

CERTIFICATE OF ANALYSIS

Pierce® ESI Negative Ion Calibration Solution, 10 mL

Product Number: 88324

Lot Number: OL192881

Expiration: Jan 6, 2015

Summary:

The Thermo Scientific Pierce ESI Negative Ion Calibration Solution is a ready-use-liquid formulation for the calibration of Thermo Scientific ion traps, Exactive and Orbitrap mass spectrometers. The only additional materials needed are a 500 microliter Hamilton syringe and liquid infusion line, both supplied with the instrument.

Important Product Information:

- For best results, flush the syringe and infusion line with 50 % methanol before use.
- No additives are required for the use of this calibration solution. Approximately 500 µL of solution are required for complete calibration

Storage:

Upon receipt store at room temperature.

Formulation:

Sodium Dodecyl Sulfate (29µg), Sodium Taurocholate (54 µg), and Ultramark 1621 (0.001%) in a solution of 50% Acetonitrile/ 25% Methanol/ 24% Water/ 1% Acetic Acid per 10 mL of solution.

Visual:

Clear, Colorless liquid

Components:

Specification

Results

Components:	Specification	Results
Ultramark 1621	Purity 95.0%	Conform
Sodium Dodecyl Sulfate	Purity 99.5 – 100.5%	Conform
Sodium Taurocholate	Purity 95%	Conform
Acetonitrile	Purity 99.9%	Conform
Methanol	Purity 99.9%	Conform
Acetic Acid	Purity 99.7%	Conform
Water	LC-MS Grade	Conform

Instruments:

LTQ series
LTQ Orbitrap™ series
LTQ Velos™ series
LTQ Orbitrap Velos series
Exactive™

Related Thermo Scientific Products:

- 88321 Pierce Peptide Retention Time Calibration Mixture, 200 µL
- 88322 Pierce LTQ ESI Positive Ion Calibration Solution, 10 mL
- 88323 Pierce LTQ Velos ESI Positive Ion Calibration Solution, 10 mL
- 88325 Pierce Triple Quadrupole Calibration Solution, 10 mL

Additional information:

For MSDS please visit www.thermoscientific.com/pierce

For calibration procedure use
LTQ Series Getting Started Guide (97055-97073)
LTQ Orbitrap Velos Getting Started Tune Plus 2.6 (1250590)
LTQ Orbitrap XL™ Getting Started Tune Plus 2.5.5 (1225841)
Exactive Operating Manual (1249360)

Technical Support:

For Hardware related support call 1-800-532-4752
For Reagent support call 1-800-874-3723

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Mike Stanaitis, Quality Chemist II



This product ("Product") is warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation") and to be free from defects in material and workmanship. Unless otherwise expressly authorized in writing, Products are supplied for research use only. No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the original purchaser of the Product ("Buyer").
No other warranties, express or implied, are granted, including without limitation, implied warranties of merchantability, fitness for any particular purpose, or non infringement. Buyer's exclusive remedy for non-conforming Products during the warranty period is limited to replacement of or refund for the non-conforming Product(s). There is no obligation to replace Products as the result of (i) accident, disaster or event of force majeure, (ii) misuse, fault or negligence of or by Buyer, (iii) use of the Products in a manner for which they were not designed, or (iv) improper storage and handling of the Products.

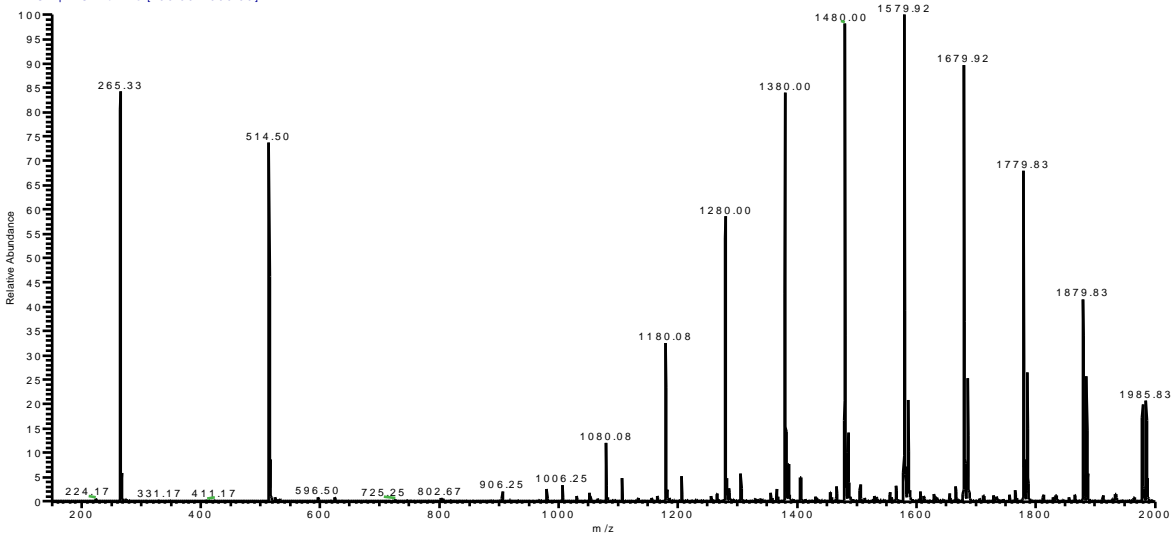
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Analysis:

Results

<p>Relative Intensity (Ratio to the Reference Standard)</p> <p>265 (SDS) 514 (Taurocholate) 1380 (Ultramark) 1480 (Ultramark) 1580 (Ultramark) 1680 (Ultramark)</p>	<p>265 Ratio = 0.2 – 2.0 514 Ratio = 0.2 – 2.0 1380 Ratio = 0.2 – 2.0 1480 Ratio = 0.2 – 2.0 1580 Ratio = 0.2 – 2.0 1680 Ratio = 0.2 – 2.0</p>	<p>265 Ratio =1.1 514 Ratio = 1.2 1380 Ratio =1.2 1480 Ratio = 1.2 1580 Ratio = 1.2 1680 Ratio = 1.2</p>
<p>% Intensity (Relative to the 1580 Peak)</p> <p>265 (SDS) 514 (Taurocholate) 1380 (Ultramark) 1480 (Ultramark) 1680 (Ultramark)</p>	<p>265 = 60 – 105% 514 = 50 – 125% 1380 = 50 – 100% 1480 = 75 – 125% 1680 = 60 – 110%</p>	<p>% Intensity (265 ion) = 80% % Intensity (514 ion) = 72% % Intensity (1380 ion) = 83% % Intensity (1480 ion) = 98% % Intensity (1680 ion) =91%</p>
<p>Baseline Noise Ions (m/z)</p> <p>265 (SDS) 514 (Taurocholate) 1380 (Ultramark) 1480 (Ultramark) 1580 (Ultramark) 1680 (Ultramark)</p>	<p>No ions present in the Relative Intensity Spectra scan (+/-) 3 m/z at:</p> <p>265: > 15% 514: > 15% 1380: > 15% 1480: > 15% 1580: > 15% 1680: > 15%</p>	<p>265 (+/- 3 m/z): No ions present > 15% 514 (+/- 3 m/z): No ions present > 15% 1380 (+/- 3 m/z): No ions present > 15% 1480 (+/- 3 m/z): No ions present > 15% 1580 (+/- 3 m/z): No ions present > 15% 1680 (+/- 3 m/z): No ions present > 15%</p>

2-18-14-88324_OL192881_L1 #1-270 RT: 0.00-1.98 AV: 90 NL: 7.36E5
T: ITMS - p ESI Full s [150.00-2000.00]



Spectra were acquired on Thermo Scientific LTQ XL following procedure described in LTQ Series Getting Started Guide (97055-97073).

This product ("Product") is warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation") and to be free from defects in material and workmanship. Unless otherwise expressly authorized in writing, Products are supplied for research use only. No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the original purchaser of the Product ("Buyer").

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