

Compound	m/z
Glycine	76.039854
L-Alanine	90.055504
L-Arginine	175.119501
L-Asparagine	133.061318
L-Aspartic acid	134.045334
L-Cysteine	122.027576
L-Cystine	241.031677
L-Glutamic acid	148.060984
L-Glutamine	147.076968
L-Histidine	156.077302
L-Isoleucine	132.102454
L-Kynurenine	209.092618
L-Leucine	132.102454
L-Lysine	147.113353
L-Methionine	150.058876
L-Phenylalanine	166.086804
L-Proline	116.071154
L-Serine	106.050419
L-Threonine	120.066069
L-Tryptophan	205.097703
L-Tyrosine	182.081719
L-Valine	118.086804
Hydroxyproline	132.066069
L-Hydroxylysine	163.108268
4-Aminobutyric acid	104.071154
Dimethylglycine	104.071154
Glycine betaine	118.086804
L-Cystathionine	223.075255
L-Homocysteine	136.043226
S-Adenosylhomocysteine	385.129416
S-Adenosylmethionine	399.145066
Shikimic acid	173.045
Chitobiose	425.177138
Monesin	693.418985
Thiotropocin	212.968013
Glutathione	308.091634
Salicylic acid	137.02387
Trehalose	341.10839
Dihydroxyacetone phosphate	168.990203
Melatonin	233.129003
(S)-3-Hydroxybutyryl-CoA	852.144174
Acetoacetyl-CoA	850.128524
Acetyl-CoA	808.117959
Crotonoyl-CoA	834.133609

D-Methylmalonyl-CoA	866.123439
Malonyl-CoA	852.107789
Propionyl-CoA	822.133609
Succinyl-CoA	866.123439
Adenosine diphosphate	426.021596
Adenosine monophosphate	346.055262
Adenosine triphosphate	505.987929
Guanosine monophosphate	362.050178
Guanosine triphosphate	521.982844
Sarcosine	90.055504
3',5'-Cyclic AMP	328.044698
3',5'-Cyclic diGMP	689.087051
3',5'-Cyclic GMP	344.039613
2,5-Dihydroxybenzoic acid	153.018785
4-Aminobenzoic acid	138.055503
Acetosyringone	197.081385
Acetovanillone	167.07082
Ethyl aminobenzoate	166.086804
Ethyl dihydroxybenzoate	181.050085
Ferulic acid	195.065735
p-Coumaric acid	165.05517
Sinapic acid	225.0763
Syringaldehyde	183.065735
Syringic acid	199.06065
trans-Cinnamic acid	131.04969
Vanillic acid	169.050085
Vanillin	153.05517
2-Hydroxy-4-(methylthio)butyric acid	149.027242
2-keto-4-methylthiobutyric acid	147.011592
Carnitine	162.113019
Citrulline	176.103517
Cys-Gly, oxidized	355.074605
Homocysteine thiolactone	118.032661
L-Arginosuccinic acid	291.13046
L-Cysteinyglycine	179.04904
L-Homocystine	269.062977
L-Homoserine	120.066069
L-Methionine S-oxide	166.053791
L-Ornithine	133.097703
N6-Acetyl-L-lysine	189.123918
O-Acetyl-L-serine	148.060984
Proline betaine	144.102454
Sucrose	341.10839
Trigonelline	138.055503
5-Oxoproline	128.034768

Butyrylcarnitine	232.154884
Glucosamine	180.087199
Glycerophosphocholine	258.110652
O-Acetylcarnitine	204.123584
Ophthalmic acid	290.135212
O-Propionylcarnitine	218.139234
Trimethylamine	60.081324
Trimethylamine N-oxide	76.076239
Allopurinol	135.030686
Arsenobetaine	179.005326
beta-Alanine	90.055504
Betonicine	160.097369
Deoxyadenosine	252.109665
Dimethylsulfonioacetate	121.032327
Gonyol	179.074191
Hordenine	166.123189
Hydroxyisoleucine	148.097369
Inosine	267.072946
Lactose	341.10839
Maltose	341.10839
Melamine	127.073219
O-Methylmalonyl-L-carnitine	262.129063
Succinic semialdehyde	101.02387
Sulfanilic acid	172.006841
Urocanic acid	137.035103
Acetylcholine	146.118104
beta-Alaninebetaine	132.1018
L-Cysteinesulfinic acid	152.001756
5-Methylcytosine	126.066737
Anserine	241.130066
beta-Glutamic acid	148.060984
Carnosine	227.114416
Hypoxanthine	137.046336
N6,N6,N6-Trimethyl-L-lysine	189.160303
N6-Methyladenine	150.07797
N-Acetyl-D-glucosamine	222.097764
N-Acetylmuramic acid	294.118894
(3-Carboxypropyl)trimethylammonium	146.118104
2,3-Pyridinedicarboxylic acid	168.029684
Acetylglycine	116.034769
Butyrylglycine	144.066069
Ergothioneine	230.096324
Glutamylphenylalanine	295.129398
N-Acetyl-L-glutamic acid	190.071549
Propionylglycine	130.050419

Succinylglycine	176.055899
Threonic acid	135.02935
Adenine	136.06232
Cytosine	112.051087
Guanine	152.057235
Thymine	125.035103
Uracil	111.019453
Adenosine	268.10458
Cytidine	244.093347
Guanosine	284.099495
Thymidine	241.082448
Uridine	243.061713
UDP-glucose	565.047204
UDP-N-acetylglucosamine	606.073753
2-Ketoglutaric acid	145.0137
cis-Aconitic acid	173.008615
Citric acid	191.01918
D-Gluconic acid	195.05048
Fumaric acid	115.003135
Isocitric acid	191.01918
Lipoic acid	205.035699
Malic acid	133.0137
Orotic acid	155.009283
Oxalic acid	88.987485
Phosphoenolpyruvic acid	166.974553
Succinic acid	117.018785
Creatine	132.077302
2-O-alpha-D-Glucosylglycerol	255.107995
5-Hydroxyectoine	159.076968
Ectoine	143.082053
Ectoine	143.082053
Homarine	138.055503
Muramic acid	252.108329
3-Indoleacetonitrile	157.076573
3-Indolepropionic acid	190.08626
Abscisic acid	247.13342
Camalexin	201.048645
Indole-3-acetamide	175.087138
Indole-3-acetic acid	176.071154
Indole-3-carbinol	146.060589
Indole-3-carboxylic acid	162.055503
Indole-3-methyl acetate	190.086804
Indolebutyric acid	204.10191
Indolelactate	206.081719
Indolepyruvic acid	202.050419

Kinetin	216.088535
Methyl indole-3-carboxylate	176.071154
Tryptamine	161.107872
Tryptophol	162.091889
Caffeine	195.088201
Xanthine	153.041251
Coenzyme Q1	251.128335
2-(3,5-Dichlorophenylcarbamoyl)-1,2-dimethylcyclo	232.097369
2-Heptyl-3-hydroxy-quinolone	260.165054
2-Heptyl-4(1H)-quinolone	244.170139
N-(3-Oxodecanoyl)homoserine lactone	270.170534
N-(3-Oxododecanoyl)homoserine lactone	298.201834
N-(3-Oxohexanoyl)homoserine lactone	214.107934
N-(3-Oxoctanoyl)homoserine lactone	242.139234
N-(3-Oxoctanoyl)homoserine lactone	242.139234
N-(4-Coumaroyl)-L-homoserine lactone	248.092284
N-Butyryl-L-homoserine lactone	172.097369
N-Decanoyl-L-homoserine lactone	256.191269
N-Hexanoyl-L-homoserine lactone	200.128669
N-Octanoyl-L-homoserine lactone	228.159969
N-Tetradecanoyl-DL-homoserine lactone	312.253869
Flavin adenine dinucleotide	784.149317
Glycerophosphoric acid	171.005853
Glycerophosphoric acid	171.005853
NAD	662.101304
NADH	664.116954
NADP	742.067637
NADPH	744.083287
Riboflavin-5-phosphate	457.112444
3-Phosphoglycerate	184.985118
3-Phosphoglycerate	184.985118
D-Fructose 6-phosphate	259.021897
D-Glucose 1-phosphate	259.021897
D-Glucose 6-phosphate	259.021897
D-Ribose 5-phosphate	229.011333
(R)-2,3-Dihydroxypropane-1-sulfonate	155.001422
1-Propanesulfonate	123.011592
3-Sulfopyruvic acid	166.965037
Dimethylsulfoniopropionate	135.047977
Ethanesulfonic acid	108.995942
Glutathione disulfide	613.159793
Hypotaurine	110.027576
Isethionic acid	124.990857
L-Cysteic acid	167.996671
Methylthioadenosine	298.097387

N-Acetyltaurine	166.017406
N-Methyltaurine	140.038141
Sodium 2-mercaptoethanesulfonate	140.968013
Sulfoacetic acid	138.970122
Taurine	124.006841
Domoic acid	312.144714
5-(2-Hydroxyethyl)-4-methylthiazole	144.048311
Biotin	245.09599
Desthiobiotin	215.139568
Folic acid	442.147508
Nicotinic acid	124.039854
Pantothenic acid	220.118498
Pyridoxal	168.066069
Pyridoxal phosphate	248.032402
Pyridoxamine	169.097703
Pyridoxine	170.081719
Riboflavin	377.146111
Thiamine	265.112308
Thiamine diphosphate	425.044974
Thiamine monophosphate	345.078641
Choline	104.107539
Adenosylcobalamin	790.3367
Cyanocobalamin	678.2894
Hydroxocobalamin	664.7861
Methylcobalamin	672.8011
Dimethylbenzimidazole	147.092223

Ionization form	Column	Retention Time	Spike Concentration (uM)
[M+H]	HILIC	11.51	0.03121875
[M+H]	HILIC	11.3	0.03121875
[M+H]	HILIC	17.93	0.03121875
[M+H]	HILIC	11.86	0.03121875
[M+H]	HILIC	12.86	0.03121875
[M+H]	HILIC	7	0.025024038
[M+H]	HILIC	13.1	0.03121875
[M+H]	HILIC	12.41	0.03121875
[M+H]	HILIC	11.7	0.03121875
[M+H]	HILIC	11.45	0.03121875
[M+H]	HILIC	8.17	0.03121875
[M+H]	RP	1.27	0.0025
[M+H]	HILIC	7.63	0.03121875
[M+H]	HILIC	17.5	0.03121875
[M+H]	HILIC	7.96	0.03121875
[M+H]	RP	1.15	0.0025
[M+H]	HILIC	9.49	0.03121875
[M+H]	HILIC	11.86	0.03121875
[M+H]	HILIC	10.92	0.03121875
[M+H]	RP	2.07	0.0025
[M+H]	HILIC	9.76	0.03121875
[M+H]	HILIC	9.09	0.03121875
[M+H]	HILIC	10.07	0.03121875
[M+H]	HILIC	16.37	0.03121875
[M+H]	HILIC	11.155	0.03121875
[M+H]	HILIC	8.97	0.03121875
[M+H]	HILIC	7.86	0.03121875
[M+H]	HILIC	13.14	0.025024038
[M+H]	HILIC	8.7	0.025024038
[M+H]	RP	0.96	0.0025
[M+H]	RP	0.71	0.0025
[M-H]	HILIC	10.97	0.03121875
[M+H]	HILIC	10.21	0.025024038
[M+H]	RP	11.79	0.0025
[M+H]	RP	6.47	0.0025
[M+H]	HILIC	12	0.03121875
[M-H]	HILIC	2.2	0.024975
[M-H]	HILIC	13	0.025024038
[M-H]	HILIC	12.86	0.031272837
[M+H]	RP	6.51	0.0025
[M-H]	HILIC	11.545	0.024975
[M-H]	HILIC	10.6	0.024975
[M-H]	HILIC	10.84	0.024975
[M-H]	HILIC	8.45	0.024975

[M-H]	HILIC	13.18	0.024975
[M-H]	HILIC	13.525	0.024975
[M-H]	HILIC	8.83	0.024975
[M-H]	HILIC	12.965	0.024975
[M-H]	HILIC	12.09	0.031272837
[M-H]	HILIC	11.585	0.031272837
[M-H]	HILIC	15.35	0.031272837
[M-H]	HILIC	13.85	0.025024038
[M-H]	HILIC	16.58	0.025024038
[M+H]	HILIC	10.6	0.025024038
[M-H]	HILIC	4.06	0.031272837
[M-H]	HILIC	13.74	0.025024038
[M-H]	HILIC	8.8	0.031272837
[M-H]	HILIC	4.08	0.030028846
[M+H]	RP	2	0.0025
[M+H]	RP	5.765	0.0025
[M+H]	RP	5.38	0.0025
[M+H]	RP	3.365	0.0025
[M-H]	HILIC	2.08	0.025024038
[M+H]	RP	5.97	0.0025
[M+H]	RP	5.385	0.0025
[M+H]	RP	5.985	0.0025
[M+H]	RP	5.48	0.0025
[M+H]	RP	4.88	0.0025
[M-OH]	RP	6.2	0.0025
[M+H]	RP	4.115	0.0025
[M+H]	RP	4.69	0.0025
[M-H]	HILIC	2.69	0.031316106
[M]	HILIC	2.59	0.031316106
[M+H]	HILIC	10.21	0.006263221
[M+H]	HILIC	12.21	0.025052885
[M+H]	HILIC	11.85	0.025052885
[M+H]	HILIC	2.78	0.025052885
[M+H]	HILIC	13.69	0.025052885
[M+H]	RP	0.72	0.0025
[M+H]	HILIC	12.58	0.025052885
[M+H]	HILIC	11.32	0.025052885
[M+H]	HILIC	9.73	0.025052885
[M+H]	HILIC	16.79	0.031316106
[M+H]	HILIC	9.71	0.025052885
[M+H]	HILIC	6.27	0.025052885
[M+H]	HILIC	7.18	0.003131611
[M-H]	HILIC	11.93	0.031316106
[M+H]	HILIC	8.36	0.003131611
[M-H]	HILIC	7.97	0.024975

[M+H]	HILIC	4.47	0.024975
[M+H]	HILIC	9.97	0.03121875
[M]	HILIC	10.86	0.024975
[M+H]	HILIC	7.22	0.024975
[M+H]	HILIC	10.73	0.03121875
[M+H]	HILIC	5.63	0.024975
[M+H]	HILIC	5.96	0.0624375
[M+H]	HILIC	6.59	0.024975
[M-H]	HILIC	4.16	0.025019231
[M+H]	HILIC	7.06	0.025019231
[M+H]	HILIC	11.39	0.025019231
[M+H]	HILIC	8.45	0.025019231
[M+H]	HILIC	3.44	0.025019231
[M]	HILIC	8.39	0.012509615
[M+H]	HILIC	10.74	0.012509615
[M+H]	HILIC	3.34	0.025019231
[M+H]	HILIC	8.34	0.025019231
[M-H]	HILIC	7.57	0.025019231
[M-H]	HILIC	12.53	0.025019231
[M-H]	HILIC	12.31	0.025019231
[M+H]	HILIC	6.68	0.025019231
[M+H]	HILIC	9.67	0.025019231
[M-H]	HILIC	6.51	0.025019231
[M-H]	HILIC	7.23	0.025019231
[M-H]	HILIC	8.16	0.025019231
[M]	HILIC	13.37	0.025096154
[M+H]	HILIC	9.38	0.025096154
[M-H]	HILIC	10.74	0.031370192
[M+H]	HILIC	5.53	0.025096154
[M+H]	HILIC	8.55	0.025096154
[M+H]	HILIC	11.9	0.025096154
[M+H]	HILIC	10.47	0.025096154
[M+H]	HILIC	5.51	0.025096154
[M+H]	HILIC	17.14	0.025096154
[M+H]	HILIC	3.97	0.025096154
[M+H]	HILIC	8.55	0.037644231
[M+H]	HILIC	3.35	0.031370192
[M]	HILIC	9.91	0.025052885
[M+H]	HILIC	10.17	0.031316106
[M-H]	HILIC	7.81	0.031316106
[M-H]	HILIC	2.92	0.025052885
[M+H]	HILIC	11.29	0.025052885
[M+H]	HILIC	9.55	0.025052885
[M-H]	HILIC	11.84	0.025052885
[M-H]	HILIC	5.52	0.031316106

[M+H]	HILIC	12.58	0.025052885
[M-H]	HILIC	10.37	0.025052885
[M+H]	HILIC	4.72	0.024975
[M+H]	HILIC	7.41	0.031272837
[M+H]	HILIC	8.61	0.025024038
[M-H]	HILIC	3.02	0.031272837
[M-H]	HILIC	4	0.031272837
[M+H]	HILIC	4.46	0.031272837
[M+H]	HILIC	8.55	0.031272837
[M+H]	HILIC	9.06	0.031272837
[M-H]	HILIC	3.27	0.024975
[M-H]	HILIC	6.02	0.031272837
[M-H]	HILIC	13.59	0.025024038
[M-H]	HILIC	12.75	0.025024038
[M-H]	HILIC	10.845	0.024975
[M-H]	HILIC	14.21	0.024975
[M-H]	HILIC	15.65	0.031272837
[M-H]	HILIC	10.79	0.025024038
[M-H]	HILIC	12.7	0.024975
[M-H]	HILIC	15.65	0.024975
[M-H]	HILIC	2.42	0.024975
[M-H]	HILIC	11.97	0.024975
[M-H]	HILIC	4.195	0.024975
[M-H]	HILIC	13.235	0.024975
[M-H]	HILIC	13.865	0.024975
[M-H]	HILIC	11.9	0.024975
[M+H]	HILIC	11.34	0.03121875
[M+H]	HILIC	10.1	0.025024038
[M+H]	HILIC	11.07	7.82E-04
[M+H]	HILIC	9.25	0.050048077
[M+H]	HILIC	9.25	0.031272837
[M+H]	HILIC	6.19	0.025024038
[M+H]	HILIC	11	0.03121875
[M+H]	RP	7.09	0.0075
[M+H]	RP	6.66	0.0025
[M-OH]	RP	6.7	0.0025
[M+H]	RP	6.96	0.0025
[M+H]	RP	4.02	0.0025
[M+H]	RP	5.41	0.0025
[M-H]	HILIC	2.395	0.025024038
[M+H]	RP	5.44	0.0025
[M+H]	RP	7.31	0.0025
[M+H]	RP	7.45	0.0025
[M+H]	RP	4.65	0.0025
[M-H]	HILIC	2.375	0.025024038

[M+H]	RP	3.37	0.0025
[M+H]	RP	7.25	0.0025
[M+H]	RP	2.55	0.0025
[M+H]	RP	5.33	0.0025
[M+H]	RP	3.85	0.0025
[M+H]	RP	1.11	0.0025
[M+H]	RP	9.35	0.0025
[M+H]	RP	6.425	0.0025
[M+H]	HILIC	2.16	0.03121875
[M+H]	RP	11.02	0.0025
[M+H]	RP	8.255	0.0025
[M+H]	RP	9.75	0.0025
[M+H]	RP	1.96	0.0025
[M+H]	RP	5.28	0.0025
[M+H]	RP	5.28	0.0025
[M+H]	RP	5.46	0.0025
[M+H]	RP	1.47	0.0025
[M+H]	RP	9.21	0.0025
[M+H]	RP	4.06	0.0025
[M+H]	RP	7.36	0.0025
[M+H]	RP	11.4	0.0025
[M-H]	HILIC	7.585	0.031272837
[M-H]	HILIC	13.065	0.025024038
[M-H]	HILIC	13.065	0.0624375
[M-H]	HILIC	10.6	0.031272837
[M-H]	HILIC	11.26	0.025024038
[M-2H]	HILIC	12.74	0.025024038
[M]	HILIC	13.345	0.031272837
[M+H]	HILIC	8.6	0.031272837
[M-H]	HILIC	14.755	0.0624375
[M-H]	HILIC	14.755	0.031272837
[M-H]	HILIC	13.51	0.024975
[M-H]	HILIC	13.45	0.031272837
[M-H]	HILIC	14.12	0.024975
[M-H]	HILIC	13.29	0.031272837
[M-H]	HILIC	10.67	0.025024038
[M]	HILIC	2.81	0.031272837
[M-H]	HILIC	12.92	0.025024038
[M+H]	HILIC	9.325	0.025024038
[M-H]	HILIC	4.29	0.031272837
[M+H]	HILIC	14.98	0.031272837
[M+H]	HILIC	11.36	0.031272837
[M-H]	HILIC	7.2	0.025024038
[M-H]	HILIC	12.15	0.025024038
[M+H]	RP	2.1	0.0025

[M-H]	HILIC	3.74	0.025024038
[M+H]	HILIC	6.06	0.031272837
[M]	HILIC	2.67	0.025024038
[M-H]	HILIC	13.9	0.025024038
[M-H]	HILIC	11.13	0.025024038
[M+H]	RP	2.72	0.0025
[M+H]	RP	1	0.0025
[M+H]	RP	3.75	0.0025
[M+H]	RP	4.5	0.0025
[M+H]	RP	4.51	0.0025
[M+H]	RP	0.88	0.0025
[M+H]	RP	1.17	0.0025
[M+H]	RP	0.86	0.0025
[M+H]	RP	0.78	0.0025
[M+H]	RP	0.65	0.0025
[M+H]	RP	0.88	0.0025
[M+H]	RP	4.39	0.0025
[M]	RP	0.69	0.0025
[M]	HILIC	13.765	0.03121875
[M]	HILIC	11.5	0.03121875
[M]	HILIC	15.265	0.03121875
[2M+H]	RP	5.4	0.0025
[2M+H]	RP	5.02	0.0025
[2M-OH]	RP	4.35	0.0025
[2M+H]	RP	6.29	0.0025
[M+H]	RP	3.38	0.0025

Supplier	Part Number
Sigma-Aldrich	4059-00
Sigma-Aldrich	A7627-100G
Sigma-Aldrich	A5006-100G
Sigma-Aldrich	A0884-10MG
Sigma-Aldrich	A9256-100G
Sigma-Aldrich	168149-2.5G
Sigma-Aldrich	AA-SRM-NIST-2389a
Sigma-Aldrich	G1251-100G
Sigma-Aldrich	G8540-25G
Sigma-Aldrich	H8000-10G
Sigma-Aldrich	I2752-10G
Sigma-Aldrich	K8625-25MG
Sigma-Aldrich	L8000-25G
Sigma-Aldrich	L5501-25G
Sigma-Aldrich	M9625-5G
Sigma-Aldrich	P2126-100G
Sigma-Aldrich	P0380-100G
Sigma-Aldrich	S4500-100G
Sigma-Aldrich	T8625-10G
Sigma-Aldrich	T0254-25G
Sigma-Aldrich	T3754-50G
Sigma-Aldrich	1B1102-500G
Sigma-Aldrich	H54409-2.5G
Sigma-Aldrich	H0377-100MG
Sigma-Aldrich	A2129-25G
Sigma-Aldrich	D1156-5G
Sigma-Aldrich	B2629-50G
Sigma-Aldrich	C7505-10MG
Sigma-Aldrich	69453-10MG
Sigma-Aldrich	A9384-10MG
Sigma-Aldrich	A7007-5MG
Sigma-Aldrich	S5375-10MG
Sigma-Aldrich	D1523-100MG
Sigma-Aldrich	M5273-500MG
Sigma-Aldrich	SML0735-5MG
Sigma-Aldrich	PHR1359-500MG
Sigma-Aldrich	PHR1013-1G
Sigma-Aldrich	PHR1344-500MG
Sigma-Aldrich	D7137-5MG
Sigma-Aldrich	M5250-250MG
Sigma-Aldrich	H0261-10MG
Sigma-Aldrich	A1625-5MG
Sigma-Aldrich	A2056-5MG
Sigma-Aldrich	28007-5MG

Sigma-Aldrich	M1762-1MG
Sigma-Aldrich	M4263-5MG
Sigma-Aldrich	P5397-5MG
Sigma-Aldrich	S1129-5MG
Sigma-Aldrich	01905-250MG-F
Sigma-Aldrich	01930-5G
Sigma-Aldrich	A2383-1G
Sigma-Aldrich	G8377-500MG
Sigma-Aldrich	G8877-10MG
Sigma-Aldrich	S7672-10MG
Sigma-Aldrich	A6885-25MG
Sigma-Aldrich	SML1228-1UMO
Sigma-Aldrich	G6129-25MG
Sigma-Aldrich	149357-10G
Sigma-Aldrich	A9878-5G
Sigma-Aldrich	D134406-1G
Sigma-Aldrich	73536-100MG
Sigma-Aldrich	E10505-5G
Sigma-Aldrich	541052-1G
Sigma-Aldrich	1270311-25MG
Sigma-Aldrich	C9008-1G
Sigma-Aldrich	D7927-1G
Sigma-Aldrich	S7602-5G
Sigma-Aldrich	S6881-5G
Sigma-Aldrich	C80857-5G
Sigma-Aldrich	94770-10G
Sigma-Aldrich	V1104-2G
Cambridge Chemicals	CHM0094455
Sigma-Aldrich	K6000-10MG
Sigma-Aldrich	C0283-10MG
Sigma-Aldrich	C7629-10MG
Sigma-Aldrich	C9187-5MG
Sigma-Aldrich	H6503-100MG
Sigma-Aldrich	A5707-10MG
Sigma-Aldrich	C0166-25MG
Sigma-Aldrich	H6010-100MG
Sigma-Aldrich	H6515-10MG
Sigma-Aldrich	M1126-1G
Sigma-Aldrich	O2375-10MG
Sigma-Aldrich	A4021-1G
Sigma-Aldrich	A6262-10MG
Santa Cruz Biotechnology	sc-296420
Sigma-Aldrich	S0389-500G
Sigma-Aldrich	T5509-1G
Sigma-Aldrich	83160-25G

Sigma-Aldrich	42623-10MG
Sigma-Aldrich	PHR1199-500MG
Sigma-Aldrich	G5291-10MG
Sigma-Aldrich	A6706-1G
Sigma-Aldrich	91351-10MG
Sigma-Aldrich	42602-10MG
Sigma-Aldrich	41284-100MG
Sigma-Aldrich	317594-1G
Sigma-Aldrich	A8003-5G
Santa Cruz Biotechnology	sc-227279
Sigma-Aldrich	A9920-10MG
Santa Cruz Biotechnology	sc-291986
Sigma-Aldrich	D7400-500MG
Dr. Georg Pohnert, Germany	NA
Dr. Georg Pohnert, Germany	NA
Santa Cruz Biotechnology	sc-279195
Sigma-Aldrich	49549-10MG
Sigma-Aldrich	I4125-1G
Sigma-Aldrich	PHR1025-1G
Sigma-Aldrich	PHR1497-1G
Sigma-Aldrich	M2659-5G
Toronto Research Chemicals	M318900
Santa Cruz Biotechnology	sc-281158†
Santa Cruz Biotechnology	sc-212977
Sigma-Aldrich	859796-5G
Sigma-Aldrich	A6625-10MG
Ingalls Lab	NA
Sigma-Aldrich	C4418-100MG
Sigma-Aldrich	M6751-250MG
Santa Cruz Biotechnology	sc-207792A
Sigma-Aldrich	G1763-50MG
Sigma-Aldrich	C9625-10MG
Sigma-Aldrich	H9377-1G
Sigma-Aldrich	T1660-25MG
Santa Cruz Biotechnology	sc-236150
Sigma-Aldrich	A8625-10MG
Sigma-Aldrich	A3007-10MG
Sigma-Aldrich	403245-1G
Sigma-Aldrich	P63808-25G
Sigma-Aldrich	A16300-5G
Sigma-Aldrich	94274-10MG
Santa Cruz Biotechnology	sc-200814
Santa Cruz Biotechnology	sc-488719
Sigma-Aldrich	855642-25G
Sigma-Aldrich	92986-10MG

Sigma-Aldrich	01883-10MG
Sigma-Aldrich	79272-10MG
Sigma-Aldrich	104965-5G
Sigma-Aldrich	C3506-1G
Sigma-Aldrich	G11950-10G
Sigma-Aldrich	T0376-5G
Sigma-Aldrich	U0750-5G
Sigma-Aldrich	A9251-1G
Sigma-Aldrich	C4654-1G
Sigma-Aldrich	G6752-1G
Sigma-Aldrich	89270-1G
Sigma-Aldrich	U3750-1G
Santa Cruz Biotechnology	sc-222402A
Sigma-Aldrich	U4375-25MG
Sigma-Aldrich	75890-25G
Sigma-Aldrich	A3412-1G
Sigma-Aldrich	W302600-SAMPLE-K
Sigma-Aldrich	G9005-10MG
Sigma-Aldrich	47910-5G
Sigma-Aldrich	I1252-1G
Sigma-Aldrich	T5625-500MG
Sigma-Aldrich	PHR1273-1G
Sigma-Aldrich	O2750-10G
Sigma-Aldrich	194131-5G
Sigma-Aldrich	P7127-100MG
Sigma-Aldrich	W327700-SAMPLE-K
Sigma-Aldrich	C0780-10MG
Santa Cruz Biotechnology	sc-211562
Sigma-Aldrich	70709-1G-F
Sigma-Aldrich	81619-1G-F
Sigma-Aldrich	81619-1G-F
Santa Cruz Biotechnology	sc-470671
Sigma-Aldrich	M2503-5MG
Sigma-Aldrich	129453-5G
Sigma-Aldrich	220027-1G
Sigma-Aldrich	A1049-100MG
Sigma-Aldrich	SML1016-5MG
Sigma-Aldrich	286281-5G
Sigma-Aldrich	I2886-5G
Sigma-Aldrich	I7256-1G
Sigma-Aldrich	284734-1G
Sigma-Aldrich	I9770-1G
Sigma-Aldrich	I5386-1G
Sigma-Aldrich	I5508-250MG-A
Sigma-Aldrich	I7017-1G

Sigma-Aldrich	K3378-1G
Sigma-Aldrich	395307-25G
Sigma-Aldrich	193747-10G
Sigma-Aldrich	T90301-5G
Sigma-Aldrich	C0750-5G
Sigma-Aldrich	X7375-10G
Sigma-Aldrich	C7956-2MG
C. Harwood laboratory, University of Washington	NA
Sigma-Aldrich	94398-10MG
Sigma-Aldrich	SML0747-10mg
Sigma-Aldrich	O9014-10MG
Sigma-Aldrich	O9139-10MG
Sigma-Aldrich	K3007-10MG
Sigma-Aldrich	O1639-25MG
Sigma-Aldrich	O1639-25MG
Sigma-Aldrich	07077-50MG
Sigma-Aldrich	09945-25MG
Sigma-Aldrich	07028-10MG
Sigma-Aldrich	56395-10MG
Sigma-Aldrich	44558-10MG
Sigma-Aldrich	10937-25MG
Sigma-Aldrich	F6625-10MG
Sigma-Aldrich	94124-10MG
Sigma-Aldrich	94124-10MG
Sigma-Aldrich	N7004-250MG
Sigma-Aldrich	10 107 735 001 500mg
Sigma-Aldrich	10 128 031 001 100mg
Sigma-Aldrich	N1630-25MG
Sigma-Aldrich	F2253-10MG
Sigma-Aldrich	P8877-10MG
Sigma-Aldrich	P8877-10MG
Sigma-Aldrich	F3627-10MG
Sigma-Aldrich	G7000-1G
Sigma-Aldrich	G7879-500MG
Sigma-Aldrich	R7750-10MG
A. Bourdon and S. Champagna, University of Tennessee, Knoxville	NA
Santa Cruz Biotechnology	sc-272474
Sigma-Aldrich	39584-10MG
Sigma-Aldrich	80828-100MG
Sigma-Aldrich	186260-5G
Sigma-Aldrich	G4376-500MG
Sigma-Aldrich	H1384-10MG
Sigma-Aldrich	220078-25G
Sigma-Aldrich	30170-10G
Sigma-Aldrich	D5011-25MG

A. Cook and K. Denger, University of Konstanz, Germany
Santa Cruz Biotechnology
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NA
sc-487851
M1511-5G
242802-5G
T0625-10G
D6152-5MG
PHR3365-50MG
B4639-1G
D1411-500MG
F8758-5G
N4126-5G
21210-5G-F
P9130-500MG
P9255-1G
P9380-1G
P6280-10G
R9504-25G
T4625-5G
700011-508
T1208-5GM
C7017-10MG
C0884-25MG
PHR1234-1G
H1428000
M9756-25MG
D147206-25G

Status

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IS Classification

Spike-Before
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IS Compound

DL-Proline, 2H7
DL-Valine, D8
L-Methionine, D3
DL-Histidine, 15N
DL-Alanine, 2H3
L-Isoleucine, 15N
Sucrose, 13C
Betaine, 13C5-15N
Cytosine, 13C2, 15N3
Guanine, 13C-15N2
Homarine, D3
Thymine, D4
Uracil, 15N2-D2
Trehalose, 13C
Succinic Acid, D4
Adenosine Monophosphate, 15N5
Indole 3 Acetic Acid, D5
L-Cysteic Acid, D3
Taurine, D4
L-Phenylalanine
(B2) Riboflavin dioxypyrimidine, 13C4
Tryptophan
Arsenobetaine, 13C2

Final concentration in reconstituted sample (uM)

1
1
1
2.5
5
0.5
5
1
2
2
4
6
8
5
10
5
5
1
1
0.1
0.1
0.1
1

MS-DIAL ver. 4.38

Fraction	HILIC Pos
MS1 Data type	Centroid
MS2 Data type	Centroid
Ion mode	Positive
Target	Metabonomics
Mode	ddMSMS
#Data collection parameters	
Retention time begin	2
Retention time end	20
Mass range begin	60
Mass range end	800
MS2 mass range begin	0
MS2 mass range end	2000
#Centroid parameters	
MS1 tolerance	0.02
MS2 tolerance	0.02
#Isotope recognition	
Maximum charged number	2
#Data processing	
Number of threads	1
#Peak detection parameters	
Smoothing method	LinearWeigh
Smoothing level	6
Minimum peak width	10
Minimum peak height	30000
#Peak spotting parameters	
Mass slice width	0.05
Exclusion mass list (mass & tolerance)	
#Deconvolution parameters	
Sigma window value	0.5
MS2Dec amplitude cut off	0
Exclude after precursor	TRUE
Keep isotope until	0.5
Keep original precursor isotopes	FALSE
#MSP file and MS/MS identification setting	

MSP file	
Retention time tolerance	100
Accurate mass tolerance (MS1)	0.01
Accurate mass tolerance (MS2)	0.05
Identification score cut off	80
Using retention time for scoring	FALSE
Using retention time for filtering	FALSE
#Text file and post identification (retention time and accurate mass based) setting	
Text file	
Retention time tolerance	0.1
Accurate mass tolerance	0.01
Identification score cut off	85
#Advanced setting for identification	
Relative abundance cut off	0
Top candidate report	FALSE
#Adduct ion setting	
[M+H] ⁺	
#Alignment parameters setting	
Retention time tolerance	2
MS1 tolerance	0.015
Retention time factor	0.5
MS1 factor	0.5
Peak count filter	0
N% detected in at least one group	0
Remove feature based on peak height fold-change	FALSE
Sample max / blank average	5
Sample average / blank average	5
Keep identified and annotated metabolites	TRUE
Keep removable features and assign the tag for checking	TRUE
Gap filling by compulsion	TRUE
#Tracking of isotope labels	
Tracking of isotopic labels	FALSE
#Ion mobility	
Ion mobility data	FALSE

HILIC Neg RP

Centroid Centroid

Centroid Centroid

Negative Positive

Metablomics Metablomics

ddMSMS ddMSMS

2 0.5

20 17.8

60 60

2000 2000

0 0

2000 2000

0.01 0.01

0.025 0.025

2 2

1 1

LinearWeigh LinearWeightedMovingAverage

3 3

5 5

1000 1000

0.1 0.1

0.5 0.5

0 0

TRUE TRUE

0.5 0.5

FALSE FALSE

100	100
0.01	0.01
0.05	0.05
80	80
FALSE	FALSE
FALSE	FALSE

0.1	0.1
0.01	0.01
85	85

0	0
FALSE	FALSE

2	0.5
0.015	0.015
0.5	0.5
0.5	0.5
0	0
0	0
FALSE	FALSE
5	5
5	5
TRUE	TRUE
TRUE	TRUE
TRUE	TRUE

FALSE	FALSE
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FALSE	FALSE
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Compound	Fraction	Sample	Mean EE (%)
(3-Carboxypropyl)trimethylammonium	HILIC Pos	A	57.61
(3-Carboxypropyl)trimethylammonium	HILIC Pos	NP	34.38
(3-Carboxypropyl)trimethylammonium	HILIC Pos	PS	52.67
(3-Carboxypropyl)trimethylammonium	HILIC Pos	LW	42.60
(Iso)leucine	HILIC Pos	A	63.88
(Iso)leucine	HILIC Pos	NP	58.27
(Iso)leucine	HILIC Pos	PS	54.60
(Iso)leucine	HILIC Pos	LW	62.00
3',5'-Cyclic Adenosine Monophosphate	HILIC Neg	A	5.53
3',5'-Cyclic Adenosine Monophosphate	HILIC Neg	NP	5.68
3',5'-Cyclic Adenosine Monophosphate	HILIC Neg	PS	6.03
3',5'-Cyclic Adenosine Monophosphate	HILIC Neg	LW	6.44
4-Aminobutyric acid	HILIC Pos	A	84.40
4-Aminobutyric acid	HILIC Pos	NP	95.31
4-Aminobutyric acid	HILIC Pos	PS	86.70
4-Aminobutyric acid	HILIC Pos	LW	90.44
5-Hydroxyectoine	HILIC Pos	A	55.18
5-Hydroxyectoine	HILIC Pos	NP	44.71
5-Hydroxyectoine	HILIC Pos	PS	47.76
5-Hydroxyectoine	HILIC Pos	LW	41.13
5-Methylcytosine	HILIC Pos	A	22.97
5-Methylcytosine	HILIC Pos	NP	18.99
5-Methylcytosine	HILIC Pos	PS	22.33
5-Methylcytosine	HILIC Pos	LW	19.80
5-Oxoproline	HILIC Neg	A	14.09
5-Oxoproline	HILIC Neg	NP	16.93
5-Oxoproline	HILIC Neg	PS	17.04
5-Oxoproline	HILIC Neg	LW	24.16
Abscisic acid	RP	A	4.51
Abscisic acid	RP	PS	5.02
Adenine	HILIC Pos	A	55.29
Adenine	HILIC Pos	NP	44.01
Adenine	HILIC Pos	PS	47.13
Adenine	HILIC Pos	LW	50.08
Adenosine	HILIC Pos	A	11.94
Adenosine	HILIC Pos	NP	10.09
Adenosine	HILIC Pos	PS	11.97
Adenosine	HILIC Pos	LW	8.46
Adenosine monophosphate	HILIC Neg	A	25.04
Adenosine monophosphate	HILIC Neg	NP	14.54
Adenosine monophosphate	HILIC Neg	PS	20.33
Adenosine monophosphate	HILIC Neg	LW	31.93
Allopurinol	HILIC Neg	A	56.09
Allopurinol	HILIC Neg	NP	39.05

Allopurinol	HILIC Neg	PS	60.05
Allopurinol	HILIC Neg	LW	28.70
Arsenobetaine	HILIC Pos	A	98.59
Arsenobetaine	HILIC Pos	NP	83.36
Arsenobetaine	HILIC Pos	PS	92.34
Arsenobetaine	HILIC Pos	LW	81.22
beta-Alanine	HILIC Pos	A	83.48
beta-Alanine	HILIC Pos	NP	70.69
beta-Alanine	HILIC Pos	PS	87.37
beta-Alanine	HILIC Pos	LW	86.74
beta-Alaninebetaine	HILIC Pos	A	73.67
beta-Alaninebetaine	HILIC Pos	NP	58.06
beta-Alaninebetaine	HILIC Pos	PS	70.25
beta-Alaninebetaine	HILIC Pos	LW	62.76
beta-Glutamic acid	HILIC Pos	A	56.47
beta-Glutamic acid	HILIC Pos	NP	48.08
beta-Glutamic acid	HILIC Pos	PS	60.16
beta-Glutamic acid	HILIC Pos	LW	46.95
Betonicine	HILIC Pos	A	100.66
Betonicine	HILIC Pos	NP	85.33
Betonicine	HILIC Pos	PS	92.77
Betonicine	HILIC Pos	LW	78.20
Butyrylcarnitine	HILIC Pos	A	6.34
Butyrylcarnitine	HILIC Pos	NP	4.24
Butyrylcarnitine	HILIC Pos	PS	5.68
Butyrylcarnitine	HILIC Pos	LW	5.97
Carnosine	HILIC Pos	A	24.24
Carnosine	HILIC Pos	NP	11.47
Carnosine	HILIC Pos	PS	16.48
Carnosine	HILIC Pos	LW	25.89
Citrulline	HILIC Pos	A	50.87
Citrulline	HILIC Pos	NP	33.10
Citrulline	HILIC Pos	PS	36.87
Citrulline	HILIC Pos	LW	39.93
Creatine	HILIC Pos	A	61.16
Creatine	HILIC Pos	NP	46.74
Creatine	HILIC Pos	PS	53.26
Creatine	HILIC Pos	LW	40.45
Cytidine	HILIC Pos	A	22.95
Cytidine	HILIC Pos	NP	16.35
Cytidine	HILIC Pos	PS	21.47
Cytidine	HILIC Pos	LW	18.82
Cytosine	HILIC Pos	A	34.94
Cytosine	HILIC Pos	NP	29.68
Cytosine	HILIC Pos	PS	31.62

Cytosine	HILIC Pos	LW	27.05
Desthiobiotin	RP	A	79.08
Desthiobiotin	RP	PS	53.12
Dimethylglycine	HILIC Pos	A	75.78
Dimethylglycine	HILIC Pos	NP	56.72
Dimethylglycine	HILIC Pos	PS	67.30
Dimethylglycine	HILIC Pos	LW	60.64
Dimethylsulfonioacetate	HILIC Pos	A	105.65
Dimethylsulfonioacetate	HILIC Pos	NP	92.55
Dimethylsulfonioacetate	HILIC Pos	PS	97.17
Dimethylsulfonioacetate	HILIC Pos	LW	83.90
Dimethylsulfoniopropionate	HILIC Pos	A	60.20
Dimethylsulfoniopropionate	HILIC Pos	NP	49.50
Dimethylsulfoniopropionate	HILIC Pos	PS	58.94
Dimethylsulfoniopropionate	HILIC Pos	LW	53.29
Ectoine	HILIC Pos	A	51.95
Ectoine	HILIC Pos	NP	44.29
Ectoine	HILIC Pos	PS	49.36
Ectoine	HILIC Pos	LW	44.78
Glucosamine	HILIC Pos	A	52.88
Glucosamine	HILIC Pos	NP	44.84
Glucosamine	HILIC Pos	PS	50.65
Glucosamine	HILIC Pos	LW	49.18
Glutamylphenylalanine	HILIC Pos	A	31.67
Glutamylphenylalanine	HILIC Pos	NP	21.91
Glutamylphenylalanine	HILIC Pos	PS	27.92
Glutamylphenylalanine	HILIC Pos	LW	22.31
Glycerophosphocholine	HILIC Pos	A	2.45
Glycerophosphocholine	HILIC Pos	NP	1.44
Glycerophosphocholine	HILIC Pos	PS	1.87
Glycerophosphocholine	HILIC Pos	LW	3.21
Glycerophosphoric acid	HILIC Neg	A	3.62
Glycerophosphoric acid	HILIC Neg	NP	0.64
Glycerophosphoric acid	HILIC Neg	PS	0.82
Glycerophosphoric acid	HILIC Neg	LW	0.77
Glycine betaine	HILIC Pos	A	121.53
Glycine betaine	HILIC Pos	NP	86.15
Glycine betaine	HILIC Pos	PS	110.62
Glycine betaine	HILIC Pos	LW	81.71
Gonyol	HILIC Pos	A	83.45
Gonyol	HILIC Pos	NP	48.54
Gonyol	HILIC Pos	PS	77.16
Gonyol	HILIC Pos	LW	74.91
Guanine	HILIC Pos	A	52.54
Guanine	HILIC Pos	NP	39.11

Guanine	HILIC Pos	PS	43.63
Guanine	HILIC Pos	LW	53.28
Guanosine	HILIC Pos	A	15.14
Guanosine	HILIC Pos	NP	10.34
Guanosine	HILIC Pos	PS	15.39
Guanosine	HILIC Pos	LW	11.81
Homarine	HILIC Pos	A	52.01
Homarine	HILIC Pos	NP	50.90
Homarine	HILIC Pos	PS	53.37
Homarine	HILIC Pos	LW	43.73
Hordenine	HILIC Pos	A	8.53
Hordenine	HILIC Pos	NP	4.71
Hordenine	HILIC Pos	PS	9.92
Hordenine	HILIC Pos	LW	6.01
Hydroxyisoleucine	HILIC Pos	A	88.51
Hydroxyisoleucine	HILIC Pos	NP	51.78
Hydroxyisoleucine	HILIC Pos	PS	66.49
Hydroxyisoleucine	HILIC Pos	LW	46.12
Hydroxyproline	HILIC Pos	A	58.49
Hydroxyproline	HILIC Pos	NP	49.78
Hydroxyproline	HILIC Pos	PS	56.04
Hydroxyproline	HILIC Pos	LW	53.57
Hypoxanthine	HILIC Pos	A	66.39
Hypoxanthine	HILIC Pos	NP	52.71
Hypoxanthine	HILIC Pos	PS	60.35
Hypoxanthine	HILIC Pos	LW	58.75
Indole-3-acetic acid	RP	A	16.77
Indole-3-acetic acid	RP	PS	10.22
Inosine	HILIC Neg	A	42.53
Inosine	HILIC Neg	NP	28.71
Inosine	HILIC Neg	PS	43.50
Inosine	HILIC Neg	LW	31.95
L-Alanine	HILIC Pos	A	87.79
L-Alanine	HILIC Pos	NP	82.16
L-Alanine	HILIC Pos	PS	134.62
L-Alanine	HILIC Pos	LW	120.22
L-Arginosuccinic acid	HILIC Pos	A	50.47
L-Arginosuccinic acid	HILIC Pos	NP	30.77
L-Arginosuccinic acid	HILIC Pos	PS	20.23
L-Arginosuccinic acid	HILIC Pos	LW	35.71
L-Asparagine	HILIC Pos	A	88.30
L-Asparagine	HILIC Pos	NP	76.01
L-Asparagine	HILIC Pos	PS	88.01
L-Asparagine	HILIC Pos	LW	78.45
L-Aspartic acid	HILIC Pos	A	62.91

L-Aspartic acid	HILIC Pos	NP	58.48
L-Aspartic acid	HILIC Pos	PS	73.51
L-Aspartic acid	HILIC Pos	LW	74.08
L-Cystine	HILIC Pos	A	8.75
L-Cystine	HILIC Pos	NP	8.25
L-Cystine	HILIC Pos	PS	8.23
L-Cystine	HILIC Pos	LW	5.65
L-Glutamic acid	HILIC Pos	A	61.18
L-Glutamic acid	HILIC Pos	NP	41.55
L-Glutamic acid	HILIC Pos	PS	58.20
L-Glutamic acid	HILIC Pos	LW	53.86
L-Glutamine	HILIC Pos	A	147.50
L-Glutamine	HILIC Pos	NP	123.93
L-Glutamine	HILIC Pos	PS	133.94
L-Glutamine	HILIC Pos	LW	119.45
L-Histidine	HILIC Pos	A	32.88
L-Histidine	HILIC Pos	NP	25.27
L-Histidine	HILIC Pos	PS	31.27
L-Histidine	HILIC Pos	LW	42.38
L-Homoserine	HILIC Pos	A	81.04
L-Homoserine	HILIC Pos	NP	64.96
L-Homoserine	HILIC Pos	PS	72.77
L-Homoserine	HILIC Pos	LW	56.62
L-Hydroxylysine	HILIC Pos	A	29.81
L-Hydroxylysine	HILIC Pos	NP	38.58
L-Hydroxylysine	HILIC Pos	PS	42.28
L-Hydroxylysine	HILIC Pos	LW	42.25
L-Lysine	HILIC Pos	A	60.82
L-Lysine	HILIC Pos	NP	63.30
L-Lysine	HILIC Pos	PS	33.45
L-Lysine	HILIC Pos	LW	67.26
L-Methionine S-oxide	HILIC Pos	A	77.81
L-Methionine S-oxide	HILIC Pos	NP	64.30
L-Methionine S-oxide	HILIC Pos	PS	69.48
L-Methionine S-oxide	HILIC Pos	LW	78.92
L-Ornithine	HILIC Pos	A	29.69
L-Ornithine	HILIC Pos	NP	45.71
L-Ornithine	HILIC Pos	PS	52.23
L-Ornithine	HILIC Pos	LW	61.20
L-Phenylalanine	RP	A	136.15
L-Phenylalanine	RP	PS	119.91
L-Proline	HILIC Pos	A	106.64
L-Proline	HILIC Pos	NP	94.56
L-Proline	HILIC Pos	PS	110.12
L-Proline	HILIC Pos	LW	103.01

L-Serine	HILIC Pos	A	40.01
L-Serine	HILIC Pos	NP	70.79
L-Serine	HILIC Pos	PS	88.46
L-Serine	HILIC Pos	LW	102.11
L-Threonine	HILIC Pos	A	60.94
L-Threonine	HILIC Pos	NP	59.90
L-Threonine	HILIC Pos	PS	66.99
L-Threonine	HILIC Pos	LW	60.97
L-Tyrosine	HILIC Pos	A	31.87
L-Tyrosine	HILIC Pos	NP	22.54
L-Tyrosine	HILIC Pos	PS	29.03
L-Tyrosine	HILIC Pos	LW	31.16
Melamine	HILIC Pos	A	68.71
Melamine	HILIC Pos	NP	53.63
Melamine	HILIC Pos	PS	58.12
Melamine	HILIC Pos	LW	60.24
Muramic acid	HILIC Pos	A	17.74
Muramic acid	HILIC Pos	NP	12.51
Muramic acid	HILIC Pos	PS	14.88
Muramic acid	HILIC Pos	LW	13.41
N6-Acetyl-L-lysine	HILIC Pos	A	42.87
N6-Acetyl-L-lysine	HILIC Pos	NP	29.01
N6-Acetyl-L-lysine	HILIC Pos	PS	39.61
N6-Acetyl-L-lysine	HILIC Pos	LW	39.55
N6-Methyladenine	HILIC Pos	A	19.00
N6-Methyladenine	HILIC Pos	NP	11.87
N6-Methyladenine	HILIC Pos	PS	17.10
N6-Methyladenine	HILIC Pos	LW	15.28
Nicotinic acid	RP	A	98.16
Nicotinic acid	RP	PS	105.87
O-Methylmalonyl-L-carnitine	HILIC Pos	A	53.54
O-Methylmalonyl-L-carnitine	HILIC Pos	NP	39.26
O-Methylmalonyl-L-carnitine	HILIC Pos	PS	48.87
O-Methylmalonyl-L-carnitine	HILIC Pos	LW	48.01
Ophthalmic acid	HILIC Pos	A	27.68
Ophthalmic acid	HILIC Pos	NP	18.03
Ophthalmic acid	HILIC Pos	PS	24.36
Ophthalmic acid	HILIC Pos	LW	21.82
Proline betaine	HILIC Pos	A	67.04
Proline betaine	HILIC Pos	NP	51.47
Proline betaine	HILIC Pos	PS	62.42
Proline betaine	HILIC Pos	LW	51.75
Pyridoxamine	RP	A	48.08
Pyridoxamine	RP	PS	4.01
Riboflavin-5-phosphate	HILIC Pos	A	1.19

Riboflavin-5-phosphate	HILIC Pos	NP	0.68
Riboflavin-5-phosphate	HILIC Pos	PS	1.84
Riboflavin-5-phosphate	HILIC Pos	LW	0.72
Salicylic acid	HILIC Neg	A	9.19
Salicylic acid	HILIC Neg	NP	4.96
Salicylic acid	HILIC Neg	PS	8.27
Salicylic acid	HILIC Neg	LW	0.20
Sarcosine	HILIC Pos	A	42.83
Sarcosine	HILIC Pos	NP	37.18
Sarcosine	HILIC Pos	PS	43.81
Sarcosine	HILIC Pos	LW	40.25
Trigonelline	HILIC Pos	A	60.91
Trigonelline	HILIC Pos	NP	48.33
Trigonelline	HILIC Pos	PS	56.32
Trigonelline	HILIC Pos	LW	47.71
Trimethylamine N-oxide	HILIC Pos	A	67.25
Trimethylamine N-oxide	HILIC Pos	NP	43.81
Trimethylamine N-oxide	HILIC Pos	PS	63.22
Trimethylamine N-oxide	HILIC Pos	LW	44.48
Urocanic acid	HILIC Neg	A	67.97
Urocanic acid	HILIC Neg	NP	55.99
Urocanic acid	HILIC Neg	PS	78.05
Urocanic acid	HILIC Neg	LW	60.40
Vanillic acid	RP	A	33.36
Vanillic acid	RP	PS	7.59
Xanthine	RP	A	77.64
Xanthine	RP	PS	60.75

Standard Deviation of EE (%)

13.75
2.26
6.12
14.15
16.62
3.08
2.63
15.38
0.39
0.37
1.42
5.22
8.86
25.92
11.86
16.00
8.00
3.24
4.64
7.56
4.46
2.09
1.09
3.62
5.09
1.02
10.16
7.28
0.80
2.72
12.97
5.21
3.06
11.82
2.66
1.26
1.04
2.13
2.41
3.22
5.18
12.69
13.07
6.88

10.84
20.74
17.11
5.58
4.80
14.89
13.65
6.94
8.14
17.44
11.81
1.47
7.65
11.04
4.24
4.00
4.29
3.22
14.22
4.64
4.94
14.07
1.40
1.41
2.37
3.58
9.27
2.19
6.31
17.29
13.24
0.70
4.21
15.01
8.91
2.93
5.76
7.36
5.36
0.50
3.28
4.55
5.35
3.71
2.17

4.97
28.58
16.84
6.33
0.75
6.71
10.96
12.49
3.32
9.45
12.66
9.98
4.52
9.29
9.45
7.80
2.18
3.33
6.08
7.01
3.45
4.15
14.42
6.68
1.63
3.72
6.53
0.77
0.10
0.76
1.57
0.64
0.07
1.00
0.56
18.24
4.67
9.30
15.31
16.58
2.32
7.33
22.31
13.78
5.22

6.38
18.79
5.50
0.65
1.12
5.07
8.18
1.28
9.45
8.83
3.98
1.00
2.73
1.39
20.57
12.14
20.66
27.46
13.78
3.53
4.30
11.93
13.30
6.36
4.78
17.33
7.05
7.88
12.76
2.34
4.97
12.08
16.76
5.08
37.39
33.17
19.14
4.16
23.53
27.19
13.57
1.77
6.74
19.14
12.04

0.57
5.35
20.06
3.51
3.58
7.24
7.71
4.43
3.73
7.53
19.13
27.27
6.82
13.92
31.26
7.47
1.57
6.65
21.90
10.59
1.01
4.91
14.90
3.84
1.90
1.65
16.27
15.52
2.10
30.11
20.78
14.04
6.21
2.55
23.35
5.32
6.00
4.13
16.79
37.49
14.24
24.75
5.23
5.99
26.64

16.57
2.76
3.61
32.72
13.57
6.48
2.66
19.36
11.22
1.82
2.55
10.26
10.68
4.05
4.66
18.20
4.95
0.50
2.39
4.77
13.08
3.95
1.32
13.89
6.70
1.52
0.92
5.30
16.85
7.63
9.93
1.41
2.23
16.33
8.46
2.22
3.28
7.84
12.34
1.45
5.11
10.22
16.93
16.25
0.38

0.08
0.39
0.30
2.14
0.66
2.92
0.90
7.75
1.96
4.42
8.22
11.28
3.17
3.48
7.31
19.01
1.06
21.77
16.62
2.51
6.36
9.10
13.64
7.47
3.73
19.29
5.66

Compound	Fraction	Sample
Hydroxyisoleucine	HILIC Pos	A
Hydroxyisoleucine	HILIC Pos	PS
N6-Methyladenine	HILIC Pos	A
N6-Methyladenine	HILIC Pos	PS
O-Acetylcarnitine	HILIC Pos	A
O-Acetylcarnitine	HILIC Pos	PS
N-Acetyl-L-glutamic acid	HILIC Neg	A
N-Acetyl-L-glutamic acid	HILIC Neg	PS
cis-Aconitic acid	HILIC Neg	A
cis-Aconitic acid	HILIC Neg	PS
Adenine	HILIC Pos	A
Adenine	HILIC Pos	PS
Adenosine	HILIC Pos	A
Adenosine	HILIC Pos	PS
Allopurinol	HILIC Neg	A
Allopurinol	HILIC Neg	PS
beta-Glutamic acid	HILIC Pos	A
beta-Glutamic acid	HILIC Pos	PS
Butyrylcarnitine	HILIC Pos	A
Butyrylcarnitine	HILIC Pos	PS
Butyrylglycine	HILIC Neg	A
Butyrylglycine	HILIC Neg	PS
3',5'-Cyclic Adenosine Monophosphate	HILIC Neg	A
3',5'-Cyclic Adenosine Monophosphate	HILIC Neg	PS
Carnitine	HILIC Pos	A
Carnitine	HILIC Pos	PS
3',5'-Cyclic Guanosine Monophosphate	HILIC Neg	A
3',5'-Cyclic Guanosine Monophosphate	HILIC Neg	PS
Cys-Gly, oxidized	HILIC Pos	A
Cys-Gly, oxidized	HILIC Pos	PS
Glutamylphenylalanine	HILIC Pos	A
Glutamylphenylalanine	HILIC Pos	PS
Glutathione disulfide	HILIC Pos	A
Glutathione disulfide	HILIC Pos	PS
Gonyol	HILIC Pos	A
Gonyol	HILIC Pos	PS
Guanine	HILIC Pos	A
Guanine	HILIC Pos	PS
Guanosine	HILIC Pos	A
Guanosine	HILIC Pos	PS
Hordenine	HILIC Pos	A
Hordenine	HILIC Pos	PS
Inosine	HILIC Neg	A
Inosine	HILIC Neg	PS

(Iso)leucine	HILIC Pos	A
(Iso)leucine	HILIC Pos	PS
5-Oxoproline	HILIC Neg	A
5-Oxoproline	HILIC Neg	PS
Melamine	HILIC Pos	A
Melamine	HILIC Pos	PS
L-Methionine S-oxide	HILIC Pos	A
L-Methionine S-oxide	HILIC Pos	PS
L-Methionine	HILIC Pos	A
L-Methionine	HILIC Pos	PS
O-Methylmalonyl-L-carnitine	HILIC Pos	A
O-Methylmalonyl-L-carnitine	HILIC Pos	PS
N-Acetylmuramic acid	HILIC Pos	A
N-Acetylmuramic acid	HILIC Pos	PS
Ophthalmic acid	HILIC Pos	A
Ophthalmic acid	HILIC Pos	PS
O-Propionylcarnitine	HILIC Pos	A
O-Propionylcarnitine	HILIC Pos	PS
Propionylglycine	HILIC Neg	A
Propionylglycine	HILIC Neg	PS
2,5-Dihydroxybenzoic acid	HILIC Neg	A
2,5-Dihydroxybenzoic acid	HILIC Neg	PS
Riboflavin-5-phosphate	HILIC Pos	A
Riboflavin-5-phosphate	HILIC Pos	PS
L-Serine	HILIC Pos	A
L-Serine	HILIC Pos	PS
Succinic acid	HILIC Neg	A
Succinic acid	HILIC Neg	PS
Succinic semialdehyde	HILIC Neg	A
Succinic semialdehyde	HILIC Neg	PS
Succinylglycine	HILIC Pos	A
Succinylglycine	HILIC Pos	PS
Sucrose	HILIC Neg	A
Sucrose	HILIC Neg	PS
Sulfanilic acid	HILIC Neg	A
Sulfanilic acid	HILIC Neg	PS
L-Threonine	HILIC Pos	A
L-Threonine	HILIC Pos	PS
Thymidine	HILIC Neg	A
Thymidine	HILIC Neg	PS
Thymine	HILIC Neg	A
Thymine	HILIC Neg	PS
L-Tyrosine	HILIC Pos	A
L-Tyrosine	HILIC Pos	PS
Uridine	HILIC Neg	A

Uridine	HILIC Neg	PS
N-(3-Oxohexanoyl)homoserine lactone	RP	A
N-(3-Oxohexanoyl)homoserine lactone	RP	PS
N-(3-Oxooctanoyl)homoserine lactone	RP	A
N-(3-Oxooctanoyl)homoserine lactone	RP	PS
Abscisic acid	RP	A
Abscisic acid	RP	PS
S-Adenosylhomocysteine	RP	A
S-Adenosylhomocysteine	RP	PS
N-Butyryl-L-homoserine lactone	RP	A
N-Butyryl-L-homoserine lactone	RP	PS
N-Hexanoyl-L-homoserine lactone	RP	A
N-Hexanoyl-L-homoserine lactone	RP	PS
Desthiobiotin	RP	A
Desthiobiotin	RP	PS
Domoic acid	RP	A
Domoic acid	RP	PS
Indole-3-acetamide	RP	A
Indole-3-acetamide	RP	PS
Indole-3-carboxylic acid	RP	A
Indole-3-carboxylic acid	RP	PS
L-Kynurenine	RP	A
L-Kynurenine	RP	PS
Methylthioadenosine	RP	A
Methylthioadenosine	RP	PS
N-(4-Coumaroyl)-L-homoserine lactone	RP	A
N-(4-Coumaroyl)-L-homoserine lactone	RP	PS
Pyridoxal	RP	A
Pyridoxal	RP	PS
Pyridoxal phosphate	RP	A
Pyridoxal phosphate	RP	PS
5-(2-Hydroxyethyl)-4-methylthiazole	RP	A
5-(2-Hydroxyethyl)-4-methylthiazole	RP	PS
Tryptamine	RP	A
Tryptamine	RP	PS
L-Tryptophan	RP	A
L-Tryptophan	RP	PS
Thiamine	RP	A
Thiamine	RP	PS
Riboflavin	RP	A
Riboflavin	RP	PS
Nicotinic acid	RP	A
Nicotinic acid	RP	PS
Pantothenic acid	RP	A
Pantothenic acid	RP	PS

Pyridoxine	RP	A
Pyridoxine	RP	PS
Biotin	RP	A
Biotin	RP	PS
Folic acid	RP	A
Folic acid	RP	PS
Xanthine	RP	A
Xanthine	RP	PS

Mean EE (%)	Standard Deviation of EE (%)
45.07	1.22
42.82	1.98
85.35	8.63
97.04	5.11
32.52	4.43
37.92	1.28
15.55	1.19
28.07	1.55
3.98	0.49
9.14	0.69
76.01	13.08
78.13	18.03
65.47	1.99
72.84	6.11
40.34	1.20
62.06	31.91
1.16	0.38
2.34	0.62
78.29	13.24
89.78	8.26
81.22	4.83
77.46	4.59
51.35	2.25
62.99	2.30
9.56	1.56
8.27	0.33
44.16	2.83
43.80	1.27
2.42	0.28
2.05	0.76
80.55	6.17
93.53	11.99
55.88	19.35
68.90	3.36
3.51	0.33
2.48	0.10
20.18	9.50
12.79	5.24
60.02	7.09
74.43	8.60
112.28	13.23
132.21	7.03
126.63	14.67
130.20	8.13

53.72	0.59
62.69	2.14
9.06	2.54
14.65	1.07
2.64	0.12
3.05	0.27
2.37	0.37
6.26	0.52
4.65	0.30
5.44	1.43
128.38	5.32
136.28	10.11
54.35	4.54
66.86	8.51
18.42	0.66
29.78	2.41
83.55	11.22
92.03	5.96
25.52	1.74
30.58	1.19
104.84	12.00
87.28	29.24
32.67	16.18
39.12	17.02
2.59	0.84
4.65	3.29
12.26	0.98
22.33	0.75
3.47	1.26
6.78	1.93
2.20	0.23
4.60	0.11
1.42	0.59
2.99	5.10
2.45	0.22
3.99	2.03
1.95	0.91
2.99	4.01
66.75	2.81
89.36	38.55
60.94	2.54
86.14	46.10
36.27	2.15
51.15	4.34
29.26	1.50

	29.65	2.65
	80.04	10.56
	67.97	21.37
	94.39	38.87
	98.47	10.39
	72.99	7.30
	73.22	16.31
	143.33	37.31
	174.67	8.49
	93.81	7.46
	78.99	16.93
	92.59	10.76
	81.75	13.17
	76.69	14.59
	88.27	14.13
	100.81	23.56
	100.95	11.76
	37.87	1.35
ND	ND	
	88.61	18.99
ND	ND	
	46.69	7.41
	41.90	2.37
	133.72	47.35
	138.70	25.82
	90.71	10.10
	80.13	16.90
	7.00	1.26
	18.32	6.50
	42.95	17.34
	54.13	24.83
	98.12	16.44
	96.33	16.14
	22.29	9.95
	41.53	10.53
	108.37	22.34
	134.39	13.96
	3.04	1.12
	4.44	0.28
	80.45	11.70
	79.82	18.58
	61.78	3.51
	92.79	40.20
	68.12	8.90
	77.77	13.94

57.03	9.79
91.49	30.02
77.91	18.40
86.25	13.88
68.79	8.54
63.84	10.97
2.81	0.39
7.17	0.53

Mass Feature	Analysis Fraction	m/z	Retention Time	CX-SPE - Aloha	CX-SPE - PS
8_HILICNeg	HILICNeg	61.98714	5.16	ND	ND
43_HILICPos	HILICPos	76.07635	7.227	949205226.7	43448886.67
45_HILICPos	HILICPos	76.1035	9.333	1383345.333	1470575.333
47_HILICPos	HILICPos	77.10972	9.336	6315375.333	6201743.333
61_HILICNeg	HILICNeg	78.91776	8.384	ND	ND
69_HILICNeg	HILICNeg	79.95621	2.919	ND	148874041.3
71_HILICNeg	HILICNeg	79.95624	14.878	ND	ND
52_HILICPos	HILICPos	80.1316	8.545	8962890.667	9548465.333
76_HILICNeg	HILICNeg	80.91569	8.384	ND	ND
87_HILICNeg	HILICNeg	81.95203	2.913	ND	11283584.67
89_HILICNeg	HILICNeg	81.95206	14.884	ND	ND
80_HILICPos	HILICPos	86.09702	6.958	6525242	3474122
1_RP	RP	90.05545	0.699	ND	201307.584
16_RP	RP	90.9771	0.675	ND	ND
19_RP	RP	91.05475	4.799	ND	ND
38_RP	RP	93.04527	1.025	1147580.039	614736.5184
42_RP	RP	93.07428	0.699	5837593.822	5660175.09
114_HILICPos	HILICPos	93.0743	10.558	19832405.07	20498041.6
143_HILICNeg	HILICNeg	93.9719	2.909	ND	82371020
118_HILICPos	HILICPos	94.0657	10.921	4846107.333	4277786.667
53_RP	RP	94.06573	0.92	ND	ND
76_RP	RP	95.08608	3.1	ND	ND
85_RP	RP	96.04485	0.827	ND	ND
164_HILICNeg	HILICNeg	96.71236	14.927	ND	ND
91_RP	RP	96.92216	0.664	4688026.867	ND
165_HILICNeg	HILICNeg	96.95899	14.907	ND	ND
99_RP	RP	97.0653	1.83	ND	ND
102_RP	RP	97.06538	2.745	ND	ND
146_HILICPos	HILICPos	97.08447	6.088	118723136	114507728
120_RP	RP	98.06049	0.886	ND	ND
121_RP	RP	98.06058	1.295	ND	ND
134_RP	RP	98.91917	0.669	1843338.277	ND
190_HILICNeg	HILICNeg	98.9548	14.908	ND	ND
140_RP	RP	99.04457	1.053	ND	ND
143_RP	RP	99.05581	0.75	ND	ND
144_RP	RP	99.05582	0.901	ND	ND
167_RP	RP	100.07622	1.25	ND	ND
169_RP	RP	100.1125	2.223	19878728	ND
190_RP	RP	101.06019	1.386	ND	ND
197_RP	RP	101.10776	0.97	ND	ND
183_HILICPos	HILICPos	103.03942	2.256	ND	ND
226_RP	RP	103.06188	0.932	ND	4855515.077
227_HILICNeg	HILICNeg	104.03423	11.304	10149003.33	ND
265_RP	RP	105.0704	3.246	ND	ND

207_HILICPos	HILICPos	106.08674	7.443	19715298	ND
235_HILICNeg	HILICNeg	106.97982	2.626	1903838	5030012
286_RP	RP	107.07063	2.958	ND	ND
299_RP	RP	107.96709	0.696	ND	ND
301_RP	RP	108.08118	0.96	ND	ND
307_RP	RP	108.51314	0.923	ND	ND
321_RP	RP	109.0652	2.002	ND	ND
322_RP	RP	109.06522	5.785	ND	ND
323_RP	RP	109.06525	1.414	ND	ND
324_RP	RP	109.06528	2.747	ND	ND
325_RP	RP	109.0653	1.487	ND	ND
326_RP	RP	109.07639	0.978	ND	ND
330_RP	RP	109.1016	4.553	ND	ND
331_RP	RP	109.10162	4.742	ND	ND
334_RP	RP	109.10165	6.067	ND	ND
337_RP	RP	109.10171	2.3	ND	ND
222_HILICPos	HILICPos	110.06036	4.106	ND	ND
347_RP	RP	110.06045	0.978	ND	ND
360_RP	RP	111.03946	6.39	ND	ND
389_RP	RP	112.05089	0.748	ND	1662054.547
390_RP	RP	112.05091	0.807	ND	ND
392_RP	RP	112.07607	1.872	ND	ND
394_RP	RP	112.07612	1.714	ND	ND
397_RP	RP	112.89602	0.665	3609114.745	ND
404_RP	RP	113.06004	1.4	ND	ND
409_RP	RP	113.06016	7.805	ND	ND
412_RP	RP	113.09648	3.159	ND	ND
429_RP	RP	114.09167	1.063	ND	ND
434_RP	RP	114.12815	1.141	ND	ND
440_RP	RP	114.89308	0.667	ND	ND
447_RP	RP	115.07578	4.288	ND	ND
270_HILICPos	HILICPos	116.05158	7.381	ND	3236642
466_RP	RP	116.07083	0.891	ND	ND
467_RP	RP	116.07086	0.718	31433972.91	ND
271_HILICPos	HILICPos	116.07097	9.26	58909724	ND
471_RP	RP	116.10728	2.359	ND	ND
317_HILICNeg	HILICNeg	117.0185	12.771	ND	ND
485_RP	RP	117.04867	0.785	16999443.83	22070922.81
280_HILICPos	HILICPos	117.04869	7.384	24537599.69	34529537.08
492_RP	RP	117.10253	0.883	ND	9722755.418
493_RP	RP	117.10255	1.44	ND	25187834
496_RP	RP	117.51823	0.952	ND	ND
295_HILICPos	HILICPos	118.08646	7.761	360168757.3	580075818.7
530_RP	RP	118.08654	0.72	101255821.4	173117227.3
332_HILICNeg	HILICNeg	118.94109	14.909	ND	ND

308_HILICPos	HILICPos	120.06575	10.13	12000290	ND
562_RP	RP	120.08103	1.133	6382484.99	5973813.04
310_HILICPos	HILICPos	120.08106	5.299	ND	7558738.667
345_HILICNeg	HILICNeg	120.93687	14.923	ND	ND
572_RP	RP	121.03194	0.718	5175973.308	5987227.59
313_HILICPos	HILICPos	121.03201	8.843	19067316.67	20456694.67
573_RP	RP	121.03988	1.026	40043263.33	ND
355_HILICNeg	HILICNeg	121.09911	9.342	2747538	2895293.333
583_RP	RP	121.10149	4.287	ND	ND
586_RP	RP	121.10153	4.652	ND	ND
321_HILICPos	HILICPos	121.10229	9.334	4114847.333	4001978.667
590_RP	RP	121.55704	2.958	ND	ND
358_HILICNeg	HILICNeg	121.95437	2.91	ND	80925995.33
329_HILICPos	HILICPos	122.10855	9.33	21765338	21950325.33
617_RP	RP	123.04426	3.231	ND	ND
620_RP	RP	123.08071	0.92	ND	ND
337_HILICPos	HILICPos	123.09706	7.762	39604500	38837022.67
624_RP	RP	123.11472	0.756	45481649.35	41975213.36
338_HILICPos	HILICPos	123.11476	9.336	33790377.04	33345369.1
627_RP	RP	123.11711	6.088	ND	ND
635_RP	RP	123.55457	1.572	ND	394872.8389
382_HILICNeg	HILICNeg	123.97011	7.709	21321374.67	15757858.67
644_RP	RP	124.03944	0.907	ND	ND
646_RP	RP	124.07589	1.252	ND	ND
647_RP	RP	124.0759	1.004	ND	ND
655_RP	RP	124.10027	0.798	264995965.6	312993153.9
349_HILICPos	HILICPos	124.1003	7.663	1144902549	1134842155
661_RP	RP	124.1123	3.896	ND	ND
386_HILICNeg	HILICNeg	124.12096	8.541	6482769.333	6196913.333
677_RP	RP	125.04285	0.828	ND	ND
678_RP	RP	125.05991	2.553	ND	ND
679_RP	RP	125.05992	1.131	ND	ND
682_RP	RP	125.05997	3.071	ND	ND
687_RP	RP	125.09635	4.488	ND	ND
693_RP	RP	125.13046	0.748	3520706.667	4218640
711_RP	RP	126.06631	0.899	ND	ND
717_RP	RP	126.09158	2.642	ND	ND
721_RP	RP	126.13668	0.748	29411267.94	29916172.78
365_HILICPos	HILICPos	126.13672	8.56	21102305.33	21779981.33
403_HILICNeg	HILICNeg	126.90411	4.953	59343692	52145309.33
407_HILICNeg	HILICNeg	126.90416	2.244	3698874.667	ND
732_RP	RP	127.0214	1.082	ND	ND
411_HILICNeg	HILICNeg	127.03918	2.258	ND	ND
415_HILICNeg	HILICNeg	127.07554	2.255	ND	ND
738_RP	RP	127.07568	1.385	ND	ND

740_RP	RP	127.11197	4.94	ND	ND
423_HILICNeg	HILICNeg	128.03445	7.333	ND	ND
758_RP	RP	128.07082	1.095	ND	ND
382_HILICPos	HILICPos	128.10722	2.193	ND	ND
428_HILICNeg	HILICNeg	128.94101	3.548	3599339.333	ND
432_HILICNeg	HILICNeg	129.01854	10.535	ND	ND
780_RP	RP	129.05481	1.399	ND	ND
782_RP	RP	129.06607	0.826	ND	ND
807_RP	RP	130.04997	0.752	8788138.813	ND
811_RP	RP	130.08652	0.949	ND	ND
816_RP	RP	130.12291	3.387	ND	ND
817_RP	RP	130.15913	1.807	ND	ND
826_RP	RP	130.56223	2.959	ND	ND
866_RP	RP	132.10196	0.73	4118846.206	65201959.77
868_RP	RP	132.10201	0.897	24930629	9333884.223
425_HILICPos	HILICPos	132.10202	9.765	12704816	127339434.7
869_RP	RP	132.10202	1.077	ND	2083973.537
870_RP	RP	132.10204	0.828	19054234.11	ND
426_HILICPos	HILICPos	132.10205	7.245	7975461.104	ND
427_HILICPos	HILICPos	132.10205	6.841	29848962.67	ND
873_RP	RP	132.10216	1.158	ND	ND
878_RP	RP	132.88942	0.654	ND	58246
430_HILICPos	HILICPos	133.02791	14.91	ND	ND
880_RP	RP	133.02863	2.351	ND	ND
891_RP	RP	133.10138	4.488	ND	ND
440_HILICPos	HILICPos	134.06007	2.259	ND	ND
909_RP	RP	134.0714	4.711	ND	ND
910_RP	RP	134.07141	4.815	ND	ND
917_RP	RP	134.09042	8.956	ND	ND
921_RP	RP	134.88666	0.664	ND	ND
485_HILICNeg	HILICNeg	134.91522	14.896	ND	ND
928_RP	RP	135.04427	3.543	ND	ND
931_RP	RP	135.04744	0.738	50865955.92	39252954.36
449_HILICPos	HILICPos	135.0475	9.821	109104917.3	72429434.67
946_RP	RP	135.10164	1.224	ND	ND
958_RP	RP	136.00104	0.65	ND	ND
454_HILICPos	HILICPos	136.0507	5.776	ND	ND
966_RP	RP	136.06186	1.027	ND	ND
972_RP	RP	136.07343	1.63	ND	ND
973_RP	RP	136.11224	1.689	ND	ND
980_RP	RP	136.99428	0.784	10508775.21	6412258.532
463_HILICPos	HILICPos	136.99437	5.593	24015313.33	15179482
466_HILICPos	HILICPos	137.03781	10.91	1142371.333	1259687.333
983_RP	RP	137.04324	0.713	2632581.298	1544341.526
984_RP	RP	137.04585	1.081	ND	ND

467_HILICPos	HILICPos	137.04587	7.811	ND	ND
468_HILICPos	HILICPos	137.04588	6.856	ND	ND
469_HILICPos	HILICPos	137.05972	2.239	ND	ND
988_RP	RP	137.05983	5.106	ND	ND
995_RP	RP	137.09625	4.07	ND	ND
1001_RP	RP	137.13274	3.043	ND	ND
475_HILICPos	HILICPos	137.98322	14.915	ND	ND
528_HILICNeg	HILICNeg	137.98572	7.873	ND	29837986
1016_RP	RP	138.05498	0.795	39391672.18	14475200.26
477_HILICPos	HILICPos	138.05502	8.268	74162730.67	ND
1018_RP	RP	138.05504	0.893	30182552.08	18491591.39
478_HILICPos	HILICPos	138.05504	6.039	201971445.3	122201813.3
1022_RP	RP	138.08371	5.679	ND	ND
1032_RP	RP	138.1366	0.763	756277.9421	685930.2052
1035_RP	RP	138.5547	1.379	ND	ND
1036_RP	RP	138.56583	1.083	ND	ND
1037_RP	RP	138.90631	0.662	3892417.41	2054484.502
1038_RP	RP	138.97353	0.774	6774718.305	4732709.566
1048_RP	RP	139.05028	0.913	11284780.23	ND
1049_RP	RP	139.05029	1.026	27190197.33	ND
1053_RP	RP	139.11182	4.803	ND	ND
1054_RP	RP	139.11182	4.648	ND	ND
1058_RP	RP	139.11186	4.291	ND	ND
1063_RP	RP	139.11192	2.658	ND	ND
1064_RP	RP	139.11194	6.293	ND	ND
1065_RP	RP	139.11194	4.855	ND	ND
1067_RP	RP	139.14281	0.764	4151851.76	4077545.11
556_HILICNeg	HILICNeg	139.96495	2.909	ND	4828977920
559_HILICNeg	HILICNeg	139.9651	7.987	206865161.3	127068136
494_HILICPos	HILICPos	140.03416	2.253	ND	ND
1088_RP	RP	140.03429	1.315	ND	ND
1091_RP	RP	140.0546	2.975	ND	ND
1093_RP	RP	140.08194	0.799	ND	ND
501_HILICPos	HILICPos	140.08194	2.923	ND	ND
1101_RP	RP	140.10716	0.896	ND	ND
1105_RP	RP	140.53389	0.928	ND	ND
1110_RP	RP	140.6395	0.875	417420.0236	453723.5514
1112_RP	RP	140.90334	0.662	2534759.799	1335964.74
1115_RP	RP	140.98596	0.882	413651.5826	485185.2485
581_HILICNeg	HILICNeg	141.05489	2.258	ND	ND
514_HILICPos	HILICPos	141.07368	6.038	4627174741	4429691392
1141_RP	RP	141.07373	0.782	399448661.3	360587250.4
1142_RP	RP	141.07375	0.876	767769010.6	663150702.1
1145_RP	RP	141.09113	3.1	ND	ND
1147_RP	RP	141.10231	0.835	ND	ND

1150_RP	RP	141.1275	6.092	ND	ND
1151_RP	RP	141.1275	6.496	ND	ND
1155_RP	RP	141.51802	2.039	ND	ND
585_HILICNeg	HILICNeg	141.96075	2.91	ND	266690704
1170_RP	RP	142.07013	2.958	ND	ND
1171_RP	RP	142.08633	0.959	301208827.7	183291534.6
1172_RP	RP	142.08636	1.424	ND	ND
1181_RP	RP	142.12274	3.896	ND	ND
1183_RP	RP	142.52582	0.895	48346.22249	86402.36694
1187_RP	RP	142.90045	0.669	382283.0225	209567.7109
1188_RP	RP	142.93869	0.715	ND	ND
594_HILICNeg	HILICNeg	143.07047	2.248	ND	ND
1202_RP	RP	143.08148	0.735	11874357.06	12827031.04
1203_RP	RP	143.1067	3.127	ND	ND
1208_RP	RP	143.1068	4.461	ND	ND
1210_RP	RP	143.10686	3.554	ND	ND
1212_RP	RP	143.11786	0.895	ND	ND
540_HILICPos	HILICPos	144.04788	2.175	ND	ND
1235_RP	RP	144.10191	0.791	5342890.898	ND
1236_RP	RP	144.10196	0.957	ND	ND
543_HILICPos	HILICPos	144.10199	7.099	15574047.33	ND
544_HILICPos	HILICPos	144.10207	9.929	14276129.33	ND
545_HILICPos	HILICPos	144.10208	2.281	ND	ND
1248_RP	RP	144.54143	1.797	ND	ND
1251_RP	RP	144.60527	0.881	ND	172591.3333
1280_RP	RP	145.56245	2.033	ND	ND
1291_RP	RP	146.06007	3.911	ND	ND
1293_RP	RP	146.06013	5.508	ND	ND
1296_RP	RP	146.08122	1.098	ND	ND
1298_RP	RP	146.11752	0.775	1882558	4870496.667
567_HILICPos	HILICPos	146.1176	10.085	2865904.667	5166922
1316_RP	RP	147.04408	3.17	ND	ND
1327_RP	RP	147.06242	4.743	ND	ND
1328_RP	RP	147.07637	0.701	4378956.708	3767582.048
577_HILICPos	HILICPos	147.08055	2.247	ND	ND
1333_RP	RP	147.10165	1.56	ND	ND
1334_RP	RP	147.11287	0.866	ND	ND
1356_RP	RP	148.05202	3.566	ND	ND
1358_RP	RP	148.06041	0.708	8625003.483	3786658.905
579_HILICPos	HILICPos	148.0605	11.82	14287666	ND
1364_RP	RP	148.92566	0.668	ND	ND
1392_RP	RP	149.09625	4.471	ND	ND
1400_RP	RP	149.55186	3.064	ND	ND
1417_RP	RP	150.07747	0.996	ND	ND
1424_RP	RP	150.11261	0.71	ND	15100255.5

1432_RP	RP	150.93228	0.669 ND	ND
1445_RP	RP	151.06154	0.703 2164878.072	ND
1450_RP	RP	151.07553	2.641 ND	ND
1457_RP	RP	151.11189	5.785 ND	ND
1458_RP	RP	151.11191	4.819 ND	ND
1463_RP	RP	151.14409	0.735 93954122.67	ND
1465_RP	RP	151.14835	7.372 ND	ND
1477_RP	RP	152.02908	0.676 ND	ND
662_HILICNeg	HILICNeg	152.03471	3.021 ND	ND
615_HILICPos	HILICPos	152.03784	8.736 ND	4113190
618_HILICPos	HILICPos	152.05676	9.443 4950370	5564845.333
1479_RP	RP	152.05679	0.931 ND	ND
619_HILICPos	HILICPos	152.07068	2.256 ND	ND
1481_RP	RP	152.07076	1.716 ND	ND
1488_RP	RP	152.10709	5.071 ND	ND
676_HILICNeg	HILICNeg	153.0549	2.249 ND	ND
1528_RP	RP	153.07394	0.826 ND	ND
1533_RP	RP	153.09113	2.908 ND	ND
1536_RP	RP	153.09122	1.931 ND	ND
1541_RP	RP	153.12753	5.937 ND	ND
1543_RP	RP	153.12761	6.508 ND	ND
1545_RP	RP	153.12767	7.22 ND	ND
682_HILICNeg	HILICNeg	153.98087	2.259 ND	60284690.67
1557_RP	RP	154.03215	1.489 ND	ND
1562_RP	RP	154.07021	6.092 ND	ND
1567_RP	RP	154.12262	5.451 ND	ND
1579_RP	RP	154.54953	1.413 ND	ND
1583_RP	RP	154.56779	3.896 ND	ND
1585_RP	RP	154.8802	0.664 ND	ND
1595_RP	RP	155.05252	5.13 ND	ND
1597_RP	RP	155.05405	0.923 32115592.22	23861682.52
652_HILICPos	HILICPos	155.05418	8.741 52101953.33	39732304
1598_RP	RP	155.07031	2.003 ND	ND
1601_RP	RP	155.07048	1.459 ND	ND
1602_RP	RP	155.08157	0.944 5389842.535	4095303.134
1606_RP	RP	155.10677	4.931 ND	ND
1607_RP	RP	155.10677	4.555 ND	ND
1609_RP	RP	155.10678	4.755 ND	ND
1612_RP	RP	155.10686	5.536 ND	ND
719_HILICNeg	HILICNeg	155.98793	3.783 ND	5075557.333
1634_RP	RP	156.06557	1.048 ND	ND
1635_RP	RP	156.07675	0.689 1765763.407	2289073.777
1637_RP	RP	156.10196	2.284 ND	ND
1638_RP	RP	156.10197	0.937 ND	ND
666_HILICPos	HILICPos	156.10214	2.235 ND	ND

1655_RP	RP	156.87729	0.665	ND	ND
677_HILICPos	HILICPos	157.07387	10.665	34337330	64508778.67
1676_RP	RP	157.0836	1.223	ND	ND
1677_RP	RP	157.08363	1.078	ND	ND
1678_RP	RP	157.08607	3.565	ND	ND
1679_RP	RP	157.08609	1.916	ND	ND
1680_RP	RP	157.12242	4.628	ND	ND
1681_RP	RP	157.12242	4.803	ND	ND
1682_RP	RP	157.12245	6.357	ND	ND
1684_RP	RP	157.1225	4.875	ND	ND
1725_RP	RP	158.11757	0.931	ND	ND
1728_RP	RP	158.11761	1.636	ND	ND
688_HILICPos	HILICPos	158.11777	2.232	ND	ND
1761_RP	RP	159.06532	1.181	ND	ND
1763_RP	RP	159.07639	0.795	ND	7588624.575
697_HILICPos	HILICPos	159.07649	11.318	ND	9205126
1768_RP	RP	159.10175	3.101	ND	ND
763_HILICNeg	HILICNeg	159.10207	2.252	ND	ND
1769_RP	RP	159.11287	0.91	ND	ND
1770_RP	RP	159.11288	1.955	ND	ND
1771_RP	RP	159.11296	1.012	ND	ND
1772_RP	RP	159.11696	4.457	ND	ND
701_HILICPos	HILICPos	160.07596	2.189	ND	ND
1803_RP	RP	160.09677	0.784	5779743.625	ND
703_HILICPos	HILICPos	160.09688	8.873	10925852.67	ND
1806_RP	RP	160.13326	2.388	ND	ND
1807_RP	RP	160.13326	1.421	ND	ND
1809_RP	RP	160.13336	0.915	ND	3411896.282
706_HILICPos	HILICPos	160.13336	10.07	ND	7307638.667
1812_RP	RP	160.56786	3.6	ND	ND
1825_RP	RP	161.06465	1.64	ND	ND
1830_RP	RP	161.09613	5.233	ND	ND
1839_RP	RP	161.56508	5.23	ND	ND
1844_RP	RP	161.98318	0.68	ND	672655.3576
1855_RP	RP	162.0676	6.294	ND	ND
1862_RP	RP	162.0914	0.948	ND	ND
1866_RP	RP	162.11243	0.739	11483058.15	9194880.123
717_HILICPos	HILICPos	162.1125	9.779	18659456	14171808
1873_RP	RP	162.58347	2.221	709879.3333	ND
1883_RP	RP	163.03896	3.537	ND	ND
1902_RP	RP	163.0867	2.526	ND	ND
1903_RP	RP	163.09657	1.09	ND	ND
1906_RP	RP	163.13277	2.959	ND	ND
1930_RP	RP	163.96239	0.73	ND	1008650
1932_RP	RP	163.99318	0.696	243205.7946	ND

736_HILICPos	HILICPos	164.07077	2.259	ND	ND
1969_RP	RP	165.05481	1	ND	ND
742_HILICPos	HILICPos	165.05482	8.988	2548131.333	ND
1972_RP	RP	165.07399	4.79	ND	ND
1973_RP	RP	165.07591	0.909	ND	ND
1983_RP	RP	165.11224	1.204	ND	ND
2002_RP	RP	166.05319	0.7	2191176.841	901028.8523
755_HILICPos	HILICPos	166.05334	9.277	3436127.238	1566089.275
2007_RP	RP	166.08629	4.75	ND	ND
2008_RP	RP	166.0863	0.909	ND	ND
2009_RP	RP	166.08633	1.133	9623584.281	8540412.69
756_HILICPos	HILICPos	166.0864	5.335	ND	ND
2012_RP	RP	166.08644	0.991	ND	ND
757_HILICPos	HILICPos	166.0865	2.248	ND	ND
2015_RP	RP	166.10742	0.728	5102139.571	1775474.729
2019_RP	RP	166.1227	1.251	ND	ND
762_HILICPos	HILICPos	166.12273	3.911	ND	ND
2051_RP	RP	167.10669	6.254	ND	ND
2057_RP	RP	167.10678	4.468	ND	ND
2058_RP	RP	167.10684	3.901	ND	ND
2061_RP	RP	167.10686	4.285	ND	ND
2071_RP	RP	167.54861	7.732	ND	ND
855_HILICNeg	HILICNeg	167.9966	2.563	ND	82844850.67
2090_RP	RP	168.02538	0.682	ND	ND
2092_RP	RP	168.06322	1.075	ND	ND
2109_RP	RP	168.96646	0.665	387615.906	433776.9635
2122_RP	RP	169.07204	0.745	10309853.73	10312771.68
789_HILICPos	HILICPos	169.07217	9.237	11807796.74	12334030.89
2123_RP	RP	169.07568	7.22	ND	ND
791_HILICPos	HILICPos	169.08591	2.233	ND	ND
2126_RP	RP	169.08601	2.747	ND	ND
2129_RP	RP	169.08609	3.121	ND	ND
2136_RP	RP	169.12244	6.084	ND	ND
2139_RP	RP	169.12247	6.881	ND	ND
800_HILICPos	HILICPos	170.07132	2.264	ND	ND
2163_RP	RP	170.08124	0.909	ND	ND
2170_RP	RP	170.1176	1.611	ND	ND
2171_RP	RP	170.1176	3.896	ND	ND
2207_RP	RP	171.09929	1.586	ND	ND
2208_RP	RP	171.10172	2.897	ND	ND
2209_RP	RP	171.10172	5.12	ND	ND
2258_RP	RP	172.13316	1.588	ND	ND
2263_RP	RP	172.13326	1.931	ND	ND
2276_RP	RP	172.56779	4.347	ND	ND
832_HILICPos	HILICPos	173.07103	2.286	ND	ND

2302_RP	RP	173.1174	2.849	ND	ND
2303_RP	RP	173.11743	4.612	ND	ND
839_HILICPos	HILICPos	173.11748	2.247	ND	ND
2308_RP	RP	173.16492	6.657	ND	ND
2315_RP	RP	173.91589	0.686	323498.7886	210179.1972
843_HILICPos	HILICPos	174.05495	2.262	ND	ND
2331_RP	RP	174.082	0.821	1924646	ND
2336_RP	RP	174.11244	2.294	ND	ND
2339_RP	RP	174.11255	0.901	ND	ND
2340_RP	RP	174.11259	1.814	ND	ND
847_HILICPos	HILICPos	174.11264	2.254	ND	ND
2341_RP	RP	174.11266	1.924	ND	ND
848_HILICPos	HILICPos	174.12378	8.246	ND	2372294
2342_RP	RP	174.12395	1.056	ND	ND
2355_RP	RP	174.87044	0.652	25589.12937	31578.4526
955_HILICNeg	HILICNeg	174.93701	14.942	ND	ND
2377_RP	RP	175.07549	6.052	ND	ND
2382_RP	RP	175.09666	3.564	ND	ND
858_HILICPos	HILICPos	175.10172	7.392	4718811.333	6055401.333
2387_RP	RP	175.11893	0.79	ND	2501221.947
2393_RP	RP	175.57303	5.123	ND	ND
2395_RP	RP	175.91321	0.693	189580.3839	144450.4127
967_HILICNeg	HILICNeg	175.93649	14.846	ND	ND
2397_RP	RP	175.95416	0.68	ND	ND
2398_RP	RP	175.97069	1.497	527784.6667	273363.3333
862_HILICPos	HILICPos	176.0668	12.491	667565.808	ND
863_HILICPos	HILICPos	176.07082	2.295	ND	ND
2414_RP	RP	176.09184	1.423	ND	ND
2415_RP	RP	176.10295	0.746	1883441.807	ND
868_HILICPos	HILICPos	176.12831	10.663	ND	5145035.333
2423_RP	RP	176.12833	3.104	ND	ND
869_HILICPos	HILICPos	176.13959	7.757	16297592	26396158.67
2431_RP	RP	176.55392	7.694	ND	ND
2434_RP	RP	176.86751	0.654	ND	ND
2441_RP	RP	177.05461	4.185	2771758	ND
2449_RP	RP	177.08704	0.71	ND	1250547.27
2456_RP	RP	177.11215	1.321	ND	ND
2461_RP	RP	177.12746	4.465	ND	ND
2467_RP	RP	177.94604	0.715	ND	ND
2475_RP	RP	178.08624	0.915	ND	ND
878_HILICPos	HILICPos	178.0864	2.213	ND	ND
2481_RP	RP	178.09955	6.297	ND	ND
2492_RP	RP	178.15912	4.017	ND	ND
2497_RP	RP	178.86465	0.654	ND	ND
888_HILICPos	HILICPos	179.00508	7.591	4589638.667	ND

2517_RP	RP	179.05582	0.697	1703543.333	4675390.667
2518_RP	RP	179.06375	3.604	ND	ND
2519_RP	RP	179.06802	1.923	ND	ND
1006_HILICNeg	HILICNeg	179.07083	2.253	ND	ND
2522_RP	RP	179.07365	0.737	2661077.043	2971213.05
893_HILICPos	HILICPos	179.07365	11.076	5140451.333	8904882.667
894_HILICPos	HILICPos	179.08496	8.702	3001126	ND
2526_RP	RP	179.09154	1.188	ND	ND
2533_RP	RP	179.10681	5.264	ND	ND
2550_RP	RP	179.93303	0.666	ND	ND
900_HILICPos	HILICPos	180.048	2.231	ND	ND
2561_RP	RP	180.07303	7.741	ND	ND
904_HILICPos	HILICPos	180.10211	2.233	ND	ND
2568_RP	RP	180.10214	0.966	ND	4560854.136
2578_RP	RP	180.15941	2.958	ND	ND
2579_RP	RP	180.15945	1.224	ND	ND
2584_RP	RP	180.54393	7.683	ND	ND
911_HILICPos	HILICPos	180.98901	2.914	ND	7425218.667
1024_HILICNeg	HILICNeg	181.01378	12.329	ND	ND
1026_HILICNeg	HILICNeg	181.05022	2.253	ND	ND
919_HILICPos	HILICPos	181.07596	2.199	ND	ND
2606_RP	RP	181.08366	2.774	ND	ND
2607_RP	RP	181.08368	3.101	ND	ND
2608_RP	RP	181.08377	1.496	ND	ND
2616_RP	RP	181.12241	4.133	ND	ND
2618_RP	RP	181.1225	5.821	ND	ND
2619_RP	RP	181.12251	5.253	ND	ND
2627_RP	RP	181.92995	0.676	ND	ND
2633_RP	RP	182.03297	0.649	ND	ND
926_HILICPos	HILICPos	182.0813	9.076	ND	ND
2636_RP	RP	182.08134	0.98	3605886.341	ND
2637_RP	RP	182.10248	1.014	ND	ND
931_HILICPos	HILICPos	182.15343	7.76	53279334.67	52229276
2659_RP	RP	182.19054	4.588	ND	ND
2665_RP	RP	182.58101	6.294	ND	ND
2667_RP	RP	182.85594	0.678	16221.0987	ND
2668_RP	RP	182.89272	0.662	300725.1893	ND
2684_RP	RP	183.06311	0.945	ND	ND
2694_RP	RP	183.10173	2.101	ND	ND
2695_RP	RP	183.10176	1.945	ND	ND
2698_RP	RP	183.10178	3.176	ND	ND
2699_RP	RP	183.10185	1.838	ND	ND
2700_RP	RP	183.11308	1.255	ND	ND
2717_RP	RP	183.96515	0.665	ND	28100375.13
945_HILICPos	HILICPos	184.09695	2.237	ND	ND

2733_RP	RP	184.13322	1.255 ND	ND
2736_RP	RP	184.13326	5.267 ND	ND
2742_RP	RP	184.16945	6.446 ND	ND
2768_RP	RP	184.85419	0.677 ND	ND
2769_RP	RP	184.89948	0.656 ND	ND
952_HILICPos	HILICPos	184.98009	12.776 ND	ND
2777_RP	RP	185.02348	5.986 ND	ND
2784_RP	RP	185.04208	0.686 ND	ND
954_HILICPos	HILICPos	185.08084	2.234 ND	ND
2789_RP	RP	185.08096	2.42 ND	ND
1082_HILICNeg	HILICNeg	185.08159	2.216 ND	ND
2791_RP	RP	185.09232	0.914 ND	ND
956_HILICPos	HILICPos	185.10013	2.233 ND	ND
2792_RP	RP	185.11478	2.958 ND	ND
957_HILICPos	HILICPos	185.11734	2.243 ND	ND
2798_RP	RP	185.11751	6.294 ND	ND
2800_RP	RP	185.15382	7.389 ND	ND
2804_RP	RP	185.55728	5.565 ND	ND
2811_RP	RP	185.96094	0.659 ND	1262271.519
2826_RP	RP	186.11256	1.233 ND	ND
2828_RP	RP	186.11275	0.911 ND	ND
2851_RP	RP	186.89638	0.654 ND	ND
2873_RP	RP	187.0941	1.203 ND	ND
2877_RP	RP	187.09676	3.247 ND	ND
1108_HILICNeg	HILICNeg	187.09711	2.341 ND	ND
2885_RP	RP	187.13303	6.107 ND	ND
982_HILICPos	HILICPos	188.03523	9.247 296888.3261	ND
2906_RP	RP	188.06181	7.735 ND	ND
984_HILICPos	HILICPos	188.07088	2.222 ND	ND
2927_RP	RP	188.12822	3.896 ND	ND
2932_RP	RP	188.12828	0.955 ND	ND
2936_RP	RP	188.1647	5.824 ND	ND
2941_RP	RP	188.89377	0.711 ND	ND
2942_RP	RP	188.96584	1.506 ND	ND
2956_RP	RP	189.08698	0.906 ND	ND
2965_RP	RP	189.11212	5.122 ND	ND
2966_RP	RP	189.1234	0.775 1182994.667	2793058.667
2967_RP	RP	189.12341	0.901 ND	1079843.204
2968_RP	RP	189.12346	1.112 811710.8965	431331.6065
2974_RP	RP	189.58896	7.218 ND	ND
2978_RP	RP	189.94984	1.502 ND	ND
2992_RP	RP	190.05003	3.453 ND	ND
2996_RP	RP	190.05823	7.737 ND	ND
1004_HILICPos	HILICPos	190.08641	2.249 ND	ND
3004_RP	RP	190.10762	2.01 ND	ND

3015_RP	RP	190.14388	2.855	ND	ND
3016_RP	RP	190.14397	4.739	ND	ND
3019_RP	RP	190.84804	0.655	248364.3837	168190.4956
3035_RP	RP	191.05414	0.714	1522226.339	1829634.104
1011_HILICPos	HILICPos	191.05415	9.233	1857458.288	2285348.65
1012_HILICPos	HILICPos	191.07039	2.258	ND	ND
3045_RP	RP	191.09142	1.377	ND	ND
3047_RP	RP	191.10419	0.691	ND	1160753.967
3061_RP	RP	191.13908	1.098	ND	ND
3069_RP	RP	191.92813	0.687	ND	ND
3070_RP	RP	191.94791	1.443	ND	ND
1165_HILICNeg	HILICNeg	192.04248	2.218	ND	ND
1019_HILICPos	HILICPos	192.09573	2.264	ND	ND
3091_RP	RP	192.12299	0.764	1692206	ND
3095_RP	RP	192.15953	0.846	ND	ND
3096_RP	RP	192.15979	1.559	ND	ND
3102_RP	RP	192.84506	0.658	243467.4872	179865.084
3103_RP	RP	192.88136	0.668	ND	ND
1170_HILICNeg	HILICNeg	192.99763	12.788	ND	ND
3122_RP	RP	193.08379	2.89	ND	ND
3143_RP	RP	193.96362	1.398	536229.3333	ND
3157_RP	RP	194.10237	0.703	1180781.579	ND
3160_RP	RP	194.11769	0.901	ND	ND
3177_RP	RP	194.15411	6.615	ND	ND
3178_RP	RP	194.15413	6.952	ND	ND
3180_RP	RP	194.15417	2.577	ND	ND
3191_RP	RP	194.8782	0.658	ND	ND
1193_HILICNeg	HILICNeg	194.9272	14.9	ND	ND
3192_RP	RP	194.9313	0.661	ND	ND
1052_HILICPos	HILICPos	195.06248	2.228	ND	ND
3205_RP	RP	195.06313	1.485	ND	ND
3215_RP	RP	195.0994	4.551	ND	ND
3216_RP	RP	195.09944	4.739	ND	ND
3229_RP	RP	195.13828	7.033	ND	ND
3251_RP	RP	196.02827	1.053	ND	ND
1057_HILICPos	HILICPos	196.097	8.343	2176715.333	ND
1060_HILICPos	HILICPos	196.13344	2.151	ND	ND
3275_RP	RP	196.16954	7.504	ND	ND
3286_RP	RP	196.16972	7.189	ND	ND
3293_RP	RP	196.86491	0.66	5205710.576	2378925.23
3301_RP	RP	197.06317	5.967	ND	ND
1067_HILICPos	HILICPos	197.08087	2.268	ND	ND
1233_HILICNeg	HILICNeg	197.08176	2.232	ND	ND
3313_RP	RP	197.09967	1.266	ND	1893843.534
3315_RP	RP	197.11742	4.706	ND	ND

3316_RP	RP	197.11743	4.118	ND	ND
3320_RP	RP	197.11751	5.564	ND	ND
1070_HILICPos	HILICPos	197.12836	2.238	ND	ND
3332_RP	RP	197.94127	1.416	4701734.109	3928342.238
1077_HILICPos	HILICPos	198.08504	12.072	1435094.667	ND
3349_RP	RP	198.12366	0.813	ND	ND
3356_RP	RP	198.14896	6.358	ND	ND
3371_RP	RP	198.18547	7.647	ND	ND
3372_RP	RP	198.18547	7.953	ND	ND
3381_RP	RP	198.86192	0.66	4560568.156	2304799.483
3383_RP	RP	198.95705	0.663	ND	ND
1257_HILICNeg	HILICNeg	199.06099	2.227	ND	ND
3400_RP	RP	199.09679	3.021	ND	ND
1088_HILICPos	HILICPos	199.12698	6.037	440686314.7	419610613.3
3407_RP	RP	199.13326	7.217	ND	ND
3408_RP	RP	199.1685	0.739	33291426.67	3135760
1272_HILICNeg	HILICNeg	200.00211	3.493	83112513.33	ND
1095_HILICPos	HILICPos	200.09178	2.249	ND	ND
3450_RP	RP	200.10329	0.908	ND	ND
3453_RP	RP	200.12816	0.92	ND	ND
1097_HILICPos	HILICPos	200.12843	2.244	ND	ND
3483_RP	RP	200.85901	0.663	1418906.602	706962.5068
3484_RP	RP	200.87697	0.65	187521.7559	206524.7015
3485_RP	RP	200.9527	0.659	ND	ND
3495_RP	RP	201.06564	0.873	ND	ND
1100_HILICPos	HILICPos	201.06593	2.23	ND	ND
3498_RP	RP	201.07333	1.224	ND	ND
3510_RP	RP	201.11226	4.136	ND	ND
3511_RP	RP	201.11226	4.826	ND	ND
1294_HILICNeg	HILICNeg	201.11296	2.282	ND	ND
3535_RP	RP	202.06857	0.817	ND	ND
3537_RP	RP	202.07016	9.42	2487039.333	ND
3548_RP	RP	202.14377	5.289	ND	ND
3551_RP	RP	202.14392	4.468	ND	ND
3552_RP	RP	202.14397	3.902	ND	ND
3553_RP	RP	202.14397	1.852	ND	ND
1113_HILICPos	HILICPos	202.14398	2.261	ND	ND
3559_RP	RP	202.21655	6.569	9204136.667	ND
3565_RP	RP	202.85599	0.662	152731.5301	ND
3566_RP	RP	202.87401	0.655	113381.387	131557.2869
3569_RP	RP	202.95935	0.85	ND	ND
1311_HILICNeg	HILICNeg	202.97852	3.765	23324124	ND
3570_RP	RP	202.99342	0.782	ND	ND
3573_RP	RP	203.05261	0.706	ND	ND
3587_RP	RP	203.10271	0.777	4623434	3480558

3596_RP	RP	203.12811	6.292 ND	ND
1324_HILICNeg	HILICNeg	203.12862	2.265 ND	ND
3597_RP	RP	203.13916	2.178 ND	ND
3598_RP	RP	203.13921	0.965 ND	3237082.44
3600_RP	RP	203.13933	1.153 ND	3318804
1123_HILICPos	HILICPos	204.04401	6.888 ND	1264303.333
1124_HILICPos	HILICPos	204.06583	2.233 ND	ND
1126_HILICPos	HILICPos	204.10225	2.193 ND	ND
3627_RP	RP	204.10391	0.712 453040.3295	436976.4691
3628_RP	RP	204.12305	0.906 ND	ND
3629_RP	RP	204.12317	0.779 1774571.005	546840.2711
3632_RP	RP	204.12332	2.649 ND	ND
1128_HILICPos	HILICPos	204.12338	7.852 3371382	ND
3634_RP	RP	204.12338	3.246 ND	ND
3643_RP	RP	204.15961	6.094 ND	ND
3645_RP	RP	204.15965	3.103 ND	ND
3646_RP	RP	204.15974	2.972 ND	ND
3653_RP	RP	204.90059	0.752 ND	54262.66667
3677_RP	RP	205.09732	4.301 ND	ND
3678_RP	RP	205.09734	1.886 ND	ND
3683_RP	RP	205.14371	5.711 ND	ND
3708_RP	RP	206.10251	1.553 ND	ND
1147_HILICPos	HILICPos	206.13885	2.297 ND	ND
3720_RP	RP	206.13885	1.055 709543.3333	ND
3737_RP	RP	206.89383	0.67 ND	ND
3739_RP	RP	206.93114	0.673 ND	ND
1150_HILICPos	HILICPos	207.06555	2.245 ND	ND
3757_RP	RP	207.10188	3.827 ND	ND
3758_RP	RP	207.1051	0.957 ND	ND
1154_HILICPos	HILICPos	207.1131	2.25 ND	ND
3771_RP	RP	207.57997	9.206 ND	ND
1163_HILICPos	HILICPos	208.13338	2.132 ND	ND
3808_RP	RP	208.19077	2.958 ND	ND
3810_RP	RP	208.19093	5.795 ND	ND
3818_RP	RP	208.57516	7.735 ND	ND
3832_RP	RP	208.89085	0.666 ND	ND
1385_HILICNeg	HILICNeg	208.93465	10.685 ND	ND
3836_RP	RP	209.0237	0.881 ND	450147.7113
1388_HILICNeg	HILICNeg	209.04552	2.259 ND	ND
3846_RP	RP	209.07858	2.126 ND	ND
3852_RP	RP	209.10207	1.086 ND	ND
3855_RP	RP	209.13841	1.48 ND	ND
3857_RP	RP	209.16486	2.22 4058444	ND
1171_HILICPos	HILICPos	209.16489	2.23 3651919.333	ND
1175_HILICPos	HILICPos	210.0952	2.171 ND	ND

3892_RP	RP	210.11018	3.897 ND	ND
1177_HILICPos	HILICPos	210.1127	2.247 ND	ND
3897_RP	RP	210.12808	6.172 ND	ND
3898_RP	RP	210.13376	0.92 ND	ND
3904_RP	RP	210.17014	1.203 ND	ND
3918_RP	RP	210.88783	0.667 ND	ND
3932_RP	RP	211.09416	5.121 ND	ND
1184_HILICPos	HILICPos	211.10568	9.388 1282600.667	ND
3936_RP	RP	211.10779	1.017 ND	ND
3947_RP	RP	211.13315	5.396 ND	ND
1187_HILICPos	HILICPos	211.14435	2.244 ND	ND
3984_RP	RP	212.12833	0.92 ND	ND
3989_RP	RP	212.16457	7.225 ND	ND
3998_RP	RP	212.17593	5.172 ND	ND
4003_RP	RP	212.83875	0.664 693565.2708	ND
4004_RP	RP	212.90274	0.657 ND	ND
4037_RP	RP	213.17792	6.011 309918.1864	ND
1207_HILICPos	HILICPos	214.14386	2.241 ND	ND
4100_RP	RP	214.32115	7.723 ND	ND
4103_RP	RP	214.83586	0.664 579881.5571	ND
1208_HILICPos	HILICPos	215.08089	14.925 ND	ND
4123_RP	RP	215.12776	5.433 ND	ND
4126_RP	RP	215.1279	6.172 ND	ND
4127_RP	RP	215.1279	4.262 ND	ND
4132_RP	RP	215.16443	8.052 ND	ND
4139_RP	RP	215.59364	8.922 ND	ND
4144_RP	RP	215.89699	0.653 ND	26944.84531
1213_HILICPos	HILICPos	216.12299	2.254 ND	ND
4173_RP	RP	216.15935	6.359 ND	ND
4178_RP	RP	216.15948	4.906 ND	ND
4179_RP	RP	216.15948	5.694 ND	ND
1216_HILICPos	HILICPos	216.15971	2.227 ND	ND
4197_RP	RP	216.83299	0.663 ND	ND
1489_HILICNeg	HILICNeg	216.90939	14.898 ND	ND
1494_HILICNeg	HILICNeg	217.07173	2.252 ND	ND
1218_HILICPos	HILICPos	217.07681	14.924 ND	ND
4212_RP	RP	217.10449	1.072 ND	ND
4215_RP	RP	217.10725	2.471 ND	ND
4223_RP	RP	217.14384	7.22 ND	ND
4224_RP	RP	217.15497	1.098 ND	1294487.333
4231_RP	RP	217.56146	7.718 ND	ND
4240_RP	RP	217.89407	0.653 36160.1729	ND
4246_RP	RP	218.0724	3.049 ND	ND
1224_HILICPos	HILICPos	218.08144	2.256 ND	ND
1228_HILICPos	HILICPos	218.13863	2.26 ND	ND

4256_RP	RP	218.13863	1.067 ND	ND
4266_RP	RP	218.17511	2.853 ND	ND
4267_RP	RP	218.17519	4.741 ND	ND
4268_RP	RP	218.17519	4.553 ND	ND
4278_RP	RP	218.97481	0.98 ND	ND
4314_RP	RP	219.17062	2.296 ND	ND
4323_RP	RP	219.60693	8.691 ND	ND
4329_RP	RP	219.8911	0.653 ND	ND
1240_HILICPos	HILICPos	220.09712	2.251 ND	ND
4354_RP	RP	220.11806	0.794 398005.5327	343988.1181
4360_RP	RP	220.15454	0.991 ND	260884
4372_RP	RP	220.99725	0.927 ND	ND
1529_HILICNeg	HILICNeg	221.02365	10.46 ND	6366865.333
4375_RP	RP	221.05984	5.122 ND	ND
4399_RP	RP	221.15149	8.142 ND	ND
1252_HILICPos	HILICPos	222.07603	2.238 ND	ND
4422_RP	RP	222.09712	0.705 542860	428728
1253_HILICPos	HILICPos	222.1124	2.25 ND	ND
4442_RP	RP	222.17021	5.71 ND	ND
4466_RP	RP	222.5834	9.418 2721018.03	ND
4478_RP	RP	222.87921	0.662 3365841.976	3537525.379
4504_RP	RP	223.09421	4.815 ND	ND
4518_RP	RP	223.11766	1.529 ND	ND
4524_RP	RP	223.15404	2.012 ND	ND
4539_RP	RP	223.88414	0.707 661186.4448	437602.8655
4540_RP	RP	223.95668	1.776 1667209.333	1218612.667
1264_HILICPos	HILICPos	224.09177	2.252 ND	ND
4558_RP	RP	224.11282	0.699 1038076.717	329404.653
4566_RP	RP	224.14932	1.232 ND	ND
4567_RP	RP	224.14941	0.906 939044	ND
1269_HILICPos	HILICPos	224.14952	2.249 ND	ND
1270_HILICPos	HILICPos	224.16478	2.239 ND	ND
4588_RP	RP	224.8647	0.679 ND	ND
4589_RP	RP	224.90013	0.664 1388768.982	1015300.493
4602_RP	RP	225.08717	2.592 ND	ND
4603_RP	RP	225.0872	0.913 1822667.333	1464160.667
1276_HILICPos	HILICPos	225.13327	2.256 ND	ND
1580_HILICNeg	HILICNeg	225.16095	2.231 33247315.33	ND
4628_RP	RP	225.8812	0.689 412600.1733	274258.6379
4634_RP	RP	226.03894	1.418 ND	ND
4644_RP	RP	226.10738	0.911 ND	ND
1287_HILICPos	HILICPos	226.14392	2.224 ND	ND
4653_RP	RP	226.1649	1.514 ND	ND
1290_HILICPos	HILICPos	226.97108	2.942 ND	ND
4693_RP	RP	227.09164	6.788 ND	ND

1602_HILICNeg	HILICNeg	227.09276	2.239	ND	ND
4702_RP	RP	227.11371	0.847	831560.4261	671912.2909
4703_RP	RP	227.1256	5.732	ND	ND
4704_RP	RP	227.12773	6.953	ND	ND
4705_RP	RP	227.12787	3.422	ND	ND
4708_RP	RP	227.12799	5.215	ND	ND
4719_RP	RP	227.17514	2.222	345067253.3	ND
1297_HILICPos	HILICPos	227.17526	2.229	154962634.7	ND
4720_RP	RP	227.17528	6.003	9124493.765	ND
4721_RP	RP	227.17545	1.988	5890122.667	ND
4732_RP	RP	227.87828	0.682	56562.09207	ND
4733_RP	RP	227.92302	0.653	ND	ND
1626_HILICNeg	HILICNeg	227.99721	3.783	ND	213957530.7
4746_RP	RP	228.069	0.961	ND	ND
4754_RP	RP	228.123	0.917	ND	ND
1647_HILICNeg	HILICNeg	229.07195	3.147	ND	ND
1649_HILICNeg	HILICNeg	229.10834	2.251	ND	ND
4810_RP	RP	229.11864	0.914	2544310.667	2098092.667
4816_RP	RP	229.12578	1.598	ND	ND
4832_RP	RP	229.22749	6.446	ND	ND
4842_RP	RP	229.93954	0.674	ND	ND
4874_RP	RP	230.17514	7.226	ND	ND
4878_RP	RP	230.17529	4.467	ND	ND
4879_RP	RP	230.21176	7.089	ND	ND
4903_RP	RP	231.08385	1.072	ND	ND
1665_HILICNeg	HILICNeg	231.08762	2.247	ND	1378349.333
4911_RP	RP	231.11613	0.69	ND	ND
4913_RP	RP	231.11626	7.72	ND	ND
4915_RP	RP	231.1163	0.811	ND	ND
4925_RP	RP	231.17059	1.613	ND	2241812.667
4931_RP	RP	231.8745	0.655	238334.1013	177307.8446
4950_RP	RP	232.15437	1.451	ND	ND
4959_RP	RP	232.16974	4.513	ND	ND
4974_RP	RP	232.82906	0.664	30807.7002	ND
4992_RP	RP	233.09976	0.94	ND	ND
1684_HILICNeg	HILICNeg	233.10307	2.256	ND	ND
5004_RP	RP	233.14981	0.946	ND	812057.0161
5013_RP	RP	233.18607	3.896	ND	ND
5024_RP	RP	233.87154	0.654	243115.1896	160182.523
5037_RP	RP	234.0972	0.781	642538	570802.6667
1354_HILICPos	HILICPos	234.11269	2.239	ND	ND
5043_RP	RP	234.1337	1.891	ND	ND
5057_RP	RP	234.82608	0.656	36982.39007	42604.21426
5060_RP	RP	234.98999	1.502	ND	ND
5070_RP	RP	235.07558	6.288	ND	ND

5071_RP	RP	235.07558	4.284	ND	ND
5099_RP	RP	235.86867	0.666	65370.31822	ND
5100_RP	RP	235.90982	0.687	ND	ND
1363_HILICPos	HILICPos	235.95064	14.914	ND	ND
5106_RP	RP	236.07146	0.676	ND	ND
5108_RP	RP	236.07153	0.887	ND	ND
5110_RP	RP	236.07161	7.72	ND	ND
1366_HILICPos	HILICPos	236.14923	8.746	ND	ND
1367_HILICPos	HILICPos	236.14928	10.197	1217972.667	3911005.333
5131_RP	RP	236.14949	0.943	1163896.667	ND
5147_RP	RP	236.22231	8.331	91222	ND
5153_RP	RP	236.82326	0.656	15692.08221	ND
5156_RP	RP	236.95715	0.64	ND	ND
5165_RP	RP	237.08713	1.217	ND	ND
1372_HILICPos	HILICPos	237.12332	2.241	ND	ND
5176_RP	RP	237.12363	1.651	ND	458771.5164
5179_RP	RP	237.12747	9.417	13700928	ND
5189_RP	RP	237.1507	0.876	783332	846021.3333
5201_RP	RP	237.91962	0.684	ND	ND
5210_RP	RP	238.07527	3.092	ND	ND
5213_RP	RP	238.10739	0.941	ND	ND
1377_HILICPos	HILICPos	238.1076	2.252	ND	ND
5215_RP	RP	238.14145	6.355	ND	ND
1379_HILICPos	HILICPos	238.14394	2.175	ND	ND
5240_RP	RP	238.82033	0.657	ND	ND
5241_RP	RP	238.85307	0.661	1146189.333	384640.6667
5255_RP	RP	239.08904	2.096	ND	ND
5270_RP	RP	239.14888	1.32	ND	ND
5289_RP	RP	240.05452	2.103	ND	ND
5293_RP	RP	240.07672	1.083	ND	ND
1393_HILICPos	HILICPos	240.12331	2.266	ND	ND
5304_RP	RP	240.14975	5.811	ND	ND
5323_RP	RP	240.81442	0.675	36946.13004	ND
5324_RP	RP	240.85017	0.653	ND	ND
1753_HILICNeg	HILICNeg	241.07204	2.224	ND	ND
5339_RP	RP	241.08774	5.123	ND	ND
5349_RP	RP	241.12938	0.837	1694843.333	ND
5353_RP	RP	241.14357	4.942	ND	ND
5363_RP	RP	241.22754	7.503	ND	ND
1401_HILICPos	HILICPos	242.08511	2.244	ND	ND
5392_RP	RP	242.13875	0.931	ND	ND
1402_HILICPos	HILICPos	242.13898	2.246	ND	ND
1403_HILICPos	HILICPos	242.17532	2.24	ND	ND
5400_RP	RP	242.1754	4.733	ND	ND
5415_RP	RP	242.8121	0.676	49085.23164	ND

5416_RP	RP	242.85815	0.657 ND	38833.17101
5430_RP	RP	243.08798	5.714 ND	ND
5432_RP	RP	243.09944	1.461 ND	ND
5440_RP	RP	243.12805	0.857 565914.9028	1312919.151
5451_RP	RP	243.20699	7.208 ND	ND
5452_RP	RP	243.2435	7.645 ND	ND
5454_RP	RP	243.90031	0.656 76168.10617	ND
5463_RP	RP	244.09297	0.914 ND	ND
1415_HILICPos	HILICPos	244.10143	2.264 ND	ND
5471_RP	RP	244.11829	0.915 ND	ND
5477_RP	RP	244.1544	0.906 ND	ND
5505_RP	RP	244.85519	0.655 ND	24387.19466
5512_RP	RP	245.06352	1.248 ND	ND
1806_HILICNeg	HILICNeg	245.10338	2.239 ND	892088.6667
5534_RP	RP	245.13861	5.017 ND	ND
5542_RP	RP	245.18593	1.625 ND	ND
1424_HILICPos	HILICPos	245.18625	9.466 ND	ND
5543_RP	RP	245.18628	2.313 ND	825569.8265
5544_RP	RP	245.18628	2.553 ND	750552.3611
1809_HILICNeg	HILICNeg	245.97153	12.543 ND	10272529.33
1814_HILICNeg	HILICNeg	246.05745	9.332 ND	ND
1430_HILICPos	HILICPos	246.11281	2.255 ND	ND
5573_RP	RP	246.1452	0.893 483600.1174	476266.7797
5588_RP	RP	246.1703	1.932 ND	ND
5591_RP	RP	246.17038	1.874 ND	2957956.667
1433_HILICPos	HILICPos	246.18147	2.295 ND	ND
5601_RP	RP	246.6506	6.01 423427.2356	ND
5603_RP	RP	246.85226	0.659 ND	ND
5615_RP	RP	247.08534	2.975 ND	ND
5634_RP	RP	247.16946	9.418 4919838.667	ND
5635_RP	RP	247.16948	9.233 4428814	ND
1438_HILICPos	HILICPos	248.02185	14.912 ND	ND
1439_HILICPos	HILICPos	248.09218	2.249 ND	ND
5656_RP	RP	248.11307	2.458 ND	ND
5677_RP	RP	248.18599	3.627 ND	ND
5683_RP	RP	248.80664	0.657 231004.1056	177151.3713
5698_RP	RP	249.09557	5.675 ND	1168098.885
5705_RP	RP	249.12347	1.343 776386.6667	588324.6667
5708_RP	RP	249.13094	8.867 3768948.667	ND
5711_RP	RP	249.15727	2.224 7796399.709	ND
5712_RP	RP	249.15987	4.286 ND	ND
5726_RP	RP	250.05067	0.678 ND	ND
1456_HILICPos	HILICPos	250.10777	2.252 ND	ND
1457_HILICPos	HILICPos	250.12851	2.241 ND	ND
1460_HILICPos	HILICPos	250.18031	2.208 ND	ND

5753_RP	RP	250.2016	5.708	ND	ND
5759_RP	RP	250.80356	0.656	328913.6776	236016.7249
5760_RP	RP	250.84341	0.674	ND	ND
5825_RP	RP	252.10779	0.734	ND	131472.8387
5834_RP	RP	252.14439	0.736	900509.1866	2556586.842
1475_HILICPos	HILICPos	252.15973	2.241	ND	ND
5857_RP	RP	252.80087	0.66	142734.0669	111324.5202
5858_RP	RP	252.841	0.668	ND	36076.20886
5859_RP	RP	252.89998	0.686	ND	ND
1478_HILICPos	HILICPos	252.97722	14.915	ND	ND
5886_RP	RP	253.12827	1.345	ND	ND
1483_HILICPos	HILICPos	253.12831	2.288	ND	ND
5890_RP	RP	253.16461	1.922	461799.3333	ND
5910_RP	RP	254.07025	3.562	ND	ND
1486_HILICPos	HILICPos	254.11787	2.23	ND	ND
5921_RP	RP	254.13878	1.082	ND	ND
5924_RP	RP	254.1599	1.086	ND	ND
5932_RP	RP	254.19626	1.516	ND	ND
5941_RP	RP	254.82336	0.662	5809080.633	2901351.774
5943_RP	RP	254.91493	0.698	ND	ND
5960_RP	RP	255.09787	0.918	973038.6667	695043.3333
5961_RP	RP	255.10146	8.71	ND	ND
5968_RP	RP	255.12294	4.091	ND	ND
5976_RP	RP	255.15929	7.894	ND	ND
6000_RP	RP	255.97809	0.674	ND	ND
1500_HILICPos	HILICPos	256.10745	8.925	ND	5805185.814
6034_RP	RP	256.82043	0.662	7496218.039	3854912.941
1896_HILICNeg	HILICNeg	257.01276	11.381	3537896	ND
6052_RP	RP	257.09979	2.476	ND	ND
6079_RP	RP	257.59583	4.906	ND	ND
1510_HILICPos	HILICPos	258.08676	2.912	ND	34052788.67
6095_RP	RP	258.10858	0.908	467956.6742	369540.2988
6096_RP	RP	258.11002	0.725	819769.5421	ND
1513_HILICPos	HILICPos	258.134	2.254	ND	ND
6101_RP	RP	258.13409	0.915	ND	ND
6106_RP	RP	258.1701	1.742	ND	ND
6126_RP	RP	258.81757	0.663	3617637.19	1763945.59
6130_RP	RP	258.98853	0.71	ND	ND
6132_RP	RP	259.00552	0.743	ND	98836.14746
6149_RP	RP	259.12918	0.912	884982	944200
6200_RP	RP	260.18597	3.755	ND	ND
6202_RP	RP	260.18604	6.086	ND	ND
1526_HILICPos	HILICPos	260.19702	2.255	ND	ND
6213_RP	RP	260.81458	0.663	739522.6868	357808.3285
6215_RP	RP	260.93167	0.687	ND	ND

6235_RP	RP	261.13083	1.322 ND	ND
1939_HILICNeg	HILICNeg	261.13498	2.22 ND	ND
6236_RP	RP	261.14484	0.944 ND	ND
6239_RP	RP	261.14883	9.171 2564419.491	ND
6245_RP	RP	261.21732	6.359 ND	ND
6256_RP	RP	261.60132	5.122 ND	ND
6257_RP	RP	261.84518	0.689 ND	ND
6265_RP	RP	262.04965	7.736 ND	ND
6278_RP	RP	262.12869	0.912 388042	260322
6280_RP	RP	262.14005	0.717 ND	139740.7908
6291_RP	RP	262.16516	2.093 ND	ND
6292_RP	RP	262.16516	2.193 ND	ND
6296_RP	RP	262.16556	5.985 ND	ND
6312_RP	RP	262.81186	0.684 ND	ND
6314_RP	RP	262.9155	0.669 ND	ND
6330_RP	RP	263.11029	0.748 1083207.198	321817.7369
6365_RP	RP	264.09106	4.286 ND	ND
1547_HILICPos	HILICPos	264.12354	2.258 ND	ND
1548_HILICPos	HILICPos	264.1441	2.217 ND	ND
6375_RP	RP	264.14435	1.976 ND	ND
6378_RP	RP	264.15952	1.322 ND	ND
6390_RP	RP	264.19592	4.143 ND	ND
6397_RP	RP	264.2327	8.264 ND	ND
6402_RP	RP	264.91251	0.662 ND	ND
6410_RP	RP	265.0813	1.526 ND	ND
6418_RP	RP	265.10501	7.591 ND	ND
6422_RP	RP	265.12238	9.417 37139324.67	ND
6431_RP	RP	265.15491	2.351 ND	ND
6459_RP	RP	266.12338	0.722 710493.8809	250013.9333
1560_HILICPos	HILICPos	266.13898	2.249 ND	ND
6465_RP	RP	266.17288	7.952 ND	ND
1563_HILICPos	HILICPos	266.17542	2.234 ND	ND
1567_HILICPos	HILICPos	267.13397	2.241 ND	ND
6511_RP	RP	267.13403	1.418 ND	ND
6512_RP	RP	267.13416	1.877 ND	ND
6516_RP	RP	267.13931	0.811 4229066	3504538.667
6519_RP	RP	267.14548	0.984 ND	ND
6542_RP	RP	267.98853	0.698 ND	ND
6547_RP	RP	268.08566	5.124 ND	ND
6552_RP	RP	268.10406	1.041 ND	303215.1045
1574_HILICPos	HILICPos	268.10413	4.898 ND	ND
6555_RP	RP	268.11789	1.19 ND	ND
1575_HILICPos	HILICPos	268.11801	2.258 ND	ND
1578_HILICPos	HILICPos	268.15463	2.267 ND	ND
6564_RP	RP	268.17004	6.17 ND	ND

1579_HILICPos	HILICPos	268.17526	2.178	ND	ND
6565_RP	RP	268.17557	1.538	271151.3333	ND
6566_RP	RP	268.17569	0.96	692962	ND
6590_RP	RP	268.94272	0.716	ND	1708998.999
6591_RP	RP	268.98563	0.735	ND	ND
1584_HILICPos	HILICPos	269.08807	8.002	ND	ND
6605_RP	RP	269.12524	0.767	ND	ND
6610_RP	RP	269.15359	8.733	78270950.67	ND
1586_HILICPos	HILICPos	269.15955	2.242	ND	ND
6613_RP	RP	269.17514	9.21	ND	ND
6656_RP	RP	270.17007	0.916	ND	ND
6657_RP	RP	270.19116	1.949	672520.6667	ND
6664_RP	RP	270.7973	0.664	963840.4191	ND
6666_RP	RP	270.86124	0.66	ND	202965.0679
2001_HILICNeg	HILICNeg	271.08282	2.247	ND	ND
6687_RP	RP	271.12918	0.918	1496174.667	1179295.333
6724_RP	RP	272.17044	1.093	ND	ND
6733_RP	RP	272.22223	6.19	ND	ND
6738_RP	RP	272.23312	2.211	19838607.33	ND
6742_RP	RP	272.79443	0.663	1316459.588	255285.1817
6743_RP	RP	272.87152	0.654	782817.1211	ND
6767_RP	RP	273.14468	0.927	875638.6667	1060564.667
1618_HILICPos	HILICPos	273.18097	2.26	2174732	ND
6773_RP	RP	273.18109	4.434	2536190	ND
6782_RP	RP	273.8555	0.657	ND	ND
6803_RP	RP	274.12189	0.774	ND	ND
6821_RP	RP	274.20154	5.381	ND	ND
6833_RP	RP	274.79144	0.665	663160.2891	ND
6854_RP	RP	275.10989	1.342	ND	ND
6855_RP	RP	275.11813	9.228	456484	ND
6864_RP	RP	275.14648	1.942	625674.6667	ND
6873_RP	RP	275.23306	7.226	ND	ND
6879_RP	RP	275.85263	0.658	47733.88767	ND
6889_RP	RP	276.01514	12.585	ND	ND
6895_RP	RP	276.10782	0.794	ND	1037027.333
6896_RP	RP	276.108	0.998	ND	ND
1634_HILICPos	HILICPos	276.12323	2.247	ND	ND
6900_RP	RP	276.14453	4.334	ND	ND
6918_RP	RP	276.78854	0.669	ND	ND
6921_RP	RP	276.91315	0.685	ND	ND
6937_RP	RP	277.09808	0.688	ND	ND
6939_RP	RP	277.09818	7.642	ND	ND
6964_RP	RP	277.8497	0.657	ND	ND
6974_RP	RP	278.02725	7.736	ND	ND
1645_HILICPos	HILICPos	278.13898	2.255	ND	ND

1646_HILICPos	HILICPos	278.15973	2.232	ND	ND
7014_RP	RP	278.77621	0.665	ND	ND
1650_HILICPos	HILICPos	279.13397	2.245	ND	ND
7045_RP	RP	279.17062	3.714	ND	ND
7046_RP	RP	279.17065	4.027	ND	ND
7062_RP	RP	279.8468	0.657	ND	ND
7071_RP	RP	280.09207	0.675	ND	204395.7262
7080_RP	RP	280.13931	1.028	ND	ND
7083_RP	RP	280.17569	1.074	468814	ND
7087_RP	RP	280.17581	2.446	ND	ND
7102_RP	RP	280.84714	0.659	1959625.676	1794611.721
1658_HILICPos	HILICPos	281.09903	2.261	ND	ND
7143_RP	RP	281.84283	0.685	546910.0891	311248.0963
7149_RP	RP	282.07568	7.719	ND	ND
7155_RP	RP	282.10175	6.293	ND	ND
7165_RP	RP	282.134	1.323	1681836	1397894
1661_HILICPos	HILICPos	282.13416	2.258	ND	ND
1663_HILICPos	HILICPos	282.17026	2.266	ND	ND
7182_RP	RP	282.83493	0.662	1233816.594	1186712.344
7184_RP	RP	283.00601	7.737	ND	ND
2070_HILICNeg	HILICNeg	283.11938	2.247	ND	ND
7199_RP	RP	283.1329	9.417	50583462.67	ND
7206_RP	RP	283.17511	1.638	ND	ND
7218_RP	RP	283.83984	0.685	451205.0389	293802.1322
7222_RP	RP	283.99017	1.148	ND	ND
1669_HILICPos	HILICPos	284.09897	9.445	ND	ND
7233_RP	RP	284.09909	1.101	ND	127860.8739
7239_RP	RP	284.1705	1.981	ND	ND
7268_RP	RP	285.10599	6.461	ND	ND
1684_HILICPos	HILICPos	285.22858	2.233	53723912	ND
7284_RP	RP	285.83694	0.681	134022.7602	ND
7285_RP	RP	285.8815	0.659	ND	ND
7298_RP	RP	286.07291	7.689	ND	ND
7311_RP	RP	286.18039	6.098	1649769.898	ND
7312_RP	RP	286.18616	1.244	ND	ND
7315_RP	RP	286.20166	9.21	ND	ND
7323_RP	RP	286.87924	0.655	ND	ND
7356_RP	RP	287.19662	4.741	3455923.333	ND
7359_RP	RP	287.23312	5.315	ND	ND
1696_HILICPos	HILICPos	287.23337	2.266	632368.6667	ND
7367_RP	RP	287.96799	0.816	ND	ND
7384_RP	RP	288.15967	1.622	ND	ND
7397_RP	RP	288.18091	7.591	ND	ND
7400_RP	RP	288.21713	5.945	ND	ND
7403_RP	RP	288.21725	4.392	ND	ND

7410_RP	RP	288.87656	0.66	ND	ND
7428_RP	RP	289.1257	1.986	ND	ND
7438_RP	RP	289.24863	7.952	ND	ND
7439_RP	RP	289.83319	0.656	108424.9746	ND
7440_RP	RP	289.9707	0.712	ND	ND
7444_RP	RP	290.03076	8.282	ND	ND
1709_HILICPos	HILICPos	290.0726	14.929	ND	ND
7452_RP	RP	290.13464	0.762	151828.3457	184629.793
7453_RP	RP	290.1347	0.873	97852.89306	116063.9818
7455_RP	RP	290.15997	2.162	ND	ND
7457_RP	RP	290.16006	3.509	ND	ND
7459_RP	RP	290.17133	0.932	ND	551021.3333
1715_HILICPos	HILICPos	290.19608	2.228	ND	ND
7474_RP	RP	290.78751	0.656	53629.71773	ND
1718_HILICPos	HILICPos	291.06998	8.019	ND	367779.3333
1721_HILICPos	HILICPos	291.134	2.243	ND	ND
7503_RP	RP	291.83017	0.673	154951.7253	121236.4608
7504_RP	RP	291.87152	0.685	578147.7792	267517.8105
7543_RP	RP	292.78458	0.656	74099.49358	ND
1731_HILICPos	HILICPos	293.14972	2.243	ND	ND
7586_RP	RP	293.86859	0.68	377526.0458	245656.0423
7587_RP	RP	293.89563	0.696	ND	ND
7590_RP	RP	293.99936	7.726	ND	ND
7596_RP	RP	294.11847	0.912	ND	49077.20826
1734_HILICPos	HILICPos	294.13425	2.247	ND	ND
7601_RP	RP	294.15488	4.439	ND	ND
7613_RP	RP	294.22751	1.072	ND	ND
7621_RP	RP	294.78174	0.657	39268.26761	ND
7622_RP	RP	294.85239	0.686	ND	ND
7628_RP	RP	294.99887	7.11	ND	ND
7644_RP	RP	295.129	1.643	ND	307805.3478
7683_RP	RP	296.15216	4.797	ND	ND
1746_HILICPos	HILICPos	296.17035	2.224	ND	ND
7686_RP	RP	296.17062	2.487	ND	ND
7688_RP	RP	296.17078	4.144	ND	ND
1747_HILICPos	HILICPos	296.18585	2.205	ND	ND
7703_RP	RP	296.77884	0.658	ND	ND
7706_RP	RP	296.88199	0.654	ND	ND
7727_RP	RP	297.1084	0.92	532811.3333	501050
7734_RP	RP	297.15448	1.677	ND	ND
7737_RP	RP	297.19101	2.59	ND	ND
7748_RP	RP	297.81677	0.681	ND	ND
7755_RP	RP	298.04221	7.718	ND	ND
7759_RP	RP	298.0968	0.77	614513.3333	1346324
7772_RP	RP	298.16501	0.915	ND	ND

7775_RP	RP	298.1861	1.345	ND	ND
7777_RP	RP	298.18643	0.909	570374.6667	ND
7780_RP	RP	298.22247	1.951	456909.3333	ND
7783_RP	RP	298.77304	0.667	ND	ND
7785_RP	RP	298.88559	0.656	ND	ND
7797_RP	RP	299.07147	1.055	ND	ND
7802_RP	RP	299.12396	5.727	ND	ND
7803_RP	RP	299.12418	0.916	433310.1918	263857.4275
7820_RP	RP	299.81372	0.682	ND	ND
7822_RP	RP	299.88239	0.659	653464.4	1204530.789
7832_RP	RP	300.07623	0.898	ND	ND
7851_RP	RP	300.19608	6.56	2095895.333	ND
7852_RP	RP	300.20163	1.638	ND	ND
7853_RP	RP	300.20187	1.094	ND	ND
7854_RP	RP	300.21707	7.894	ND	ND
7863_RP	RP	300.77051	0.68	53207.28423	ND
7864_RP	RP	300.81662	0.658	ND	ND
7884_RP	RP	301.19125	4.48	ND	ND
2173_HILICNeg	HILICNeg	301.68365	8.215	302662.6667	ND
7924_RP	RP	302.19623	1.663	ND	ND
7926_RP	RP	302.19638	4.537	ND	ND
7943_RP	RP	302.76782	0.677	31263.2608	ND
7944_RP	RP	302.81342	0.659	ND	36260.20912
1772_HILICPos	HILICPos	303.11237	2.187	ND	ND
1773_HILICPos	HILICPos	303.20291	2.257	ND	ND
7981_RP	RP	303.91446	0.65	ND	376010.1321
7983_RP	RP	303.95926	0.643	ND	ND
7988_RP	RP	304.05869	0.749	ND	ND
8002_RP	RP	304.17578	4.646	ND	ND
8005_RP	RP	304.17593	7.806	ND	ND
8021_RP	RP	304.81079	0.658	ND	ND
8037_RP	RP	305.11493	9.419	2045776.11	ND
8044_RP	RP	305.15692	1.642	ND	ND
8059_RP	RP	305.99869	6.471	1234168.667	637572.6667
2203_HILICNeg	HILICNeg	306.01364	9.282	764835.3333	ND
8091_RP	RP	306.76535	0.657	191807.1259	149390.5558
8092_RP	RP	306.85196	0.714	524912.8867	ND
8101_RP	RP	307.08331	0.902	ND	ND
8111_RP	RP	307.15945	0.841	791488.6667	ND
1789_HILICPos	HILICPos	308.17029	2.229	ND	ND
8132_RP	RP	308.17044	1.593	ND	ND
8149_RP	RP	308.76257	0.657	297834.277	259430.7899
8150_RP	RP	308.86179	0.687	1054568.616	728091.1437
8164_RP	RP	309.11221	5.123	ND	ND
8168_RP	RP	309.13135	7.806	ND	ND

1798_HILICPos	HILICPos	309.14465	2.245	ND	ND
8186_RP	RP	309.81973	0.651	ND	ND
8187_RP	RP	309.91119	0.667	ND	ND
8217_RP	RP	310.75961	0.658	173835.4975	158278.7983
8219_RP	RP	310.85886	0.683	660116.2634	482766.1952
8232_RP	RP	311.12787	8.997	892999.3333	ND
8234_RP	RP	311.15103	0.958	406571.2219	330861.0179
1805_HILICPos	HILICPos	311.1604	2.24	ND	ND
8238_RP	RP	311.16431	9.86	4082575.333	ND
8240_RP	RP	311.16443	9.229	580030.9146	ND
1806_HILICPos	HILICPos	311.18097	2.265	ND	ND
8242_RP	RP	311.18567	8.59	ND	ND
8243_RP	RP	311.18567	9.552	ND	ND
8250_RP	RP	311.81674	0.652	ND	ND
8265_RP	RP	312.20178	1.962	ND	ND
8266_RP	RP	312.2019	1.123	485232.6667	ND
8274_RP	RP	312.78186	0.662	3280534.396	1464531.486
8275_RP	RP	312.84259	0.664	ND	ND
8302_RP	RP	313.24881	4.443	ND	ND
8306_RP	RP	313.8139	0.65	ND	ND
8313_RP	RP	314.08975	7.739	ND	ND
8327_RP	RP	314.18088	1.677	ND	ND
8337_RP	RP	314.21747	2.592	595780	ND
8338_RP	RP	314.2175	1.291	143613.3333	ND
8340_RP	RP	314.23303	9.211	ND	ND
8343_RP	RP	314.7789	0.66	5214039.602	2422912.8
8344_RP	RP	314.83923	0.688	ND	ND
8345_RP	RP	314.85953	0.652	ND	ND
2256_HILICNeg	HILICNeg	314.87747	14.914	ND	ND
8384_RP	RP	316.00684	1.119	ND	ND
8403_RP	RP	316.19672	1.349	ND	ND
2262_HILICNeg	HILICNeg	316.73975	4.926	3661463.333	2519838.667
8418_RP	RP	316.77606	0.662	3377361.848	1533178.602
2267_HILICNeg	HILICNeg	317.12494	2.248	ND	ND
8437_RP	RP	317.1825	0.895	ND	ND
8447_RP	RP	317.26944	9.712	ND	ND
8459_RP	RP	318.16617	1.156	ND	ND
8462_RP	RP	318.19141	4.027	ND	ND
8463_RP	RP	318.19144	3.079	ND	ND
8482_RP	RP	318.77313	0.664	1053415.574	459072.4693
8484_RP	RP	318.89041	0.718	ND	ND
8491_RP	RP	319.05386	7.734	ND	ND
8510_RP	RP	319.13641	1.678	ND	ND
8514_RP	RP	319.173	2.6	167499.9682	ND
8523_RP	RP	319.84888	0.653	ND	ND

1845_HILICPos	HILICPos	320.17041	2.239	ND	ND
8538_RP	RP	320.17081	4.714	ND	ND
8547_RP	RP	320.77026	0.665	ND	ND
8569_RP	RP	321.84555	0.65	ND	ND
8586_RP	RP	322.17941	4.508	ND	ND
8602_RP	RP	322.88708	0.658	ND	ND
8617_RP	RP	323.12836	6.294	ND	ND
8630_RP	RP	323.8429	0.653	ND	ND
8636_RP	RP	324.03284	7.737	ND	ND
1857_HILICPos	HILICPos	324.14545	2.243	ND	ND
8646_RP	RP	324.16711	6.888	ND	ND
8648_RP	RP	324.2019	1.382	ND	ND
8669_RP	RP	325.01685	1.137	ND	ND
1862_HILICPos	HILICPos	325.13962	2.245	ND	ND
1863_HILICPos	HILICPos	325.17599	2.24	ND	ND
1864_HILICPos	HILICPos	326.05637	7.234	4098428.667	74024
8733_RP	RP	326.70953	5.215	ND	ND
8737_RP	RP	326.83072	0.668	329011.1678	233514.4431
8756_RP	RP	327.16476	1.626	ND	ND
8757_RP	RP	327.20151	2.107	ND	ND
8768_RP	RP	327.78998	0.672	ND	ND
2294_HILICNeg	HILICNeg	328.04553	6.871	ND	ND
8779_RP	RP	328.10019	5.342	ND	ND
8788_RP	RP	328.16068	1.706	ND	ND
1873_HILICPos	HILICPos	328.17566	2.23	ND	ND
8794_RP	RP	328.19089	9.418	6169397.333	ND
8795_RP	RP	328.19675	2.643	230384.9753	ND
8800_RP	RP	328.23303	1.639	ND	ND
8805_RP	RP	328.74881	0.662	479524.64	ND
8817_RP	RP	329.05695	0.727	ND	143391.3333
2298_HILICNeg	HILICNeg	329.09308	2.255	ND	ND
1879_HILICPos	HILICPos	330.05997	6.954	ND	58874
8844_RP	RP	330.06006	0.96	ND	152325.1947
8848_RP	RP	330.16187	4.597	ND	ND
1882_HILICPos	HILICPos	330.21228	2.182	ND	ND
8854_RP	RP	330.21243	1.503	355636	ND
8864_RP	RP	330.75299	0.663	828643.3222	ND
8866_RP	RP	330.84354	0.658	375850.0038	ND
8877_RP	RP	331.11383	0.918	ND	ND
1886_HILICPos	HILICPos	331.23404	2.254	1826028.667	ND
8896_RP	RP	331.61563	7.719	ND	ND
8901_RP	RP	331.96243	0.669	ND	ND
8919_RP	RP	332.20728	7.805	ND	ND
8931_RP	RP	332.74994	0.664	539247.5384	ND
8951_RP	RP	333.15207	2.648	ND	ND

8952_RP	RP	333.16882	6.343 ND	ND
8962_RP	RP	333.81119	0.658 ND	ND
8998_RP	RP	334.74704	0.667 ND	ND
9008_RP	RP	335.09207	0.906 ND	ND
9021_RP	RP	335.16779	1.5 118841.7398	ND
9026_RP	RP	335.78162	0.681 ND	ND
9027_RP	RP	335.80811	0.656 ND	ND
9031_RP	RP	335.88043	0.692 ND	ND
9054_RP	RP	336.32642	12.267 ND	ND
9056_RP	RP	336.73486	0.657 ND	ND
9059_RP	RP	336.85907	0.672 ND	508992.1579
9070_RP	RP	337.1441	7.22 ND	ND
9075_RP	RP	337.2352	9.794 ND	ND
9079_RP	RP	337.82303	0.653 ND	ND
1912_HILICPos	HILICPos	338.16083	7.257 1230526	ND
1913_HILICPos	HILICPos	338.16089	2.248 ND	ND
9094_RP	RP	338.25391	5.678 ND	ND
9103_RP	RP	338.77798	0.655 ND	ND
9104_RP	RP	338.80576	0.654 1085995.453	966025.0666
2337_HILICNeg	HILICNeg	338.99255	2.907 ND	14653471.33
9113_RP	RP	339.06857	7.718 ND	ND
9140_RP	RP	339.60437	7.718 ND	ND
9141_RP	RP	339.80148	0.685 138270.937	ND
9153_RP	RP	340.19662	1.749 ND	ND
9162_RP	RP	340.25961	4.893 ND	ND
9163_RP	RP	340.25974	4.618 ND	ND
9173_RP	RP	340.90497	0.698 ND	ND
9189_RP	RP	341.18088	2.172 ND	ND
1935_HILICPos	HILICPos	342.15506	2.243 ND	ND
9218_RP	RP	342.21243	3.421 ND	ND
9219_RP	RP	342.21246	1.677 ND	ND
9220_RP	RP	342.21265	0.977 454760.6667	ND
9221_RP	RP	342.2489	2.593 ND	ND
9269_RP	RP	344.22803	2.107 ND	ND
9270_RP	RP	344.22815	1.35 ND	ND
9271_RP	RP	344.22815	1.455 ND	ND
9277_RP	RP	344.72672	0.656 ND	ND
9300_RP	RP	345.18457	0.903 130395.831	ND
9310_RP	RP	345.7926	0.686 ND	ND
1953_HILICPos	HILICPos	346.11816	3.796 ND	1092237.333
9324_RP	RP	346.17508	7.007 ND	ND
1955_HILICPos	HILICPos	346.18604	2.239 ND	ND
9330_RP	RP	346.20737	1.272 ND	ND
9332_RP	RP	346.22272	4.186 ND	ND
9341_RP	RP	346.83545	0.656 ND	ND

2374_HILICNeg	HILICNeg	347.15048	2.264 ND	ND
9361_RP	RP	347.19305	0.941 ND	184532
9369_RP	RP	347.79172	0.659 ND	ND
9378_RP	RP	348.07043	0.787 ND	126700.5866
1963_HILICPos	HILICPos	348.07062	11.521 ND	ND
1965_HILICPos	HILICPos	348.16544	2.24 ND	ND
9388_RP	RP	348.2124	4.69 ND	ND
9400_RP	RP	348.74619	0.658 ND	ND
9402_RP	RP	348.87793	0.657 ND	ND
9412_RP	RP	349.14685	1.399 ND	ND
9414_RP	RP	349.18341	2.114 ND	ND
9416_RP	RP	349.29532	10.316 ND	ND
9418_RP	RP	349.88229	0.724 ND	ND
1972_HILICPos	HILICPos	350.18079	2.243 ND	ND
1973_HILICPos	HILICPos	350.1973	2.237 ND	ND
9448_RP	RP	350.74326	0.658 58605.86251	ND
9472_RP	RP	351.82733	0.696 ND	107678.6876
9477_RP	RP	352.02777	1.445 ND	502887.0056
9482_RP	RP	352.12888	7.752 ND	ND
9502_RP	RP	352.7403	0.657 46087.52776	ND
9505_RP	RP	352.92288	0.639 ND	235462
9510_RP	RP	353.05579	1.292 6579720.46	ND
1983_HILICPos	HILICPos	353.13373	2.255 ND	ND
9529_RP	RP	353.84586	0.69 247538.0972	ND
9538_RP	RP	354.13007	0.924 100106.5456	ND
1994_HILICPos	HILICPos	354.15454	2.255 ND	ND
1995_HILICPos	HILICPos	354.19104	2.234 ND	ND
9548_RP	RP	354.2854	5.055 ND	ND
9552_RP	RP	354.73734	0.66 ND	ND
9602_RP	RP	356.22806	1.404 ND	ND
9611_RP	RP	356.73483	0.664 ND	ND
9614_RP	RP	356.90918	0.671 ND	ND
9634_RP	RP	357.77252	0.679 69360.31152	ND
2009_HILICPos	HILICPos	358.20728	2.227 ND	ND
9643_RP	RP	358.20737	2.169 ND	ND
9646_RP	RP	358.24362	3.495 391876.6667	ND
9647_RP	RP	358.24384	1.467 ND	ND
9652_RP	RP	358.729	0.676 ND	ND
9653_RP	RP	358.77527	0.66 ND	ND
9656_RP	RP	358.88806	0.644 ND	ND
9668_RP	RP	359.18436	6.302 ND	ND
9675_RP	RP	359.83804	0.656 359679.4651	566558.0636
9687_RP	RP	360.11761	7.719 ND	ND
2015_HILICPos	HILICPos	360.15015	11.837 ND	ND
9699_RP	RP	360.22281	1.663 ND	ND

9712_RP	RP	360.72632	0.672	44944.04989	ND
9713_RP	RP	360.77237	0.66	ND	ND
9731_RP	RP	361.85583	0.684	322566.178	ND
9756_RP	RP	362.2417	4.624	198578.848	ND
9764_RP	RP	362.76944	0.66	ND	ND
9775_RP	RP	363.16278	2.17	ND	ND
9777_RP	RP	363.19888	3.51	61728.8325	ND
9791_RP	RP	364.06534	0.899	ND	ND
9796_RP	RP	364.11768	7.719	ND	ND
9812_RP	RP	364.72449	0.657	69996.23947	ND
9813_RP	RP	364.76617	0.662	ND	ND
9814_RP	RP	364.81085	0.676	ND	282630.2511
2028_HILICPos	HILICPos	365.10571	11.821	ND	ND
9833_RP	RP	365.23041	10.834	ND	ND
9861_RP	RP	366.72079	0.659	182770.8459	ND
9862_RP	RP	366.82053	0.688	334056.5677	196693.6631
9866_RP	RP	366.91635	0.725	ND	ND
9900_RP	RP	367.8927	0.676	ND	ND
2039_HILICPos	HILICPos	367.97125	14.911	ND	ND
9908_RP	RP	368.10367	7.739	ND	ND
9914_RP	RP	368.22812	1.771	ND	ND
9918_RP	RP	368.26483	6.688	ND	ND
9924_RP	RP	368.71753	0.659	130523.1084	117448.8126
9926_RP	RP	368.81766	0.694	264481.3936	184931.9196
9928_RP	RP	368.9122	0.678	ND	ND
9974_RP	RP	370.74063	0.663	1976472.171	796284.022
9975_RP	RP	370.8374	0.662	ND	ND
9994_RP	RP	371.22781	2.801	ND	ND
9997_RP	RP	371.26559	4.403	552068	ND
10001_RP	RP	371.77237	0.654	ND	ND
10021_RP	RP	372.22302	3.541	516706	ND
10025_RP	RP	372.2496	4.927	1714063.333	ND
10026_RP	RP	372.2594	2.108	ND	ND
10035_RP	RP	372.73761	0.662	3821920.507	1603479.539
2067_HILICPos	HILICPos	373.07117	8.92	ND	1146550.667
10051_RP	RP	373.23352	5.427	ND	ND
10059_RP	RP	374.03668	1.282	ND	878172.6667
10072_RP	RP	374.2388	1.901	475186.6667	ND
10077_RP	RP	374.73465	0.661	3076380.309	1232176.811
10079_RP	RP	374.83051	0.664	ND	ND
10082_RP	RP	375.03757	0.808	ND	ND
2080_HILICPos	HILICPos	376.19678	2.245	ND	ND
10131_RP	RP	376.73169	0.662	1318864.781	521691.015
10133_RP	RP	376.84903	0.68	337497.3388	ND
10166_RP	RP	378.72876	0.665	ND	ND

10168_RP	RP	378.83237	0.692	ND	ND
10184_RP	RP	379.19409	1.805	80563.25186	ND
10197_RP	RP	380.00516	4.913	ND	ND
10204_RP	RP	380.09537	7.718	ND	ND
10227_RP	RP	380.80362	0.654	121625.0578	97711.08156
10235_RP	RP	381.13779	4.517	ND	ND
10254_RP	RP	382.05728	9.111	ND	ND
10264_RP	RP	382.28024	6.12	732314	ND
10294_RP	RP	383.96161	0.695	96810.88211	74878.07955
2103_HILICPos	HILICPos	384.10968	7.226	33636230	1888894.667
10305_RP	RP	384.22302	2.358	ND	ND
10307_RP	RP	384.22342	4.142	ND	85096.78412
10310_RP	RP	384.29568	6.046	5773998.667	ND
10323_RP	RP	385.12933	0.946	ND	ND
10324_RP	RP	385.17886	10.481	ND	ND
10326_RP	RP	385.20715	2.892	ND	ND
10335_RP	RP	385.31763	4.618	ND	ND
2114_HILICPos	HILICPos	386.21716	2.255	ND	ND
10350_RP	RP	386.23871	2.169	ND	ND
10352_RP	RP	386.2388	4.14	ND	ND
10360_RP	RP	386.71432	0.667	341846.3185	ND
10365_RP	RP	386.87775	0.683	ND	ND
10379_RP	RP	387.74991	0.667	ND	ND
2117_HILICPos	HILICPos	388.12442	8.74	1428143.333	839031.3333
10397_RP	RP	388.2179	1.91	ND	ND
10398_RP	RP	388.25415	2.801	ND	ND
10406_RP	RP	388.71149	0.663	706781.8272	ND
10407_RP	RP	388.80804	0.677	ND	ND
10416_RP	RP	389.13635	7.562	ND	ND
10420_RP	RP	389.2511	6.055	4593293.333	ND
10445_RP	RP	390.70856	0.663	574627.9383	ND
10447_RP	RP	390.85571	0.676	ND	ND
10451_RP	RP	391.01117	0.812	ND	ND
10486_RP	RP	392.20493	4.042	ND	ND
10493_RP	RP	392.70572	0.666	266555.1213	ND
10498_RP	RP	393.05423	1.398	ND	286498.4832
10499_RP	RP	393.06479	5.123	ND	ND
10508_RP	RP	393.20956	2.81	ND	ND
10516_RP	RP	393.83923	0.688	744896.1776	551898.0375
10529_RP	RP	394.20203	4.046	ND	ND
10537_RP	RP	394.69333	0.66	ND	ND
10561_RP	RP	395.83618	0.687	484987.7748	372354.2445
10569_RP	RP	396.073	9.53	ND	ND
10584_RP	RP	396.69101	0.658	ND	ND
10585_RP	RP	396.73642	0.655	ND	ND

10586_RP	RP	396.76443	0.658	431036.41	329411.0585
2145_HILICPos	HILICPos	397.01978	11.478 ND		ND
10594_RP	RP	397.01987	0.901 ND		ND
10596_RP	RP	397.08502	7.718 ND		ND
10612_RP	RP	397.84021	0.675	77550.7705	ND
10631_RP	RP	398.73322	0.66 ND		ND
10632_RP	RP	398.76147	0.654	715946.0184	607566.4093
2158_HILICPos	HILICPos	400.19684	2.243 ND		ND
10663_RP	RP	400.21808	4.241 ND		ND
10671_RP	RP	400.80115	0.659 ND		ND
10677_RP	RP	401.12399	0.913 ND		ND
10679_RP	RP	401.23849	2.331 ND		ND
10687_RP	RP	401.75443	0.683	66084.03173	ND
10698_RP	RP	402.23358	2.89 ND		ND
2163_HILICPos	HILICPos	402.23398	2.179 ND		ND
10703_RP	RP	402.27026	4.116	294582	ND
10707_RP	RP	402.68494	0.656 ND		ND
10709_RP	RP	402.7981	0.661 ND		ND
10744_RP	RP	404.24933	2.136 ND		ND
10751_RP	RP	404.68237	0.657 ND		ND
10753_RP	RP	404.79352	0.658 ND		ND
10766_RP	RP	405.13562	4.237 ND		ND
10773_RP	RP	405.75046	0.659 ND		ND
10795_RP	RP	406.70471	0.659 ND		ND
10797_RP	RP	406.83676	0.662 ND		ND
10804_RP	RP	407.18875	2.892 ND		ND
10805_RP	RP	407.20306	0.91 ND		ND
10812_RP	RP	407.74738	0.662 ND		ND
10834_RP	RP	408.70178	0.658 ND		ND
2535_HILICNeg	HILICNeg	409.00165	14.908 ND		ND
10856_RP	RP	409.78607	0.68 ND		61168.74305
10883_RP	RP	410.69882	0.659 ND		ND
10884_RP	RP	410.76639	0.65 ND		ND
10903_RP	RP	411.88705	0.688 ND		ND
10927_RP	RP	412.69595	0.66 ND		ND
10954_RP	RP	414.1915	7.116 ND		ND
10965_RP	RP	414.69308	0.662 ND		ND
10969_RP	RP	414.83936	0.689 ND		397067.6635
10981_RP	RP	415.25403	3.639 ND		ND
10983_RP	RP	415.73096	0.679 ND		ND
10992_RP	RP	416.2493	4.171	417078	ND
10997_RP	RP	416.28552	2.804 ND		ND
10998_RP	RP	416.30106	11.03 ND		ND
11001_RP	RP	416.68753	0.672 ND		ND
11002_RP	RP	416.73355	0.664 ND		ND

11004_RP	RP	416.84726	0.707	ND	193730.2241
11006_RP	RP	416.89893	0.685	ND	ND
11021_RP	RP	417.79694	0.659	226416.6343	265418.9667
11037_RP	RP	418.26477	2.387	484520.6667	ND
11040_RP	RP	418.29135	5.434	ND	ND
11046_RP	RP	418.68481	0.672	ND	ND
11047_RP	RP	418.7305	0.661	ND	ND
11059_RP	RP	419.18182	5.151	ND	ND
11084_RP	RP	420.68204	0.679	ND	ND
11085_RP	RP	420.72763	0.662	ND	ND
11088_RP	RP	420.85794	0.692	ND	ND
11132_RP	RP	422.68304	0.656	51688.39869	ND
11135_RP	RP	422.72522	0.662	ND	ND
11136_RP	RP	422.7695	0.671	65468.10846	94049.17981
11139_RP	RP	422.85507	0.692	ND	ND
2557_HILICNeg	HILICNeg	423.16632	2.251	ND	ND
11257_RP	RP	424.67987	0.683	128865.8093	ND
11265_RP	RP	424.74765	0.773	ND	ND
11269_RP	RP	424.77917	0.697	87370.70872	ND
11420_RP	RP	426.67685	0.66	118426.3212	ND
11422_RP	RP	426.77637	0.681	108196.9704	ND
11428_RP	RP	427.17218	7.686	ND	ND
11450_RP	RP	428.69925	0.664	1381145.261	464483.1978
11452_RP	RP	428.79617	0.658	ND	ND
11461_RP	RP	429.18506	0.915	ND	ND
11464_RP	RP	429.23343	3.709	ND	ND
11489_RP	RP	430.26505	1.432	ND	ND
11491_RP	RP	430.26508	4.619	ND	ND
11497_RP	RP	430.69629	0.665	3059878.029	1076331.151
11498_RP	RP	430.75656	0.665	ND	ND
11499_RP	RP	430.79306	0.664	ND	ND
11504_RP	RP	431.00073	0.8	ND	ND
11526_RP	RP	432.28064	3.64	ND	ND
11529_RP	RP	432.69327	0.663	2942062.791	995160.8153
11530_RP	RP	432.79019	0.656	ND	ND
11564_RP	RP	434.69031	0.663	1527200.318	ND
11566_RP	RP	434.80804	0.678	ND	ND
11570_RP	RP	435.10461	0.681	1458636.384	1288566.237
11571_RP	RP	435.1965	10.015	ND	ND
11588_RP	RP	436.23129	4.561	276566	ND
11599_RP	RP	436.68741	0.664	ND	ND
11603_RP	RP	436.80505	0.691	ND	ND
11617_RP	RP	437.21536	10.564	ND	ND
11618_RP	RP	437.23608	3.648	ND	ND
11630_RP	RP	438.15701	7.719	ND	ND

11634_RP	RP	438.2283	4.564 ND	ND
11649_RP	RP	438.76218	0.655 ND	ND
2573_HILICNeg	HILICNeg	439.08545	3.784 ND	1155352.667
11668_RP	RP	439.65656	7.723 ND	ND
11673_RP	RP	440.06277	9.141 ND	ND
11697_RP	RP	440.98624	9.801 ND	ND
11728_RP	RP	442.33743	6.811 ND	ND
11734_RP	RP	442.84152	0.652 ND	ND
11764_RP	RP	444.28073	2.316 ND	ND
11772_RP	RP	444.67322	0.669 ND	ND
11783_RP	RP	445.1264	9.204 ND	ND
11802_RP	RP	446.14575	7.719 ND	ND
11804_RP	RP	446.25998	3.708 ND	ND
11807_RP	RP	446.29648	4.539 ND	ND
11811_RP	RP	446.67023	0.664 463802.6214	ND
11813_RP	RP	446.77454	0.695 ND	ND
11854_RP	RP	448.27557	2.83 ND	ND
11864_RP	RP	448.66727	0.665 470974.9239	ND
11898_RP	RP	450.66422	0.665 251941.1987	ND
11908_RP	RP	451.21518	3.709 ND	ND
2579_HILICNeg	HILICNeg	451.33011	2.113 9355232	ND
11924_RP	RP	451.79816	0.687 246063.9202	ND
11935_RP	RP	452.23245	11.376 ND	ND
11947_RP	RP	452.77686	0.654 ND	100659.4427
11956_RP	RP	453.14822	9.083 2399426.667	ND
11960_RP	RP	453.20978	3.65 ND	ND
11966_RP	RP	453.34341	6.004 176723696	ND
11968_RP	RP	453.34399	5.716 ND	ND
11971_RP	RP	453.7952	0.689 183197.3232	ND
11979_RP	RP	454.34695	6.013 45153024	ND
12049_RP	RP	458.75986	0.659 ND	ND
12063_RP	RP	459.28046	4.151 721615.2817	ND
12086_RP	RP	460.31204	3.642 ND	ND
12090_RP	RP	460.64365	0.658 ND	ND
12093_RP	RP	460.75681	0.657 ND	ND
12120_RP	RP	462.29126	3.197 483662.6667	ND
12125_RP	RP	462.64062	0.666 ND	ND
12126_RP	RP	462.75357	0.657 ND	ND
12157_RP	RP	464.66367	0.66 ND	ND
12170_RP	RP	465.26938	13.074 ND	ND
12188_RP	RP	466.24213	4.366 ND	ND
12195_RP	RP	466.66061	0.659 ND	ND
12197_RP	RP	466.75757	0.652 ND	ND
12211_RP	RP	467.7449	0.686 ND	ND
12232_RP	RP	468.65753	0.659 ND	ND

12239_RP	RP	469.17041	11.034	ND	ND
12260_RP	RP	470.37033	6.004	15610020.67	ND
12262_RP	RP	470.65469	0.662	ND	ND
12270_RP	RP	471.35495	5.21	ND	ND
12280_RP	RP	472.22223	13.076	ND	ND
12291_RP	RP	472.65161	0.663	ND	ND
12300_RP	RP	473.12112	9.939	ND	ND
12301_RP	RP	473.1579	4.906	ND	ND
12302_RP	RP	473.19162	10.487	ND	ND
12304_RP	RP	473.25989	4.215	ND	ND
12321_RP	RP	474.29135	4.967	ND	ND
12322_RP	RP	474.29138	3.708	ND	ND
12327_RP	RP	474.64645	0.673	ND	ND
2371_HILICPos	HILICPos	474.99741	11.505	ND	ND
12338_RP	RP	475.32559	6.006	13292671.15	ND
12342_RP	RP	475.68637	0.685	ND	ND
12354_RP	RP	476.30704	4.151	15495262.67	ND
12356_RP	RP	476.64346	0.67	ND	ND
12357_RP	RP	476.68896	0.663	ND	ND
12365_RP	RP	477.216	1.066	ND	ND
12384_RP	RP	478.64072	0.677	ND	ND
12385_RP	RP	478.68683	0.664	ND	ND
12387_RP	RP	478.81686	0.691	410291.597	342066.9956
12406_RP	RP	480.25766	4.942	99027.64399	ND
12414_RP	RP	480.68365	0.664	ND	ND
12416_RP	RP	480.81387	0.691	258792.7798	208495.7663
12426_RP	RP	481.26251	4.157	2355495.137	ND
12446_RP	RP	482.63797	0.66	72093.99664	ND
12447_RP	RP	482.7381	0.697	ND	ND
2383_HILICPos	HILICPos	482.9653	14.907	ND	ND
12474_RP	RP	484.63443	0.66	91629.60439	ND
12475_RP	RP	484.73505	0.688	45790.95962	ND
12505_RP	RP	486.65771	0.665	688107.0623	ND
12507_RP	RP	486.755	0.662	ND	ND
12522_RP	RP	488.09888	7.631	ND	ND
2393_HILICPos	HILICPos	488.17825	10.149	ND	ND
12535_RP	RP	488.65497	0.663	1809830.646	ND
12536_RP	RP	488.75165	0.673	ND	ND
12550_RP	RP	489.29108	3.855	ND	ND
12551_RP	RP	489.3024	3.753	ND	ND
12554_RP	RP	489.68665	0.655	ND	ND
12561_RP	RP	490.28644	4.213	ND	ND
12569_RP	RP	490.65204	0.663	2001402.531	ND
12570_RP	RP	490.74863	0.666	ND	ND
12579_RP	RP	491.19778	12.109	ND	ND

12600_RP	RP	492.64902	0.664	1236946.948	ND
12617_RP	RP	494.21063	12.584	ND	ND
12626_RP	RP	494.64597	0.666	ND	ND
12627_RP	RP	494.7243	0.659	ND	ND
12629_RP	RP	494.79089	0.686	107199.8355	ND
12635_RP	RP	495.06024	0.679	196853.7587	199601.1563
12638_RP	RP	495.24164	4.216	ND	ND
12673_RP	RP	497.09546	0.71	ND	ND
12675_RP	RP	497.2363	4.161	312862.9366	ND
12688_RP	RP	498.40027	10.074	ND	ND
12690_RP	RP	498.40152	6.004	25220219.33	ND
12691_RP	RP	498.40213	5.718	247998.6667	ND
12694_RP	RP	498.71851	0.659	76429.44261	ND
12695_RP	RP	498.74396	0.684	ND	ND
12714_RP	RP	501.09595	7.718	ND	ND
12736_RP	RP	502.62341	0.669	ND	ND
12743_RP	RP	503.30661	4.515	359304.4449	ND
12759_RP	RP	504.33841	4.153	ND	ND
12762_RP	RP	504.62903	0.666	ND	ND
12783_RP	RP	506.31775	3.858	517766	ND
12785_RP	RP	506.62619	0.666	327711.0115	ND
12811_RP	RP	508.77008	0.681	ND	ND
12817_RP	RP	509.75705	0.688	51444.66568	ND
12818_RP	RP	509.84665	0.695	ND	ND
12823_RP	RP	510.26825	4.662	ND	ND
12824_RP	RP	510.26846	4.751	ND	ND
12829_RP	RP	510.60068	0.656	ND	ND
12830_RP	RP	510.62036	0.672	ND	ND
12840_RP	RP	511.12469	7.719	ND	ND
12844_RP	RP	511.17993	1.874	ND	ND
12848_RP	RP	511.75415	0.685	76890.94778	ND
12861_RP	RP	512.60779	0.662	ND	ND
12865_RP	RP	512.73163	0.666	ND	ND
12870_RP	RP	513.00903	1.322	ND	750081.3333
12871_RP	RP	513.1203	7.718	ND	ND
12905_RP	RP	516.30219	4.192	ND	ND
12928_RP	RP	518.31787	5.242	ND	ND
12933_RP	RP	518.71545	0.658	ND	ND
12953_RP	RP	520.33313	4.502	7711536.667	ND
12957_RP	RP	520.71259	0.659	ND	ND
12961_RP	RP	521.66138	0.664	ND	ND
12976_RP	RP	522.62195	0.661	ND	ND
12986_RP	RP	524.284	5.237	ND	ND
12993_RP	RP	524.61926	0.661	ND	ND
13000_RP	RP	525.28876	4.517	1277984.457	ND

13007_RP	RP	526.28076	5.071 ND	ND
13013_RP	RP	526.61621	0.659 ND	ND
13015_RP	RP	526.71344	0.656 ND	ND
2618_HILICNeg	HILICNeg	528.00739	2.91 ND	3818398.667
13036_RP	RP	528.61334	0.661 ND	ND
2619_HILICNeg	HILICNeg	528.95148	14.923 ND	ND
13059_RP	RP	530.61047	0.666 ND	ND
13061_RP	RP	530.76746	0.668 ND	ND
13081_RP	RP	532.60522	0.67 ND	ND
13084_RP	RP	532.76447	0.657 ND	ND
13090_RP	RP	533.3175	4.264 ND	ND
13091_RP	RP	533.32874	4.192 ND	ND
13100_RP	RP	534.31274	4.575 ND	ND
13101_RP	RP	534.34906	3.858 ND	ND
13114_RP	RP	535.31616	4.58 ND	ND
13132_RP	RP	536.64557	0.663 ND	ND
13134_RP	RP	536.776	0.685 148725.4642	76335.83938
13139_RP	RP	537.29633	6.006 498617.6517	ND
13146_RP	RP	538.28424	4.197 ND	ND
13148_RP	RP	538.59644	0.664 ND	ND
13168_RP	RP	540.59576	0.661 ND	ND
13169_RP	RP	540.69659	0.68 ND	ND
13176_RP	RP	541.14594	11.034 ND	ND
13178_RP	RP	541.2627	4.516 ND	ND
13184_RP	RP	542.12274	7.719 ND	ND
13188_RP	RP	542.59259	0.66 65731.24052	ND
13190_RP	RP	542.69385	0.671 ND	ND
13202_RP	RP	544.1192	7.718 ND	ND
13211_RP	RP	544.59052	0.657 58451.29795	ND
13230_RP	RP	546.71027	0.663 ND	ND
13238_RP	RP	547.33276	4.801 ND	ND
13249_RP	RP	548.29242	4.655 ND	ND
13253_RP	RP	548.36469	4.526 659120	ND
13257_RP	RP	548.7074	0.659 ND	ND
13268_RP	RP	550.34393	4.265 356308	ND
13272_RP	RP	550.70398	0.659 ND	ND
13277_RP	RP	551.1745	11.035 ND	ND
13283_RP	RP	551.55048	14.59 ND	ND
13288_RP	RP	552.15137	7.719 ND	ND
13298_RP	RP	552.68707	7.718 ND	ND
13326_RP	RP	554.68048	0.659 ND	ND
13332_RP	RP	555.29938	4.271 ND	ND
13345_RP	RP	556.67688	0.657 ND	ND
13360_RP	RP	558.67395	0.655 ND	ND
13377_RP	RP	560.59247	0.664 ND	ND

13380_RP	RP	560.75409	0.684 ND	ND
13397_RP	RP	562.58826	0.789 ND	85868.80024
13406_RP	RP	563.79431	0.689 286529.2401	257076.8589
13413_RP	RP	564.35919	4.828 ND	ND
13425_RP	RP	565.7915	0.687 ND	148589.7559
13432_RP	RP	566.58179	0.668 ND	ND
13434_RP	RP	566.729	0.673 ND	ND
13444_RP	RP	568.31012	5.478 ND	ND
13457_RP	RP	569.31464	4.797 399000.9122	ND
13467_RP	RP	570.56555	0.665 ND	ND
13543_RP	RP	576.67407	0.659 ND	ND
13550_RP	RP	577.35474	4.51 ND	ND
13565_RP	RP	578.33893	4.858 711484.6667	ND
13570_RP	RP	578.67139	0.659 ND	ND
13578_RP	RP	579.76837	0.689 73027.92246	ND
13584_RP	RP	580.35455	4.018 ND	ND
13589_RP	RP	580.58038	0.665 ND	ND
13606_RP	RP	582.57751	0.662 ND	ND
13626_RP	RP	584.57471	0.661 ND	ND
13628_RP	RP	584.67175	0.656 ND	ND
13634_RP	RP	585.28864	4.796 ND	ND
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13658_RP	RP	588.56909	0.662 ND	ND
13669_RP	RP	590.56421	0.67 ND	ND
13674_RP	RP	591.35901	5.02 ND	ND
13697_RP	RP	594.37006	4.568 ND	ND
13702_RP	RP	594.73456	0.679 ND	ND
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13732_RP	RP	599.32562	4.572 ND	ND
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4753664.443	2088751.875
2602187.312	1151746.469
1981608	845379.3333
738022.7089	252662.8786

Compound	Sample	Mean Concentr	Standard Dev
(3-Carboxypropyl)trimethylammonium (TMAB)	Aloha	0.0479	0.0038
(3-Carboxypropyl)trimethylammonium (TMAB)	NP	0.0339	0.0056
(3-Carboxypropyl)trimethylammonium (TMAB)	PS	0.1089	0.0108
4-Hydroxyisoleucine	Aloha	1.1397	0.2321
4-Hydroxyisoleucine	LW	2.2472	0.6771
5-Methylcytosine	LW	0.0866	0.0139
6-Methyladenine	LW	0.0572	0.0324
Adenine	LW	0.4885	0.1861
Adenosine	LW	1.8801	0.5262
Asparagine	Aloha	2.1911	0.1648
Asparagine	LW	1.2862	0.1785
Aspartic acid	Aloha	6.7265	1.2664
Aspartic acid	LW	6.0790	2.0241
Aspartic acid	PS	7.0356	4.1812
beta-Alanine	Aloha	2.1044	0.3808
beta-Alanine	NP	1.7268	0.3681
beta-Alanine	PS	2.4842	0.6227
Betonicine	Aloha	0.0612	0.0100
Betonicine	LW	0.0177	0.0056
Betonicine	NP	0.0190	0.0069
Betonicine	PS	0.0158	0.0035
Creatine	Aloha	0.8993	0.0465
Creatine	LW	0.5170	0.1876
Creatine	NP	0.4106	0.0997
Creatine	PS	0.1956	0.0194
Cytidine	LW	0.5437	0.2539
Cytidine	PS	0.1471	0.0170
Dimethylsulfonioacetate (DMS-Ac)	Aloha	0.4639	0.0209
Dimethylsulfonioacetate (DMS-Ac)	NP	0.9647	0.2187
Dimethylsulfonioacetate (DMS-Ac)	PS	0.4963	0.0430
DMSP	Aloha	3.4308	0.1968
DMSP	LW	0.0131	0.0041
DMSP	NP	6.6952	1.4502
DMSP	PS	2.2589	0.2580
Ectoine	Aloha	0.0544	0.0041
Ectoine	NP	0.0459	0.0050
Glutamic acid	Aloha	11.4089	1.7375
Glutamic acid	LW	5.6780	0.4279
Glutamic acid	NP	3.1950	0.8492
Glutamic acid	PS	4.7682	0.4862
Glutamine	Aloha	1.0051	0.0959
Glutamine	LW	0.3416	0.0992
Glutamine	NP	0.1495	0.0656
Glutamine	PS	0.6201	0.0263

Glutamylphenylalanine	Aloha	0.0547	0.0165
Glutamylphenylalanine	PS	0.0547	0.0124
Glycerophosphocholine	PS	1.3868	0.0872
Gonyol	Aloha	0.6070	0.0561
Gonyol	LW	0.8575	0.3360
Gonyol	PS	1.4697	0.2062
Guanine	Aloha	0.7842	0.0667
Guanine	LW	1.5431	0.5309
Guanine	PS	1.0248	0.0557
Histidine	Aloha	1.2053	0.2944
Histidine	LW	2.0936	0.1169
Homarine	Aloha	67.6409	3.7625
Homarine	LW	3.9754	1.1421
Homarine	NP	20.8421	4.6644
Homarine	PS	40.4098	5.4569
Homoserine	PS	0.4789	0.1707
Hydroxyectoine	PS	0.0519	0.0099
Hypoxanthine	Aloha	0.6866	0.1165
Hypoxanthine	LW	1.3292	0.5379
Imidazoleacrylic Acid	Aloha	1.5865	0.4934
Imidazoleacrylic Acid	LW	1.4927	0.3813
(Iso)leucine	Aloha	4.4284	0.1922
(Iso)leucine	LW	1.3893	0.3908
(Iso)leucine	NP	0.5316	0.0660
(Iso)leucine	PS	1.4139	0.0279
Lysine	Aloha	2.5926	0.2962
Melamine	Aloha	0.9000	0.1571
Melamine	LW	0.4995	0.0494
Methionine Sulfoxide	Aloha	1.3801	0.2141
Methionine Sulfoxide	LW	0.3033	0.0247
Methionine Sulfoxide	PS	0.5611	0.1715
N(e)-Acetyl-Lysine	Aloha	0.0852	0.0184
N(e)-Acetyl-Lysine	LW	0.0491	0.0225
N(e)-Acetyl-Lysine	PS	0.0275	0.0094
Ornithine	Aloha	8.2705	0.5151
Sarcosine	Aloha	0.9170	0.2986
Sarcosine	NP	1.1631	0.3752
Serine	Aloha	13.5153	5.0306
Serine	LW	16.5523	3.7288
Stachydrine hydrochloride	Aloha	0.1426	0.0081
Stachydrine hydrochloride	PS	0.0499	0.0065
trans Hydroxyl proline	PS	0.1244	0.0433
Trigonelline	Aloha	0.9684	0.1117
Trigonelline	LW	0.1322	0.0551
Trigonelline	NP	0.2062	0.0526

Trigonelline	PS	0.1873	0.0223
Trimethylamine N-oxide	Aloha	48.5340	8.7716
Trimethylamine N-oxide	LW	0.8857	0.1123
Trimethylamine N-oxide	NP	3.7178	0.9220
Trimethylamine N-oxide	PS	2.2446	0.1595
Trimethylammonium Propionate (TMAP)	Aloha	0.2330	0.0178
Trimethylammonium Propionate (TMAP)	LW	0.0545	0.0168
Trimethylammonium Propionate (TMAP)	NP	0.1513	0.0355
Trimethylammonium Propionate (TMAP)	PS	3.0432	0.3696
Tyrosine	Aloha	2.4122	0.7335
Tyrosine	LW	1.5444	0.5730
Arsenobetaine	Aloha	0.0154	0.0012
Alanine	Aloha	16.3335	2.0414
Alanine	LW	9.1910	0.6100
Alanine	NP	2.7387	0.3477
Alanine	PS	7.1593	1.0276
Proline	Aloha	7.8970	0.9934
Proline	LW	3.4747	0.4296
Proline	NP	1.3305	0.1502
Proline	PS	1.4669	0.2631
Betaine	Aloha	3.1089	0.2758
Betaine	NP	2.8076	0.0539
Betaine	PS	5.2029	0.1925
Cytosine	Aloha	0.4676	0.0511
Cytosine	LW	1.2131	0.1095
Cytosine	NP	0.9122	0.2755
Cytosine	PS	1.3976	0.0755
Xanthine	PS	0.0922	0.0094
Phenylalanine	Aloha	0.6225	0.1410
Phenylalanine	PS	0.5559	0.0353

Mean Concentra Standard Devia Mean Concentr Standard Deviation of Concentration N (nM N)

0.3353	0.0267	0.0479	0.0038
0.2373	0.0390	0.0339	0.0056
0.7621	0.0754	0.1089	0.0108
6.8384	1.3924	1.1397	0.2321
13.4832	4.0625	2.2472	0.6771
0.4331	0.0695	0.2598	0.0417
0.3435	0.1942	0.2862	0.1618
2.4424	0.9307	2.4424	0.9307
18.8011	5.2615	9.4006	2.6308
8.7645	0.6591	4.3823	0.3295
5.1447	0.7138	2.5724	0.3569
26.9059	5.0655	6.7265	1.2664
24.3159	8.0964	6.0790	2.0241
28.1425	16.7249	7.0356	4.1812
6.3133	1.1423	2.1044	0.3808
5.1804	1.1042	1.7268	0.3681
7.4526	1.8680	2.4842	0.6227
0.4281	0.0698	0.0612	0.0100
0.1241	0.0391	0.0177	0.0056
0.1331	0.0482	0.0190	0.0069
0.1103	0.0247	0.0158	0.0035
3.5973	0.1862	2.6980	0.1396
2.0680	0.7503	1.5510	0.5628
1.6424	0.3990	1.2318	0.2992
0.7822	0.0778	0.5867	0.0583
4.8936	2.2854	1.6312	0.7618
1.3237	0.1530	0.4412	0.0510
1.8557	0.0836 NA	NA	
3.8589	0.8747 NA	NA	
1.9852	0.1721 NA	NA	
17.1542	0.9841 NA	NA	
0.0656	0.0204 NA	NA	
33.4758	7.2508 NA	NA	
11.2943	1.2899 NA	NA	
0.3264	0.0248	0.1088	0.0083
0.2755	0.0302	0.0918	0.0101
57.0445	8.6873	11.4089	1.7375
28.3898	2.1396	5.6780	0.4279
15.9751	4.2458	3.1950	0.8492
23.8408	2.4310	4.7682	0.4862
5.0257	0.4795	2.0103	0.1918
1.7078	0.4962	0.6831	0.1985
0.7475	0.3281	0.2990	0.1312
3.1004	0.1315	1.2402	0.0526

0.7663	0.2310	0.1095	0.0330
0.7657	0.1732	0.1094	0.0247
11.0942	0.6980	1.3868	0.0872
4.2489	0.3930 NA	NA	
6.0025	2.3521 NA	NA	
10.2882	1.4431 NA	NA	
3.9211	0.3335	3.9211	0.3335
7.7154	2.6543	7.7154	2.6543
5.1240	0.2784	5.1240	0.2784
7.2317	1.7662	3.6158	0.8831
12.5613	0.7016	6.2807	0.3508
473.4864	26.3378	67.6409	3.7625
27.8279	7.9946	3.9754	1.1421
145.8950	32.6511	20.8421	4.6644
282.8685	38.1981	40.4098	5.4569
1.9157	0.6829	0.4789	0.1707
0.3113	0.0592	0.1038	0.0197
3.4328	0.5826	2.7463	0.4660
6.6459	2.6894	5.3167	2.1515
9.5188	2.9605	3.1729	0.9868
8.9562	2.2877	2.9854	0.7626
26.5704	1.1529	4.4284	0.1922
8.3356	2.3449	1.3893	0.3908
3.1897	0.3957	0.5316	0.0660
8.4832	0.1676	1.4139	0.0279
15.5557	1.7774	5.1852	0.5925
2.7000	0.4712	5.4001	0.9425
1.4984	0.1483	2.9968	0.2966
6.9003	1.0706	1.3801	0.2141
1.5165	0.1236	0.3033	0.0247
2.8055	0.8574	0.5611	0.1715
0.6813	0.1472	0.1703	0.0368
0.3928	0.1800	0.0982	0.0450
0.2200	0.0751	0.0550	0.0188
41.3525	2.5753	16.5410	1.0301
2.7511	0.8959	0.9170	0.2986
3.4894	1.1255	1.1631	0.3752
40.5460	15.0919	13.5153	5.0306
49.6568	11.1865	16.5523	3.7288
0.9985	0.0567	0.1426	0.0081
0.3496	0.0455	0.0499	0.0065
0.6219	0.2164	0.1244	0.0433
6.7791	0.7821	0.9684	0.1117
0.9255	0.3858	0.1322	0.0551
1.4432	0.3685	0.2062	0.0526

1.3114	0.1560	0.1873	0.0223
145.6020	26.3149	48.5340	8.7716
2.6572	0.3370	0.8857	0.1123
11.1535	2.7660	3.7178	0.9220
6.7337	0.4785	2.2446	0.1595
1.3979	0.1065	0.2330	0.0178
0.3268	0.1006	0.0545	0.0168
0.9081	0.2130	0.1513	0.0355
18.2590	2.2173	3.0432	0.3696
21.7095	6.6017	2.4122	0.7335
13.8995	5.1573	1.5444	0.5730
0.0769	0.0059 NA	NA	
49.0004	6.1242	16.3335	2.0414
27.5729	1.8299	9.1910	0.6100
8.2161	1.0431	2.7387	0.3477
21.4780	3.0828	7.1593	1.0276
39.4849	4.9668	7.8970	0.9934
17.3734	2.1479	3.4747	0.4296
6.6524	0.7510	1.3305	0.1502
7.3346	1.3156	1.4669	0.2631
15.5443	1.3789	3.1089	0.2758
14.0380	0.2696	2.8076	0.0539
26.0147	0.9624	5.2029	0.1925
1.8705	0.2043	1.4028	0.1533
4.8525	0.4378	3.6394	0.3284
3.6489	1.1019	2.7367	0.8264
5.5903	0.3018	4.1927	0.2264
0.4609	0.0472	0.3687	0.0377
5.6027	1.2693	0.6225	0.1410
5.0028	0.3173	0.5559	0.0353

Compound	Sample	Mean Concentration	Standard Deviation	Mean Concentration	Standard Deviation
6-Methyladenine	Aloha	0.0066	0.0005	0.0397	0.0030
6-Methyladenine	PS	0.0148	0.0052	0.0891	0.0312
Aconitic Acid	Aloha	0.6793	0.3932	4.0760	2.3591
Aconitic Acid	PS	1.0811	0.2579	6.4863	1.5475
Adenine	Aloha	0.0814	0.0134	0.4069	0.0668
Adenine	PS	0.1736	0.0682	0.8682	0.3412
Adenosine	Aloha	0.0150	0.0022	0.1502	0.0222
Adenosine	PS	0.0946	0.0079	0.9458	0.0786
Glutamylphenylalanine	Aloha	0.0501	0.0243	0.7012	0.3400
Glutamylphenylalanine	PS	0.0700	0.0435	0.9797	0.6094
Gonyol	Aloha	1.1912	0.3314	8.3384	2.3196
Gonyol	PS	0.9936	0.2993	6.9551	2.0948
Guanine	Aloha	0.9393	0.1186	4.6964	0.5932
Guanine	PS	2.3071	0.4668	11.5354	2.3340
(Iso)leucine	Aloha	3.9937	0.1737	23.9623	1.0420
(Iso)leucine	PS	1.7214	0.1619	10.3287	0.9717
N-Acetylmuramic acid	Aloha	0.2666	0.0585	2.9323	0.6434
N-Acetylmuramic acid	PS	0.2180	0.0187	2.3978	0.2057
Resorcylic Acid	PS	0.0357	0.0136	0.2496	0.0955
Tyrosine	Aloha	2.3907	0.2627	21.5167	2.3647
Tyrosine	PS	1.0586	0.0184	9.5274	0.1652
Adenosyl Homocysteine	Aloha	0.0108	0.0032	0.1510	0.0444
Adenosyl Homocysteine	PS	0.0102	0.0024	0.1430	0.0331
Domoic Acid	Aloha	0.0042	0.0007	0.0624	0.0111
Domoic Acid	PS	0.0117	0.0115	0.1752	0.1724
Kynurenine	Aloha	0.0341	0.0338	0.3405	0.3385
Kynurenine	PS	0.0945	0.0611	0.9452	0.6107
Methylthioadenosine	Aloha	0.0002	0.0001	0.0019	0.0015
Methylthioadenosine	PS	0.0015	0.0011	0.0160	0.0121
Sulfurol	Aloha	0.0030	0.0001	0.0179	0.0004
Sulfurol	PS	0.0065	0.0006	0.0388	0.0034
Tryptophan	Aloha	0.0189	0.0084	0.2076	0.0928
Tryptophan	PS	0.0189	0.0052	0.2074	0.0577
Vitamin B3	Aloha	0.0072	0.0042	0.0434	0.0253
Vitamin B3	PS	0.0112	0.0052	0.0674	0.0309
Vitamin B5	Aloha	0.0042	0.0004	0.0376	0.0035
Vitamin B5	PS	0.0142	0.0021	0.1277	0.0187
Vitamin B6	Aloha	0.0142	0.0009	0.1135	0.0074
Vitamin B6	PS	0.0125	0.0014	0.0998	0.0113
Vitamin B9	Aloha	0.0158	0.0018	0.2993	0.0343
Vitamin B9	PS	0.0237	0.0126	0.4503	0.2396
Xanthine	Aloha	0.0057	0.0034	0.0284	0.0169
Xanthine	PS	0.0235	0.0162	0.1173	0.0812

Mean Conce Standard De Applied LOD threshold (nM)

	0.0331	0.0025	0.0040
	0.0742	0.0260	0.0040
NA	NA		0.1385
NA	NA		0.1385
	0.4069	0.0668	0.0641
	0.8682	0.3412	0.0641
	0.0751	0.0111	0.0014
	0.4729	0.0393	0.0014
	0.1002	0.0486	0.0074
	0.1400	0.0871	0.0074
NA	NA		0.0765
NA	NA		0.0765
	4.6964	0.5932	0.4281
11.5354	2.3340		0.4281
	3.9937	0.1737	0.1296
	1.7214	0.1619	0.1296
	0.2666	0.0585	0.0223
	0.2180	0.0187	0.0223
NA	NA		0.0000
	2.3907	0.2627	0.3983
	1.0586	0.0184	0.3983
	0.0647	0.0190	0.0000
	0.0613	0.0142	0.0000
	0.0042	0.0007	0.0000
	0.0117	0.0115	0.0000
	0.0681	0.0677	0.0000
	0.1890	0.1221	0.0000
	0.0009	0.0007	0.0000
	0.0073	0.0055	0.0000
	0.0030	0.0001	0.0000
	0.0065	0.0006	0.0000
	0.0378	0.0169	0.0014
	0.0377	0.0105	0.0014
	0.0072	0.0042	0.0041
	0.0112	0.0052	0.0041
	0.0042	0.0004	0.0011
	0.0142	0.0021	0.0011
	0.0142	0.0009	0.0004
	0.0125	0.0014	0.0004
	0.1103	0.0126	0.0000
	0.1659	0.0883	0.0000
	0.0227	0.0135	0.0000
	0.0938	0.0650	0.0000