Agilent Technologies

SUPELCO Analytical

Certificate of Analysis

ESI-L Low Concentration Tuning Mix 100ml

Agilent Part Number: G1969-85000 **Sample Lot Number:** LB86189

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%	99.40%
Trifluoroacetic acid ammonium salt (CAS NO.: 3336-58-1)	< 0.01%	98.60%
Hexamethoxyphosphazine (CAS NO.: 957-13-1)	< 0.01%	99.10%
Hexakis(2,2-difluoroethoxy)phosphazine (CAS NO.: 186817-57-2)	< 0.01%	98.50%
Hexakis(1H, 1H, 3H-tetrafluoropropoxy)phosphazine (CAS NO.: 58943-98-9)	< 0.01%	97.00%
Hexakis(1H, 1H, 5H-octafluoropentoxy)phosphazine (CAS NO.: 16059-16-8)	< 0.01%	99.00%
Hexakis(1H, 1H, 7H-dodecafluoroheptoxy)phosphazine (CAS NO.: 3830-74-8)	< 0.01%	99.00%
Hexakis(1H, 1H, 9H-perfluorononyloxy)phosphazine (CAS NO.: 186043-67-4)	< 0.01%	99.00%
Hexakis(1H, 1H ,4H-hexafluorobutyloxy)phosphazine (CAS NO.: 186406-47-3)	<0.01%	97.00%
Hexakis(1H, 1H, 6H-decafluorohexyloxy)phosphazine (CAS NO.: 186406-48-4)	<0.01%	97.00%
Hexakis(1H, 1H, 8H-tetradecafluorooctyloxy)phosphazine (CAS NO.: 186406-49-5)	<0.01%	99.00%
Tris(trifluoromethyl)-1, 3, 5-triazine (CAS NO.: 368-66-1)	<0.01%	99.00%
Tris(heptafluoropropyl)-1, 3, 5-triazine (CAS NO.: 915-76-4)	<0.01%	99.00%

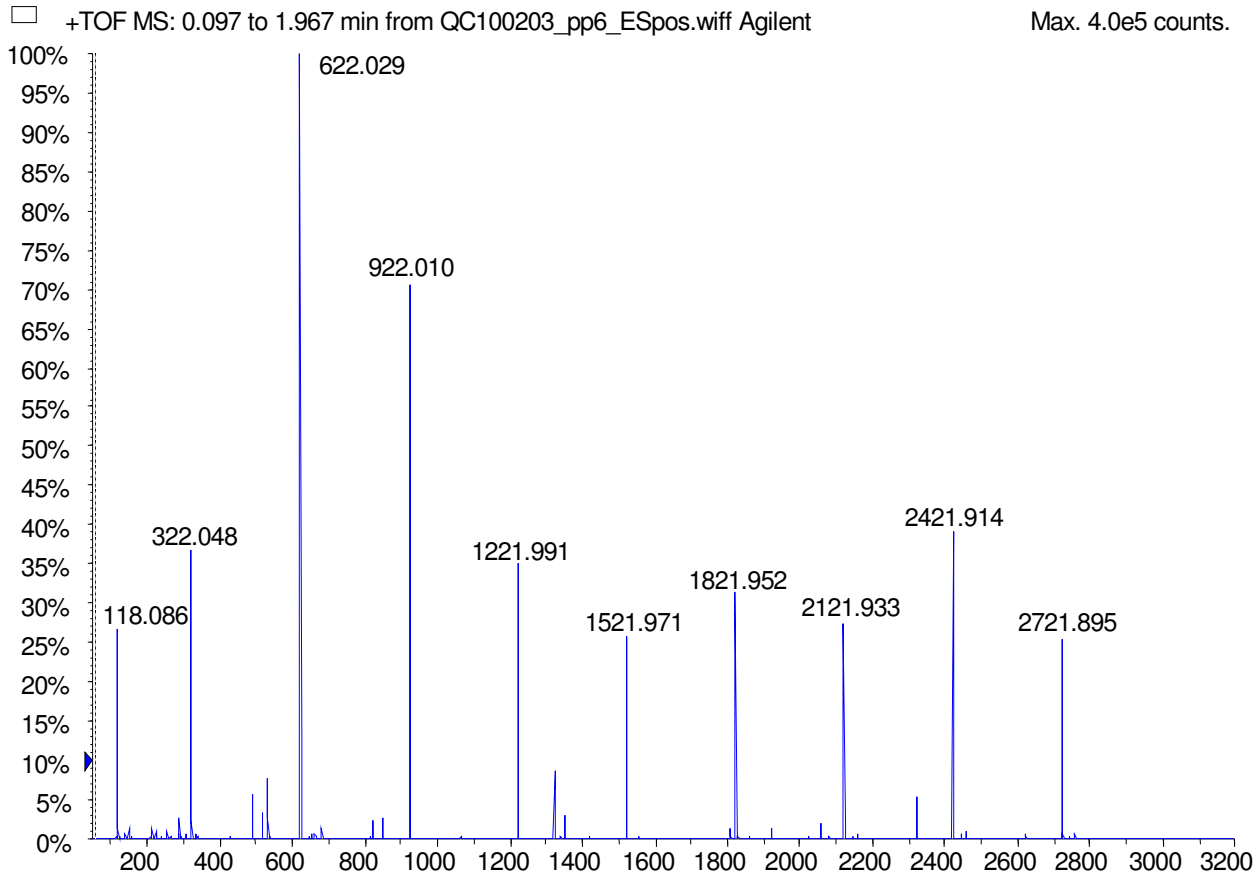
Solvent Composition:

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

Traceability:

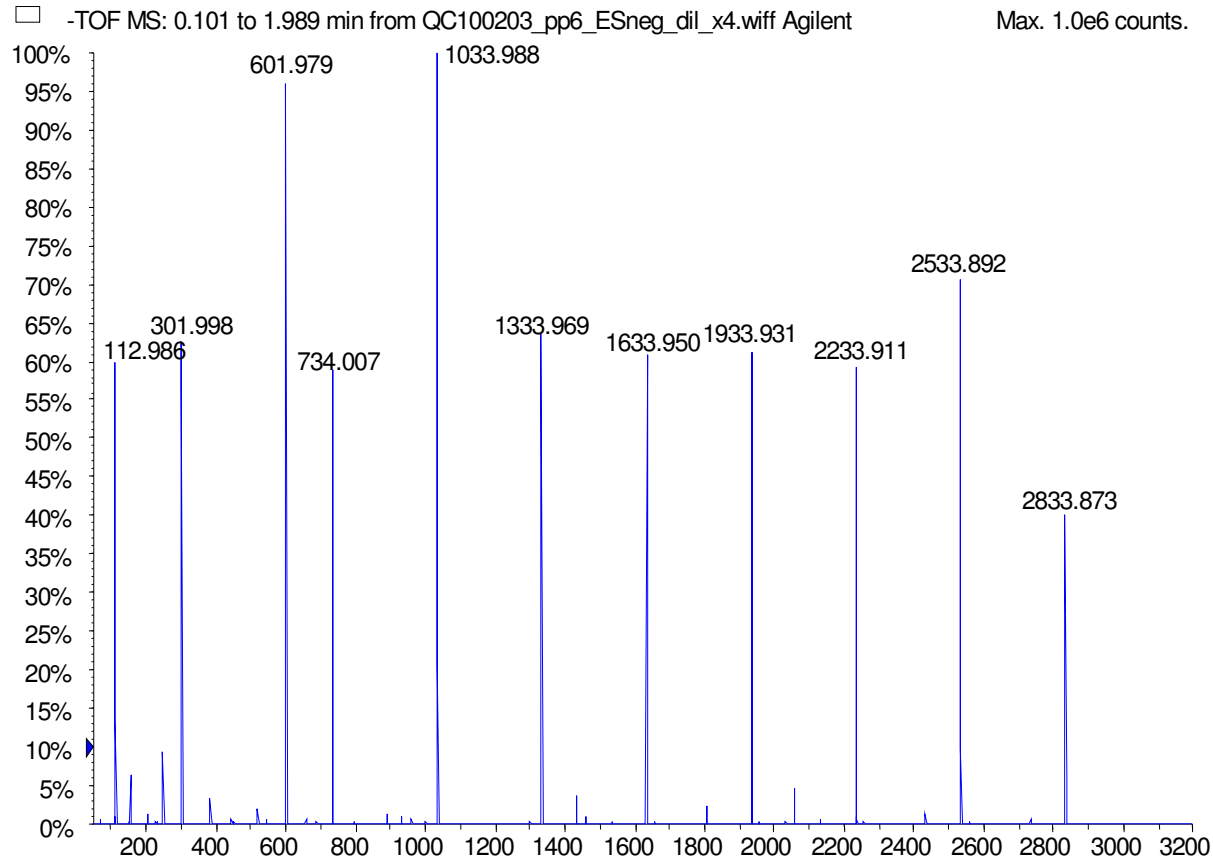
This standard has been produced gravimetrically using ISO9001 quality procedures. NIST traceable weights are used to verify balance calibration with the preparation of each lot. Concentration of analyte in solution is ug/ml +/- 0.5%, uncertainty based upon balance and Class A volumetric glassware. API-Mass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

G1969-85000 POS ES-TOF SPECTRA



Sample: G1969-85000
Instrument: Agilent G1969A API-TOF MS
Mode:ES
Polarity: Positive ion mode
CDS infusion rate: 0.1 ml/min
Vcap: -4 kV
Fragmentor: 215 V
Nebulizer pressure : 20 psig
Drying gas flow : 6 L/min
Drying gas temperature : 300 °C
MCP : 650 V
PMT : 703 V
Scan range: m/z 50-3200
Transients : 10,000
Flight tube: -6.5 kV
Oct. RF : 250 V pk

G1969-85000 NEG ES-TOF SPECTRA



Sample: G1969-85000 (1:4 dilution in 95:5 ACN/H2O)
Instrument: Agilent G1969A API-TOF MS
Mode:ES
Polarity: Negative ion mode
CDS infusion rate: 0.1 ml/min
Vcap: +4 kV
Fragmentor: 160 V
Nebulizer pressure : 20 psig
Drying gas flow : 6 L/min
Drying gas temperature : 300 °C
MCP : 650 V
PMT : 703 V
Scan range: m/z 50-3200
Transients : 10,000
Flight tube: +6.5 kV
Oct. RF : 250 V pk

PRINCIPAL IONS

MASS	POS	NEG
1	118.086255	112.985587
2	322.048121	301.998139
3	622.028960	601.978977
4	922.009798	1033.988109
5	1221.990637	1333.968947
6	1521.971475	1633.949786
7	1821.952313	1933.930624
8	2121.933152	2233.911463
9	2421.913990	2533.892301
10	2721.894829	2833.873139

Date of Manufacture: 12 JULY 2011
Date of Expiration: 12 JULY 2013

Elwood Doughty
QA Manager
Supelco, Inc.