Agilent Technologies

SUPELCO Analytical

Certificate of Analysis

ESI Tuning Mix 100ml

Agilent Part Number: G2421A/G2421-60001 Sample Lot Number: A182611

Concentration (weight to volume) and Purity/Grades:

Neat Material	Gravimetric Conc.	Neat material Purity and/or Grade
Betaine (CAS NO.: 107-43-7)	< 0.01%	98.00%
Trifluoroacetic Acid Ammonium Salt (CAS NO.: 3336-58-1)	< 0.01%	98.60%
Hexamethoxyphosphazene (CAS NO.: 957-13-1)	< 0.01%	99.90%
Hexakis(2,2-Difluoroethoxy)Phosphazene (CAS NO.: 186817-57-2)	< 0.01%	99.00%
Hexakis(1H, 1H, 3H-Tetrafluoropropoxy)Phosphazene (CAS NO.: 58943-98-9)	< 0.01%	98.00%
Hexakis(1H, 1H, 5H-Octafluoropentoxy)Phosphazene (CAS NO.: 16059-16-8)	< 0.01%	98.00%
Hexakis(1H, 1H, 7H-Dodecafluoroheptoxy)Phosphazene (CAS NO.: 3830-74-8)	< 0.01%	97.00%
Hexakis(1H, 1H, 9H-Perfluorononyloxy)Phosphazene (CAS NO.: 186043-67-4)	< 0.01%	96.00%
Tris (heptafluoropropyl)-S-Triazine (CAS NO.: 915-76-4)	< 0.01%	99.10%

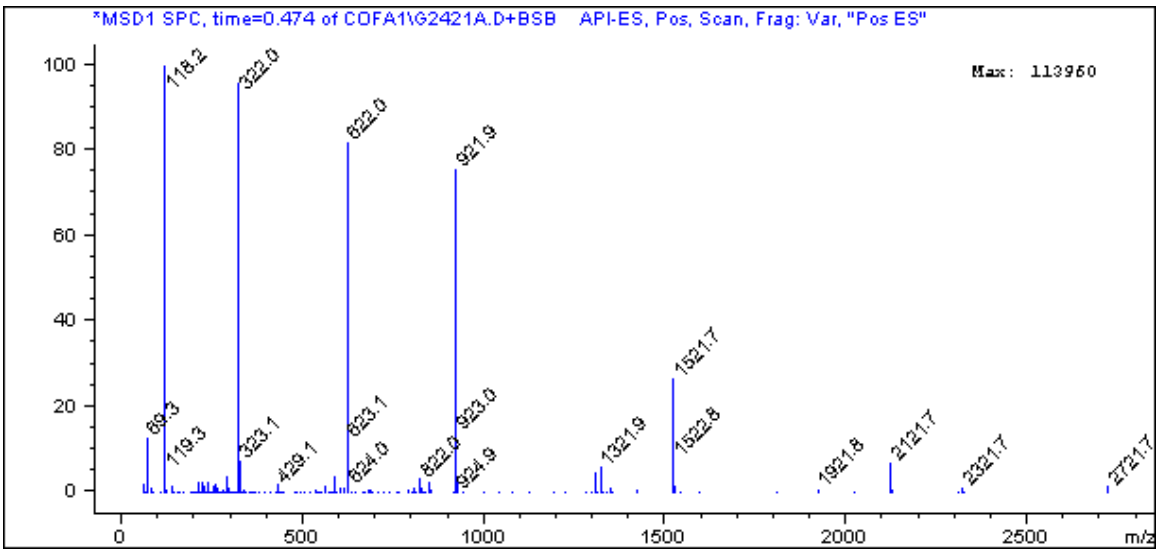
Solvent Composition:

Acetonitrile (CAS NO.: 75-05-8)	95.0%	HPLC grade 99.9%
DI Water (CAS NO.: 7732-18-5)	5.0%	De-ionized

Traceability:

This standard has been produced gravimetrically using ISO9001 quality procedures. . NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. High-performance liquid chromatography mass spectroscopy was used to evaluate system performance.

Analytical Spectrum or Chromatogram: Fragmentation Pattern



Agilent 1100 Series LC system:
G1354A Quaternary Pump (includes degasser)
G1313A Automatic liquid Sampler (ALS)

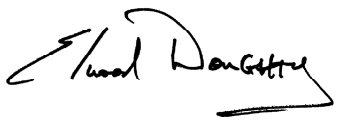
Agilent 1100 Series LC/MSD:
G1946D LC/MSD SL
G1948A API-Electrospray source
G1947A APCI source

G2421A Electrospray Tuning Calibrant
Column: None
Column Temp: N/A
Flow Rate: 0.4ml/min
Mobile Phase: 75:25 Acetonitrile/Water
Ionization Mode: Positive Electrospray
Nebulizer Pressure: 40 psi
Drying Gas Flow: 10L/min
Drying Gas Temp: 350 deg C
Scan Range: 50-3000
Step Size: 0.15amu

PRINCIPLE IONS

MASS	POS	NEG
1	118.09	112.99
2	322.05	431.98
3	622.03	601.98
4	922.01	1033.99
5	1521.97	1633.95
6	2121.93	2233.91
7	2721.89	2833.87

Date of Manufacture: 16 FEBRUARY 2011
Date of Expiration: 16 FEBRUARY 2013



Elwood Doughty
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