-regulaton of endothelial cell adhesion molecules. Prostaglandins Other Lipid Mediat. ***65*** 73. PMID: 11403500.

**Abramovitz** *et al* (2000) The utilization of recombinant prostanoid receptors to determine the affinities and selectivities of prostaglandins and related analogs. Biochim.Biophys.Acta ***1483*** 285. PMID: 10634944.

**Schror** *et al* (1981) The antiplatelet and cardiovascular actions of a new carbacyclin derivative (ZK 36 374) - equipotent to $PGI_2$ in vitro. Naunyn-Schmied.Arch.Pharmacol. ***316*** 252.