



Poncirin

Catlog Number: PDP-14783

• Product Background

Poncirin is a natural flavanone glycoside belonging to the flavonoid class of compounds, with its formal chemical name specified as (2S)-7-((2-O-(6-deoxy-alpha-L-mannopyranosyl)-beta-D-glucopyranosyl)oxy)-2,3-dihydro-5-hydroxy-2-(4-methoxyphenyl)-4H-1-benzopyran-4-one. It is primarily isolated from citrus plants, including Poncirus trifoliata and Citrus reticulata cv. Suavis Sima (Ougan fruit), where the highest natural content (1.37 mg/g dry weight) is found in the albedo (white pith) of Ougan fruit.

Isolation & Synthesis: Naturally extracted via techniques like high-speed counter-current chromatography (HSCCC) combined with D101 resin chromatography (achieving purity up to 96.56% from raw materials). It can also be synthesized in laboratories from starting materials like naringin through multi-step chemical reactions involving acetylation, hydrolysis, and oxidation.



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• Basic Information

Appearance	Solid
CAS	14941-08-3
Purity	99.94%
Molecular Weight	594.56
Formula	C ₂₈ H ₃₄ O ₁₄
Color	White to off-white
SMILES	<chem>O=C(C[C@@H](C1=CC=C(OC)C=C1)OC2=CC(O[C@H](O[C@H](CO)[C@@H](O)[C@@H]3O)[C@@H]3O[C@@](O[C@@H](C)[C@H](O)[C@H]4O)([H])[C@@H]4O)=C5)C2=C5O</chem>
Intended Use	For research and further manufacturing use only.

• Package and Storage

CD BioSustainable is a reputable and professional company in the industry. We provide high-level technical services and total solutions to deliver only the most satisfactory results for our clients.

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Storage: 4°C, protect from light

In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

Shipping: Room temperature.

• Product Features

High Purity: Commercially available with purity levels exceeding 98%, ensuring reliability for research and industrial applications.

Diverse Biological Activity: Exhibits inherent antioxidant, anti-inflammatory, and immunoregulatory properties, with additional documented effects on gut microbiota modulation.

Specific Solubility Profile: Sparingly soluble in water but soluble in water at concentrations above 10 mg/ml, supporting flexible formulation in various applications.

Well-Characterized Structure: Identified via advanced analytical techniques (HPLC-PDA, LC-MS) and defined by specific spectral properties (lambda max: 212, 225, 283 nm).

Natural Origin: Derived from edible citrus fruits, aligning with demand for plant-based, sustainable ingredients.

• Product Applications

Pharmaceuticals: Investigated for development of anti-inflammatory, antioxidant, and anti-cancer agents, particularly for gastric cancer prevention and gastrointestinal disorder treatments.

Food & Beverages: Used as a natural antioxidant to extend product shelf life and as a flavor-enhancing agent to improve taste and aroma.

Nutraceuticals: Formulated into dietary supplements targeting gut health, immune support, and oxidative stress reduction.

Biomedical Research: Serves as a tool compound for studying flavonoid metabolism, gut-brain axis interactions, and inflammatory signaling pathways.

Cosmetics: Potential application in skincare products for its antioxidant properties, which may help mitigate oxidative damage to skin cells.

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