

CERTIFICATE OF ANALYSIS

PRODUCT NAME: D(+)-Raffinose Pentahydrate
 BATCH NO. 18/MFM/2183
 DATE OF PRODUCTION: April 2018
 DATE OF EXPIRY: April 2021

| TESTS | VALUE LIMIT | RESULTS |
|--|-------------------------|-------------------|
| Appearance | Pale white to white | Complies |
| Identification | Crystalline powder | Complies |
| Specific rotation at 20°C 10% (w/v) in distilled water | Deg ml/g 103.0 to 108.0 | Complies 105.0 |
| Water Content (Karl Fischer, Methanol) | 13.0 to 17.0% | 14.3 |
| Ph-value, in dist. Water | 5,5 to 7.0 | 6.9 |
| Melting Point | 78° to 82°C | 79 |
| Heavy metals determination with AAS or ICP Arsenic | Max 2ppm | <0.1 |
| Content by HPLC | Min 98.0% | 98.9% |
| Sulphated ash | Max 0,10% | 0,05 |
| Heavy metals calc as lead | <= 10ppm | Complies |
| Total aerobic count poured plate | Max 1000 per g | <10 |
| Moulds & yeasts per plate | Max 100 per g | <10 |

* This material is supplied for laboratory use only.

Supplier: Formedium Ltd

Approved by:

Date: 09 Aug 2018

For and on behalf of
FORMEDIUM Ltd, Unit 1B
 Hunstanton Commercial Park
 PE36 5JQ England

(Authorised Signature)