

Paul Kelly

CERTIFICATE of ANALYSIS



Polyunsaturated Fatty Acid MaxSpec® LC-MS Mixture

Item No.: 17941
Batch No.: 0644193

Expiry Date: 23MAY2027 (valid from date of certification)
Supplied as: A solution in ethanol (10 µg/ml of each compound; nominal); in amber ampules

Contents: See table
Volume per Ampule: Not less than 1 ml. Ampules are overfilled. It is advised that labs use measured volumes.

Storage & Handling: Store upright and unopened at -20°C. Warm to room temperature prior to opening.

Description

MaxSpec® LC-MS mixtures are purpose-built for qualitative mass spectrometry applications. This solution has been prepared using gravimetric and volumetric preparation procedures from a combination of neat and formulated pure standards, and is supplied in ampules sealed under argon. Ongoing stability tests are performed to ensure the presence of each analyte throughout the shelf life of the product. Follow recommended storage and handling conditions.

Quality Information

Test	Limit	Result	Meets Specification
Negative ESI-HRMS	Identities confirmed	Pass	✓

Approval:

Paul Kelly

Title: Sr. Director of Analytical Chemistry

Certification Date: 23MAY2022

Cayman Chemical certifies that this product meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiry date when stored unopened as recommended.

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Quality Control Table

Item No.	Item Name	Formula	RT (min)	Calculated [MH] ⁻ (m/z)	Measured [MH] ⁻ (m/z)	Mass Accuracy (ppm)
90300	Adrenic Acid	C ₂₂ H ₃₆ O ₂	9.96	331.2643	331.2644	0.30
90010	Arachidonic Acid	C ₂₀ H ₃₂ O ₂	9.41	303.2330	303.2329	0.33
90230	Dihomo-γ-Linolenic Acid	C ₂₀ H ₃₄ O ₂	9.66	305.2486	305.2486	0.00
90310	Docosahexaenoic Acid	C ₂₂ H ₃₂ O ₂	9.36	327.2330	327.2329	0.31
90165	Docosapentaenoic Acid	C ₂₂ H ₃₄ O ₂	9.62	329.2486	329.2486	0.00
90110	Eicosapentaenoic Acid	C ₂₀ H ₃₀ O ₂	9.06	301.2173	301.2173	0.00
90150	Linoleic Acid	C ₁₈ H ₃₂ O ₂	9.44	279.2330	279.2330	0.00
90210	α-Linoleic Acid	C ₁₈ H ₃₀ O ₂	8.99	277.2173	277.2174	0.36
90220	γ-Linoleic Acid	C ₁₈ H ₃₀ O ₂	9.07	277.2173	277.2174	0.36
90320	Stearidonic Acid	C ₁₈ H ₂₈ O ₂	8.67	275.2017	275.2019	0.73
α- and γ-Linoleic Acid were distinguished by their unique product ions, 196.1469 and 177.0924						
HRAM LC-MS/MS Conditions: Ultimate 3,000 UHPLC&Q-Exactive Triple Quadrupole-Orbitrap (Thermo Scientific)						
Mobile Phase A: Water with 10 mM ammonium acetate						
Mobile Phase B: Methanol:Acetonitrile:Water (8:1:1 v/v) with 1 mM ammonium acetate						
Column: Waters BEH C18 2.1 x 100 mm, 1.7 μm		Flow Rate: 0.3 ml/min				
Gradient: 0-0.2 min 15% B; 0.2-4 min 70% B; 4-8 min 100%B; 8-11 min 100% B; 11.1-14 min 15%B						
Negative Electrospray Ionization		Parallel Reaction Monitoring				

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Revision History

Revision No.	Date	Reason for Revision
01	23MAY2022	Initial version
02	27APR2023	Updated format

Disclaimers

Material Safety Data

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some but not all of the information required for the safe and proper use of this material. Before use, review the complete Material Safety Data Sheet, which has been sent via email to your institution.

Warranty and Limitation of Remedy

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specification.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver of Buyer of all claims hereunder with respect to said material. For further details, please refer to our Warranty and Limitations of Remedy located on our website and in our catalog.

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