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Certificate of Analysis

gravimetric

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 220-91239-30 **Lot No.:** A0217894

Description : Shimadzu LCMS-8030 Tune Solution

Shimadzu LCMS-8030 Tune Solution 0.113-16.92µg/mL, Water/Methanol/14.5 ppm Ammonium acetate (80:20), 50mL/bottle, 2 bottles/pack

Container Size : 60 mL **Pkg Amt:** > 50 mL

Expiration Date : October 31, 2027 **Storage:** 10°C or colder

Ship: Ambient

Component #	Compound	CAS #	Percent Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	D-(+)-Raffinose pentahydrate	17629-30-0	84%	15.005 µg/mL	+/- 0.096166 µg/mL
2	Poly(ethylene glycol) 1000	25322-68-3.	----%	16.923 µg/mL	+/- 0.108459 µg/mL
3	Poly(ethylene glycol) 200	25322-68-3.	----%	1.696 µg/mL	+/- 0.011001 µg/mL
4	Poly(ethylene glycol) 600	25322-68-3.	----%	0.113 µg/mL	+/- 0.000854 µg/mL
5	Poly(propylene glycol) 2000	25322-69-4.	----%	10.070 µg/mL	+/- 0.064538 µg/mL

Solvent: Water/Methanol/14.5 ppm Ammonium acetate (80:20) 7732-18-5/67-56-1/631-61-8

Russ Bookhamer - Operations Technician I

Date Mixed: 15-Oct-2024 **Balance:** 1121472889

REVIEWED

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

Specific Reference Material Notes:

"Manufactured by Restek for Shimadzu"

General Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the RM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/µECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Uncertainty Value Notes:

- Uncertainties are determined using data from balances and glassware, raw material purity, and, when significant, equipment tolerances or calibration results.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.