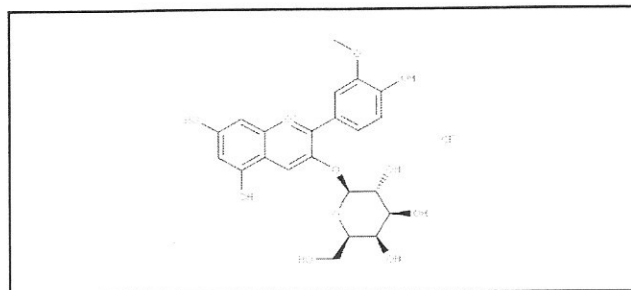


**INDOFINE Chemical Company, Inc.**

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**Certificate Of Analysis****020920S****PEONIDIN-3-O-GALACTOSIDE CHLORIDE****Lot No.: 18010301**

|             |                                                    |
|-------------|----------------------------------------------------|
| CAS RN      | 28148-89-2                                         |
| MOL FORMULA | C <sub>22</sub> H <sub>23</sub> O <sub>11</sub> Cl |
| MOL WEIGHT  | 498,87                                             |



| TEST              | METHOD         | UNIT   | SPECIFICATION                                       | RESULT  |
|-------------------|----------------|--------|-----------------------------------------------------|---------|
| Appearance        | Visual         |        | Powder                                              | Conform |
| Potency           | UV             |        | $\epsilon$ (528 nm, MeOH+0,1% HCl) = 34300 +/- 3000 | 34240   |
| Water content     | KF             | % w/w  |                                                     | 1,2     |
| Residual solvents | GC-HS          | % w/w  |                                                     | 0,4     |
| Inorganics        | ICP-MS         | % w/w  |                                                     | 0,2     |
| Purity            | HPLC           | % area | $\geq 95,0$                                         | 96,0    |
| Assay             | Calculated (*) | % w/w  |                                                     | 94,3    |

(\*) Assay = Purity by HPLC x (100 - %water - %solvents - %inorganics)

**CHROMATOGRAPHIC PURITY / HPLC**Column : Atlantis dC18 - 4,6x150 mm -3  $\mu$ m

Temperature : 30°C

Mobile phase :

Gradient: B from 5% to 60% in 20 min then 60% to 100% in 5 min then 5 min isocratic 100%

Flow rate : 1 ml/min

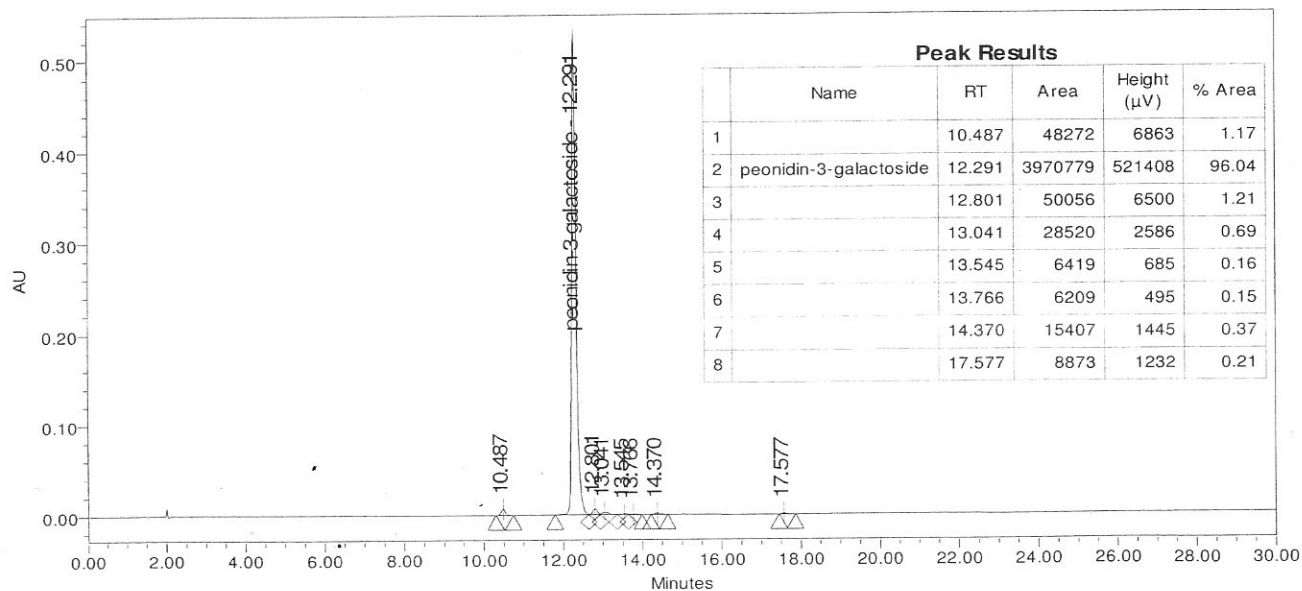
A = Water + 10% HCOOH / B = MeOH

Injection volume : 5  $\mu$ l

Detection :

UV 520 nm

Injection solvent : MeOH + 0,1% HCl



LONG TERM STORAGE : Below -15°C in a dry and dark place