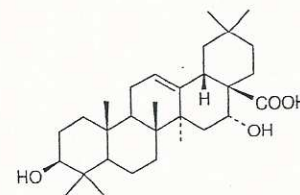


**INDOFINE Chemical Company, Inc.**

121 Stryker Lane, Building 30

Hillsborough, NJ 08844 USA

Phone: (908) 359-6778; Fax: (908) 359-1179

**HPLC****Lot No.: 13052204****ECHINOCYSTIC ACID****020033S****IDENTIFICATION**

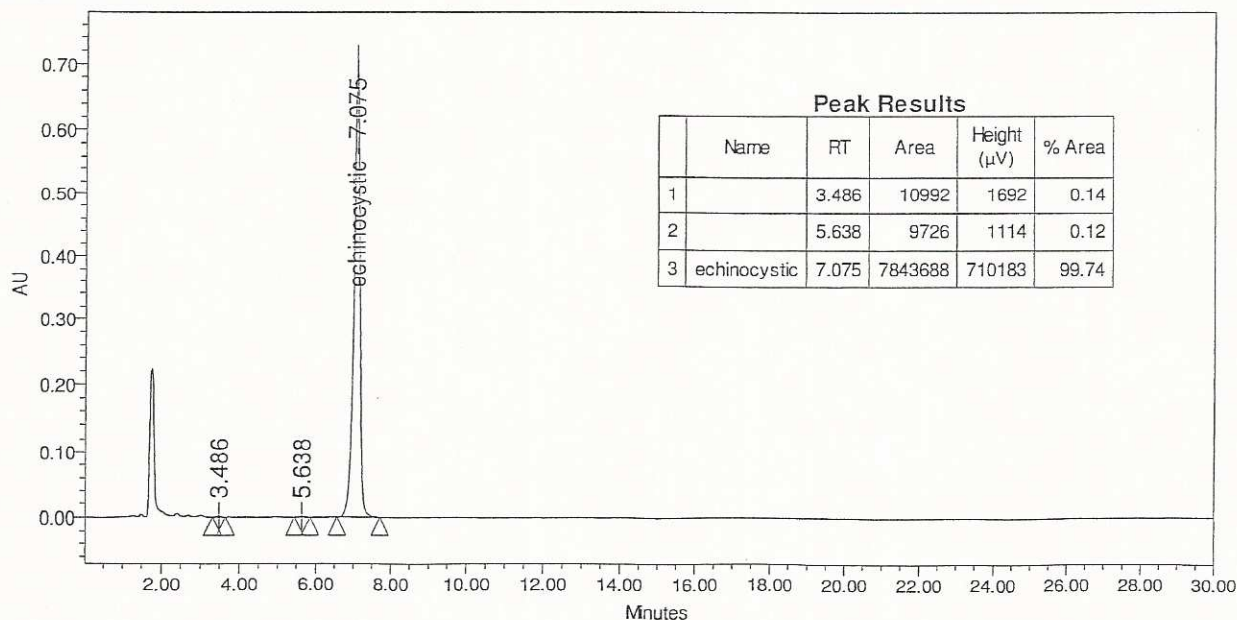
CAS number [510-30-5]
Chemical family Triterpenoids
Synonym 3 β ,16 α -Dihydroxyolean-12-en-28-oic acid
Molecular formula C₃₀H₄₈O₄
Molecular weight 472.71

CERTIFICATE OF ANALYSIS

Appearance White powder
Melting point 301-303°C
Moisture <0.5%
Residual solvents <0.5%
[α]_D +32.3° (c=0.7 in ethanol)
Thin layer chromatography support Silicagel
solvent Methylene chloride/methanol (97/3, V/V)
detection p-anisaldehyde/acetic acid/sulfuric acid (1/40/1: V/V/V) then heating at 110°C 10 mn
Storage Store at room temperature in a dry and dark place. Place in a desiccator under vacuum for 48 hours before use.

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY

Column Symmetry Shield RP18® (4.6 x 150 mm), particle size 3.5 μ m
Solvent Water/Acetonitrile (15/85, V/V)
Flow rate 1 ml/mn
Detector UV visible 200 nm
Sample solvent Methanol



Assay by an HPLC method.

Date of last QC-recheck: November 2009

Date of retest: November 2013

The values given on the 'Certificate of Analysis' are the results determined at the time of analysis.