

HPLC TECHNICAL INFORMATION

LC-MS/MS Application for Agrichemicals

農薬の LC -MS/MS分析

Courtesy of T.Nishimae, Wakayama Pharmaceutical Association, Japan

(社)和歌山県薬剤師会 医薬品・公衆衛生検査センター 西前 多香哉氏 ご提供

Analytical Conditions

Cadenza CD-C18, 150 x 2 mm
A: 0.1% acetic acid, B: acetonitrile
0-100%B (0-12min), 100%B (12-17min)
0.2 mL/min, 40 deg.C, 20uL
LC-VP / API4000, MRM

POSITIVE

Carbofuran
Iprodione
Oxine-copper
Asulam
Carbaryl
Carpropamid
Diurone
Daimuron
Tricyclazole
Azoxystrobin
Harosulfuron_methyl
Flazasulfuron
Carbendazim (MBC_1, 192.0/160.0)
Carbendazim (MBC_2, 192.0/132.0)

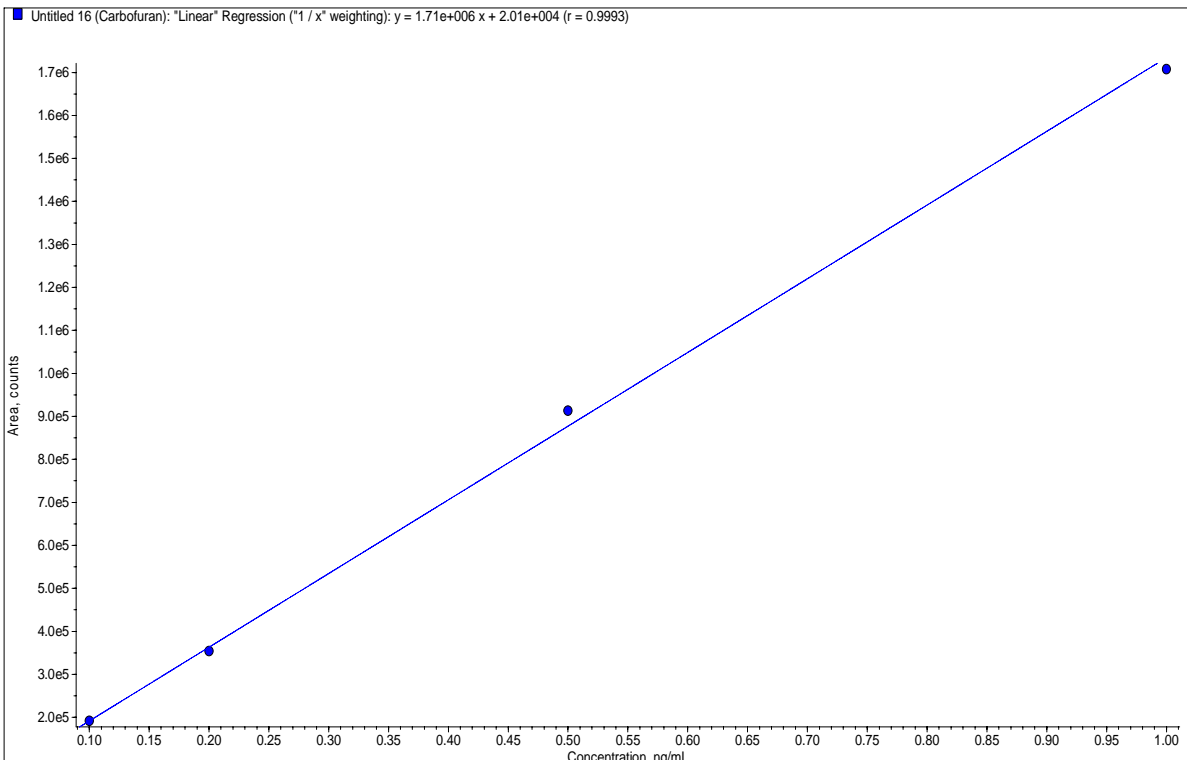
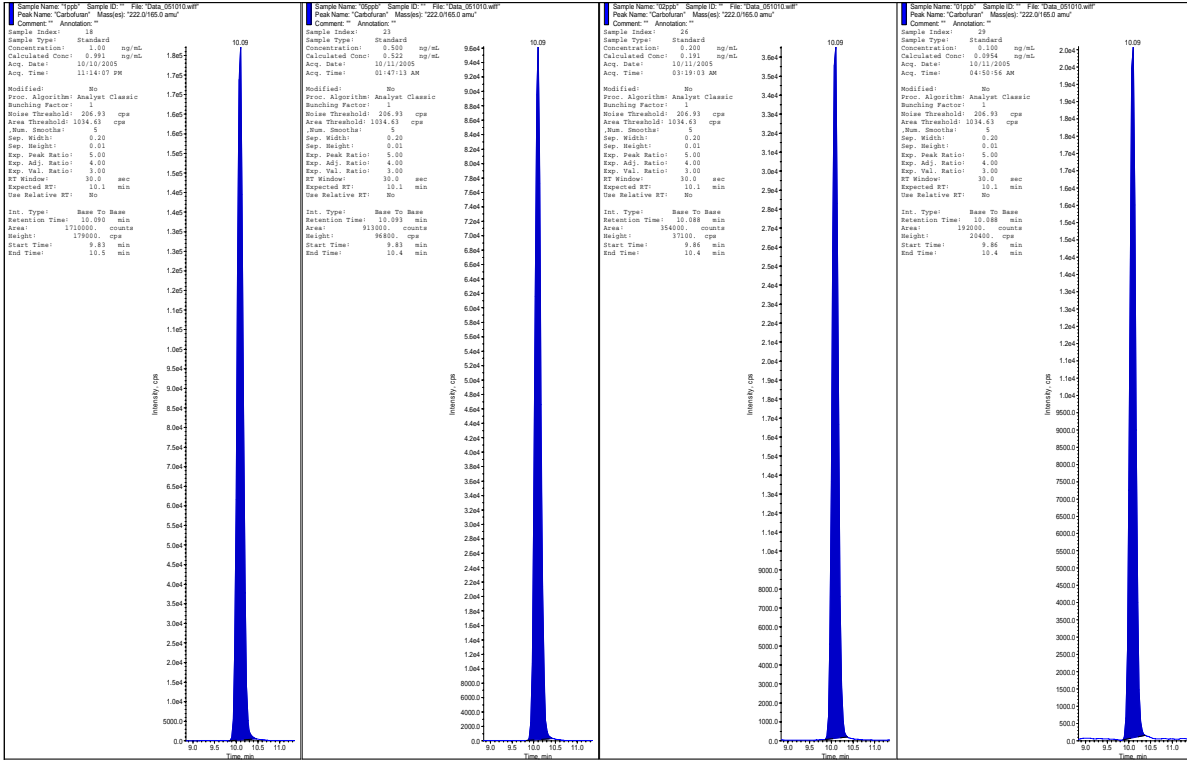
NEGATIVE

Bentazone
2,4-D
Triclopyr
Mecoprop
Bensulfuron-methyl
Bensulide

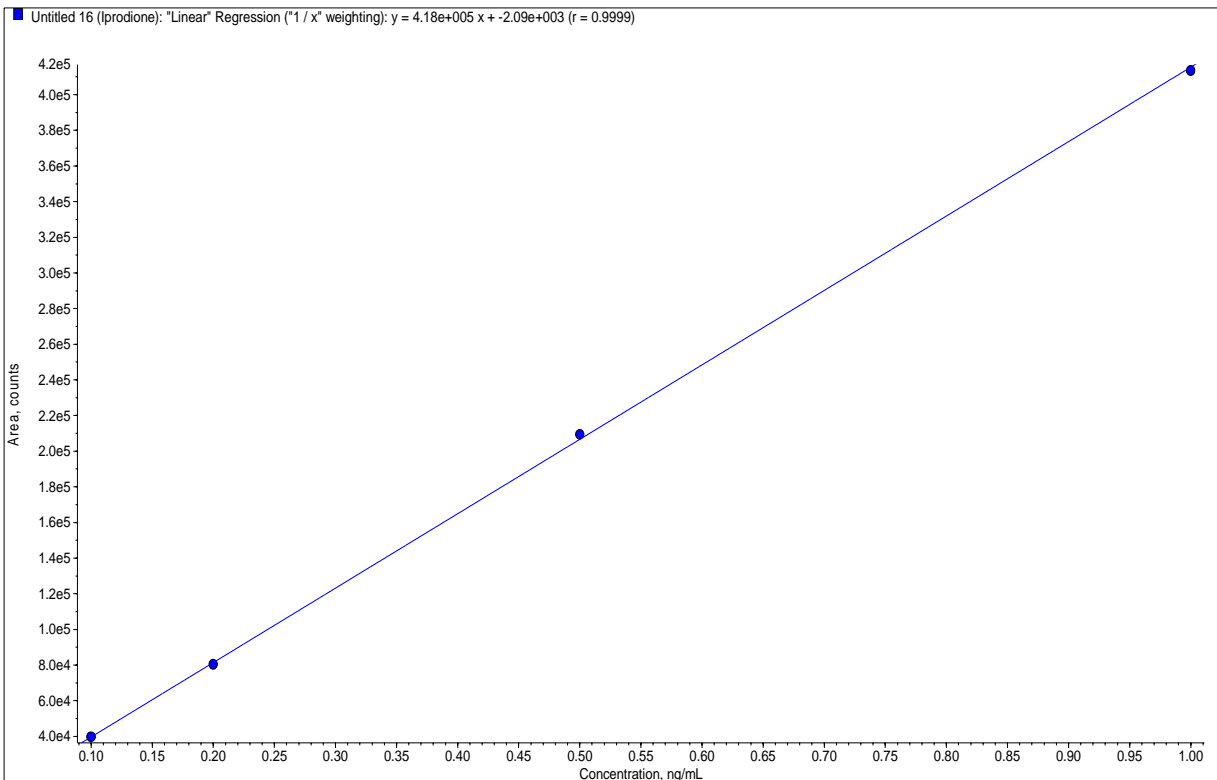
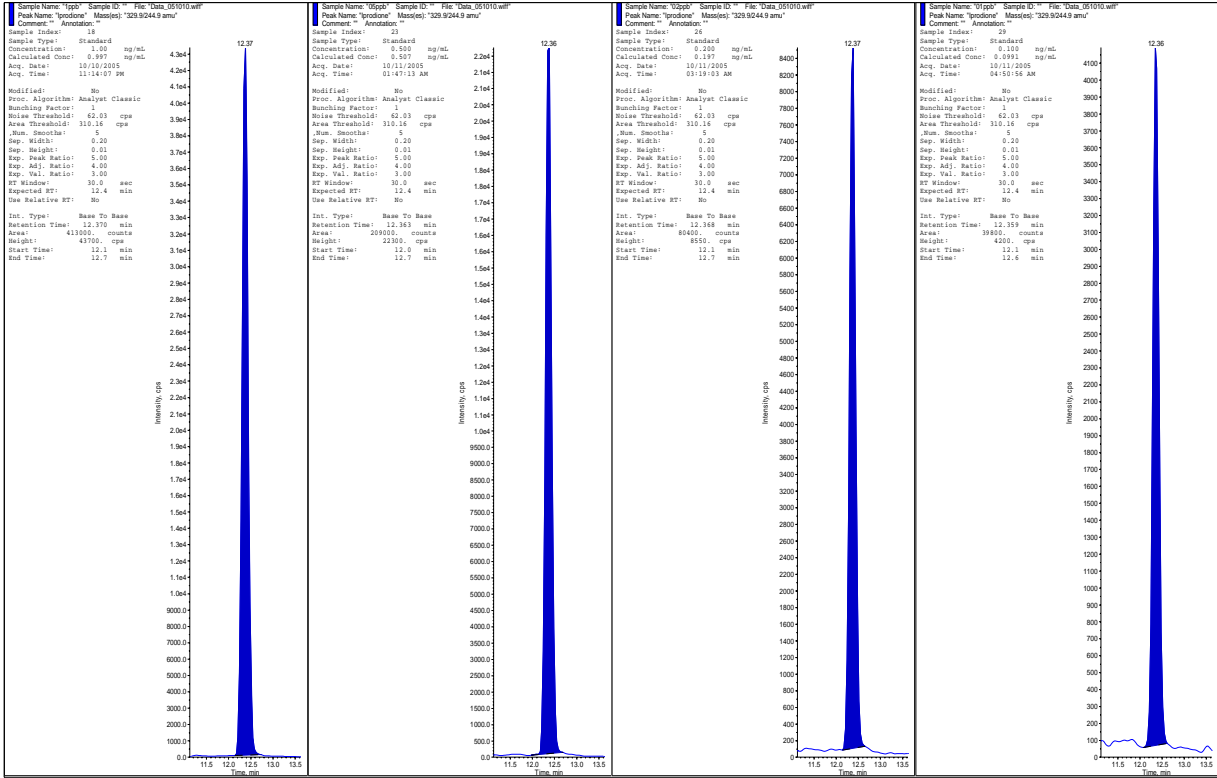
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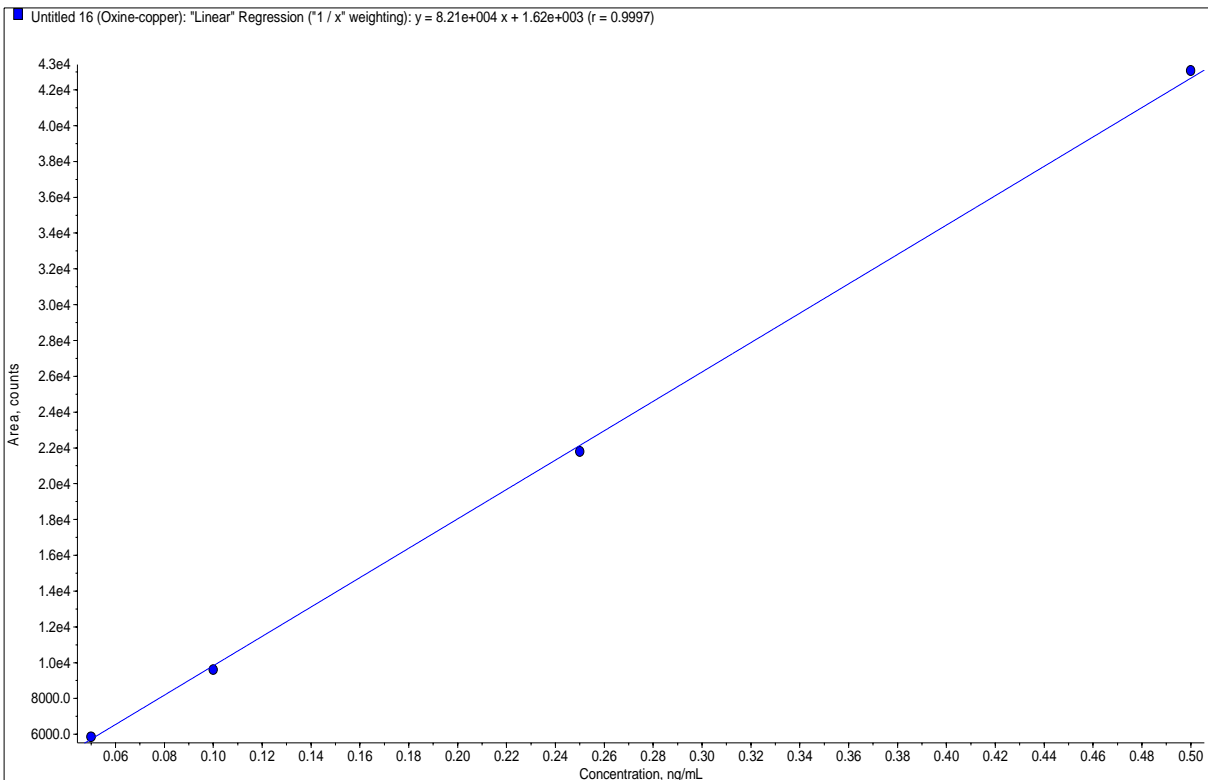
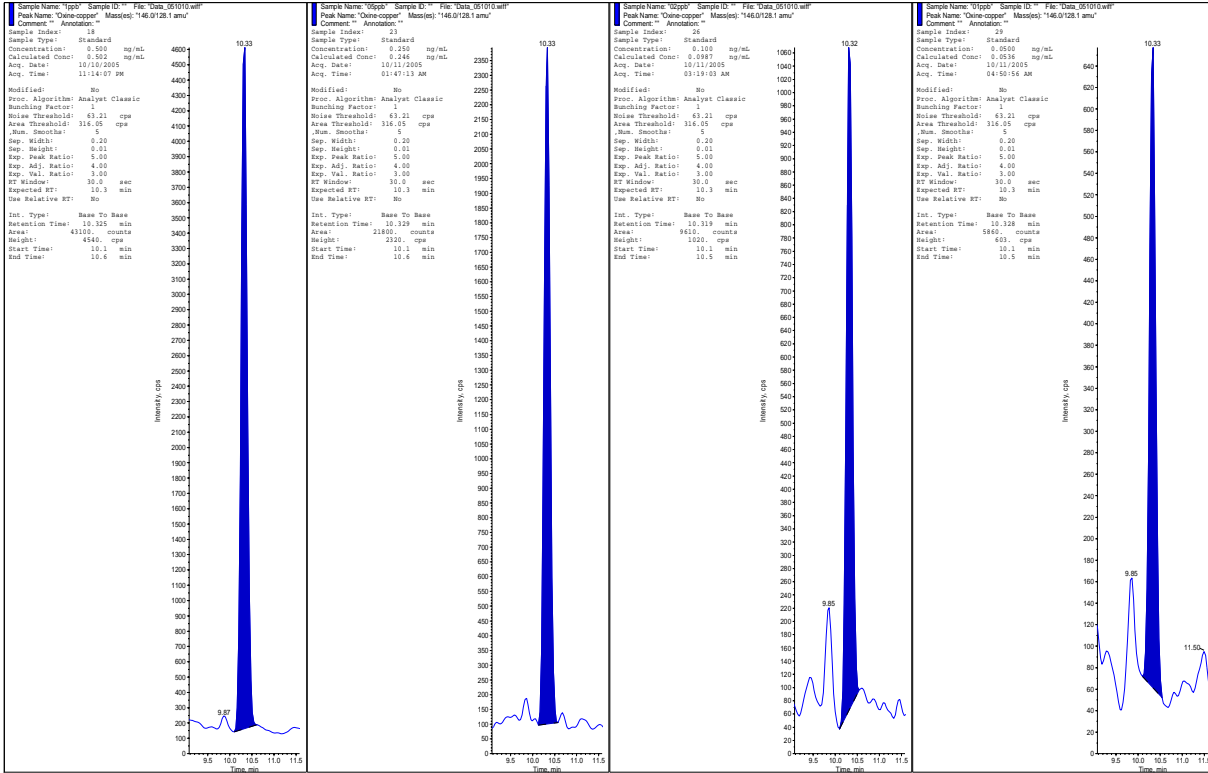
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Retention Time (m)
1	1ppb Standard	Carbofuran		1710000	179000		10.09
2	05ppb Standard	Carbofuran		913000	96800		10.093
3	02ppb Standard	Carbofuran		354000	37100		10.088
4	01ppb Standard	Carbofuran		192000	20400		10.088



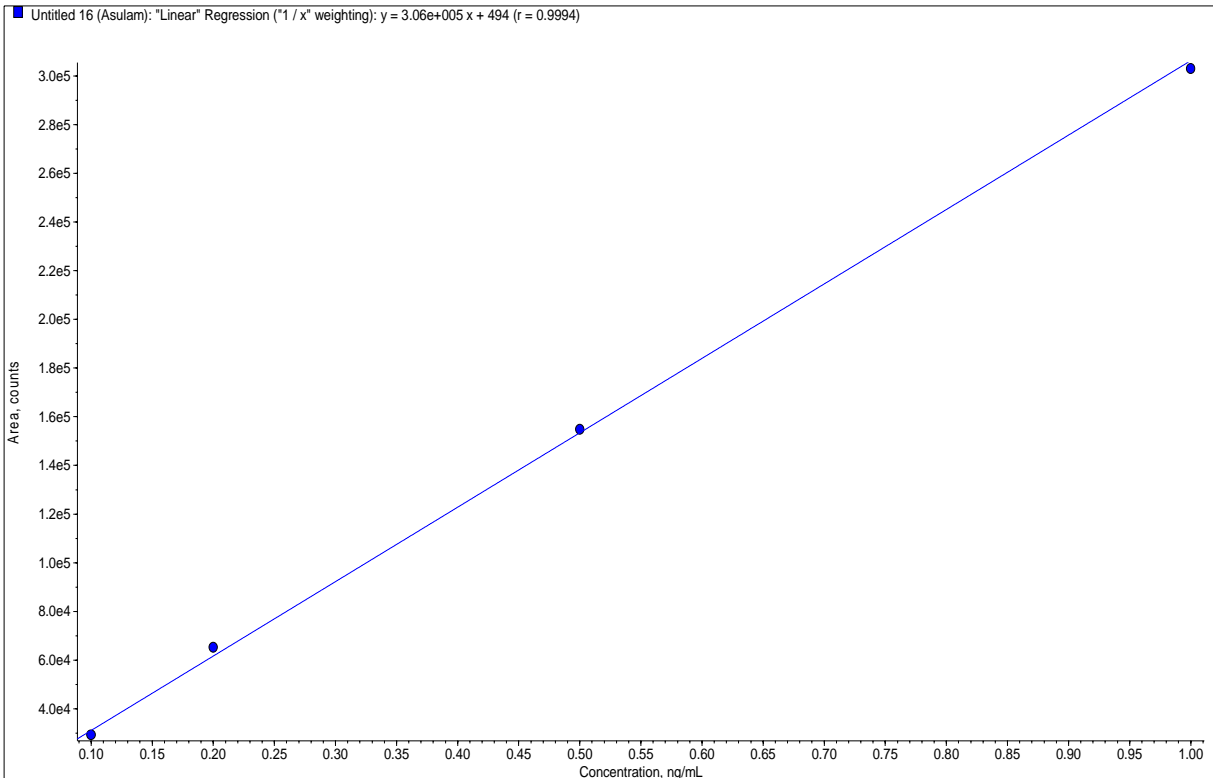
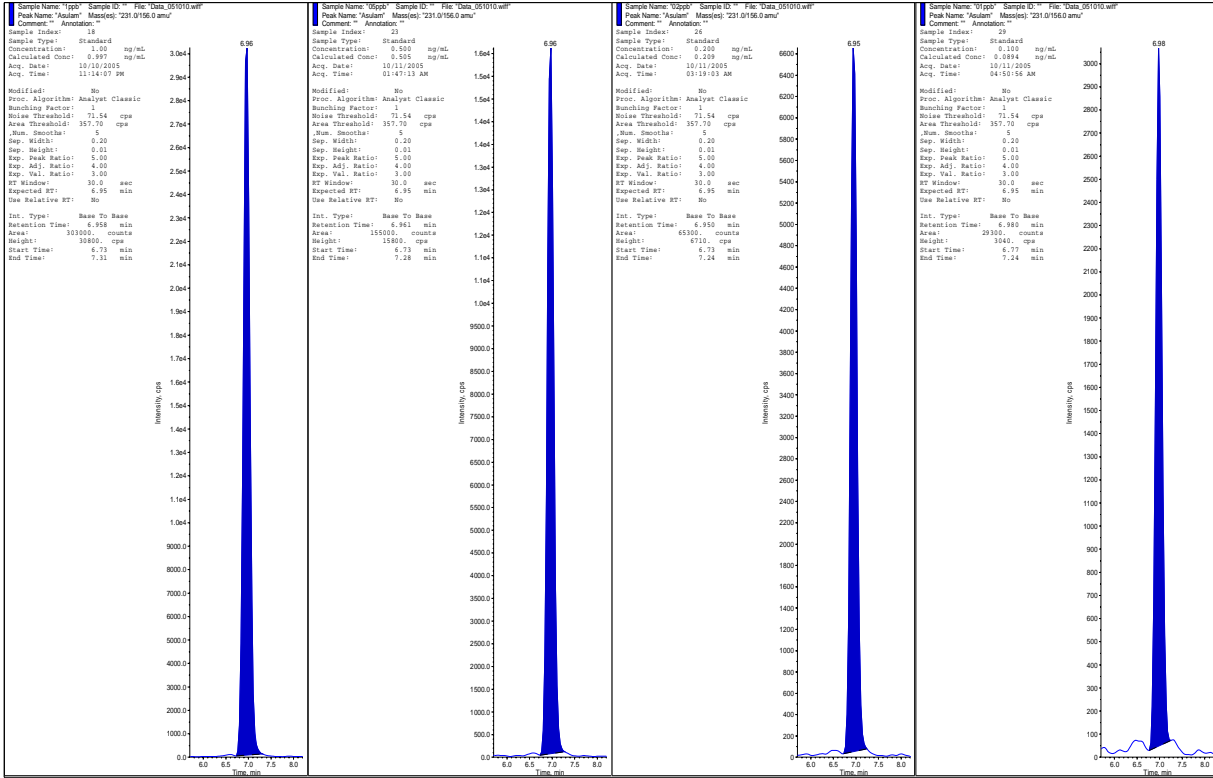
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Retention Time (m)
1	1ppb Standard	Iprondione		413000	43700		12.37
2	05ppb Standard	Iprondione		209000	22300		12.363
3	02ppb Standard	Iprondione		80400	8550		12.368
4	01ppb Standard	Iprondione		39800	4200		12.359



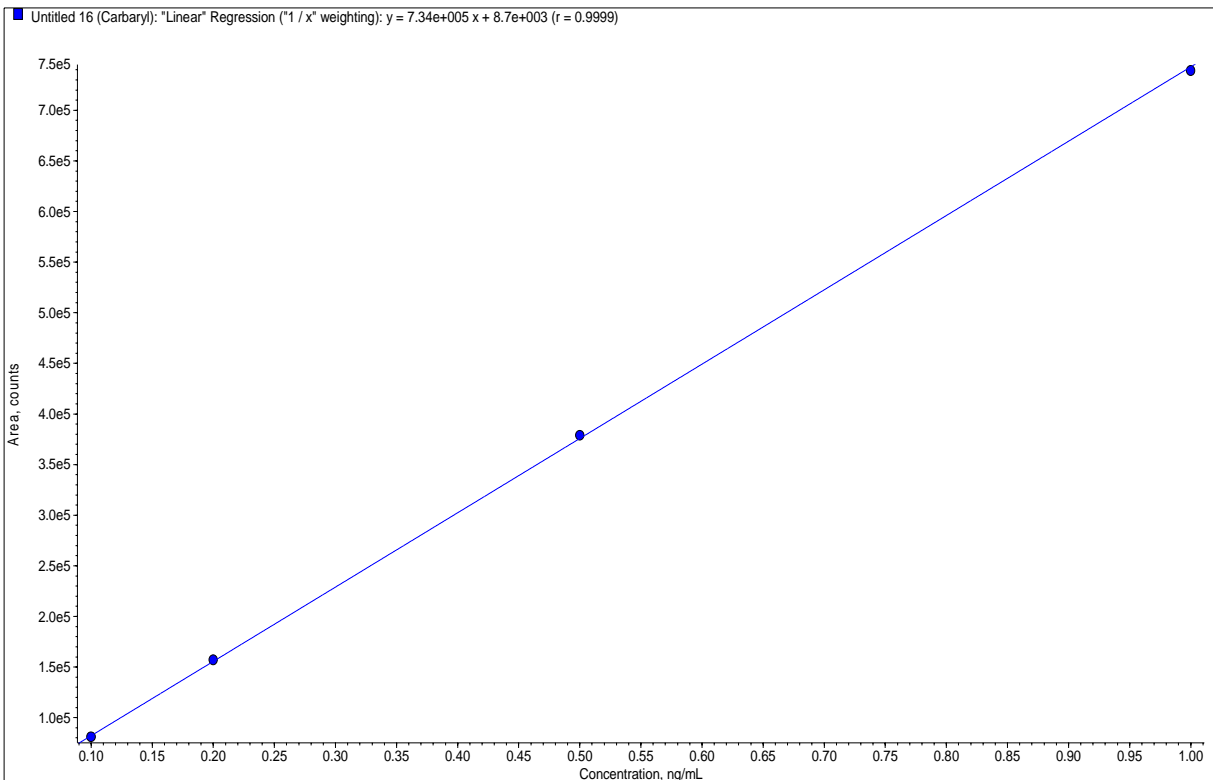
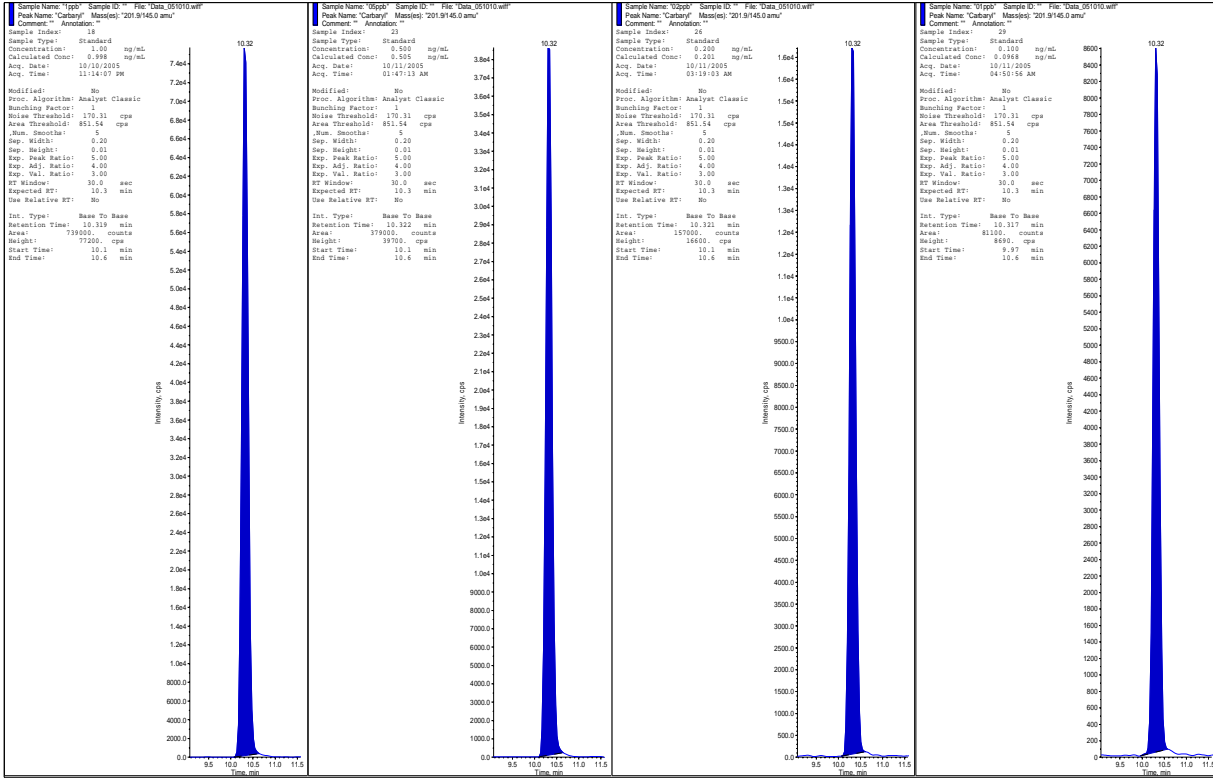
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Retention Time (m)
1	05ppb Standard	Oxine-copper		43100	4540		10.325
2	025ppb Standard	Oxine-copper		21800	2320		10.329
3	01ppb Standard	Oxine-copper		9610	1020		10.319
4	005ppb Standard	Oxine-copper		5860	603		10.328



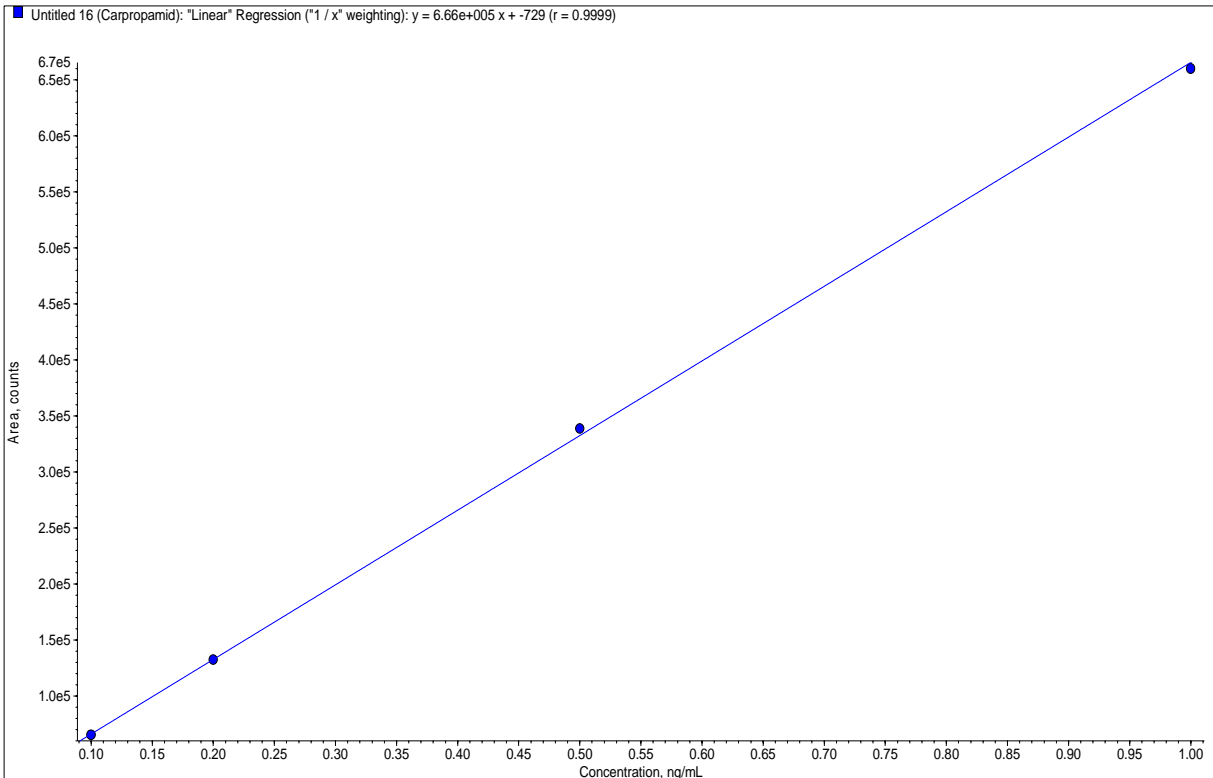
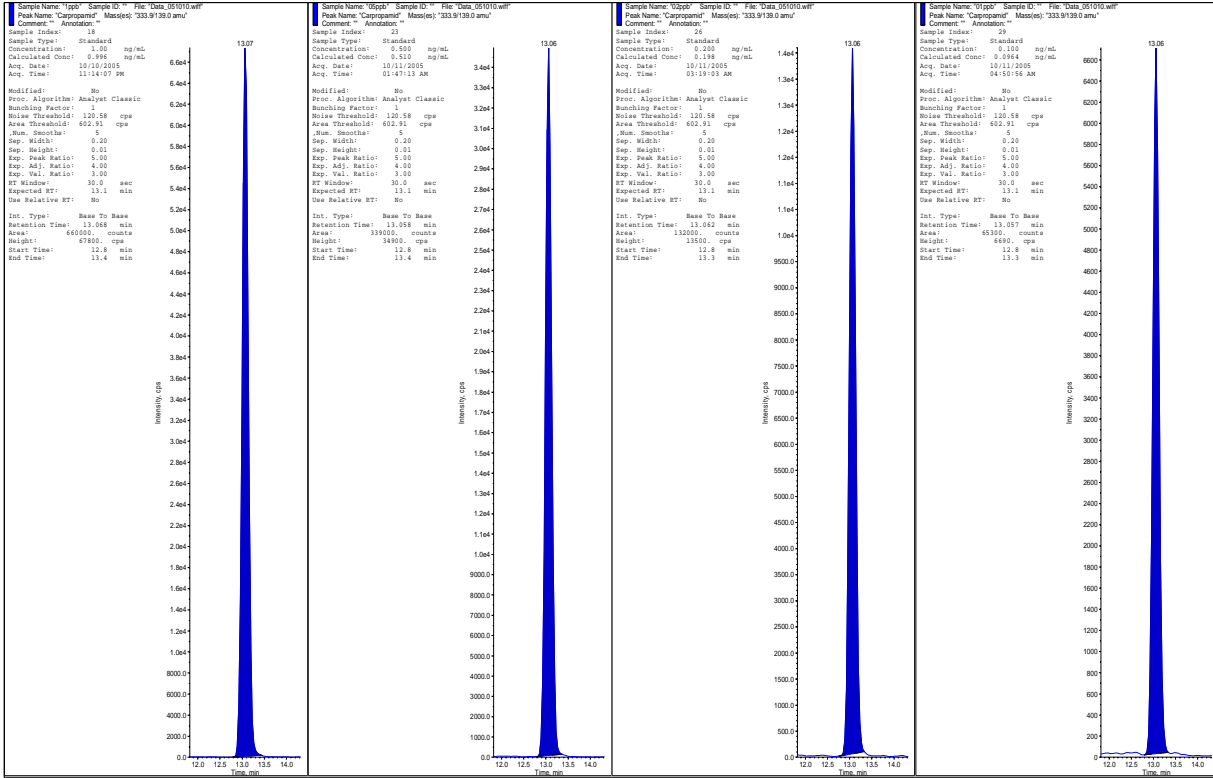
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Retention Time (m)
1	1ppb Standard	Asulam		303000	30800		6.958
2	05ppb Standard	Asulam		155000	15800		6.961
3	02ppb Standard	Asulam		65300	6710		6.95
4	01ppb Standard	Asulam		29300	3040		6.98



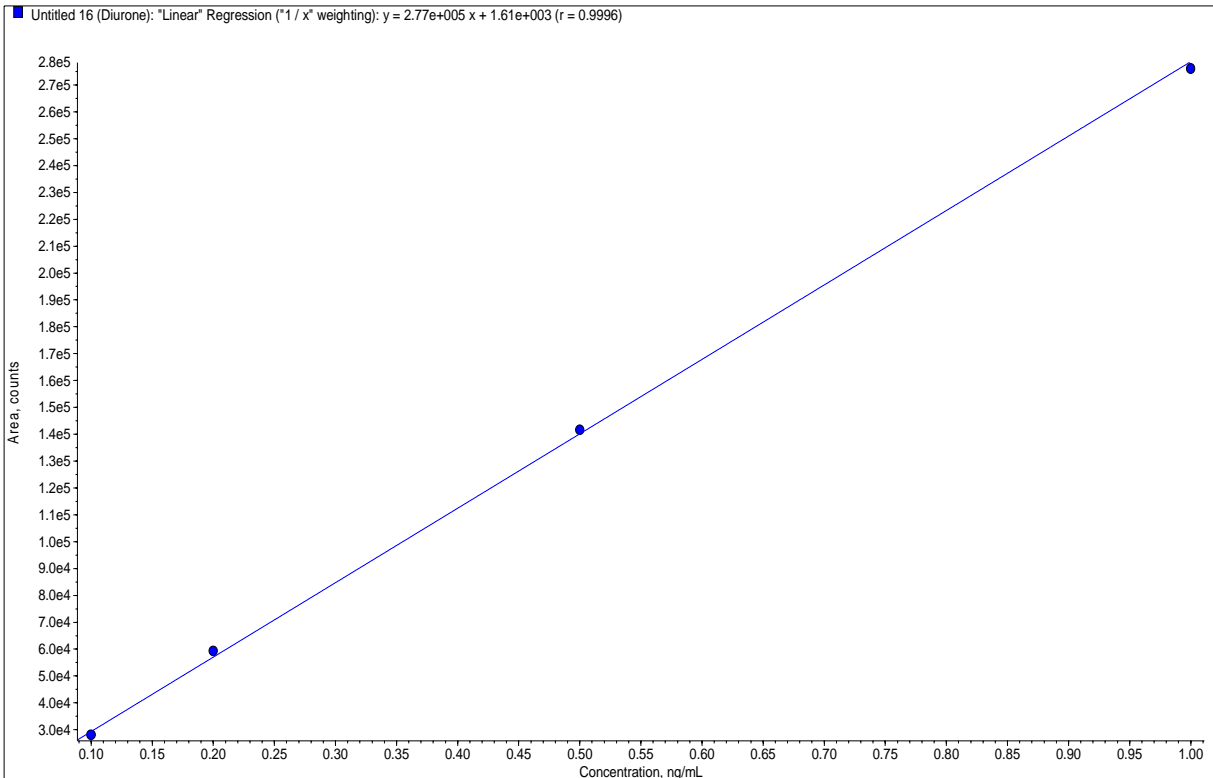
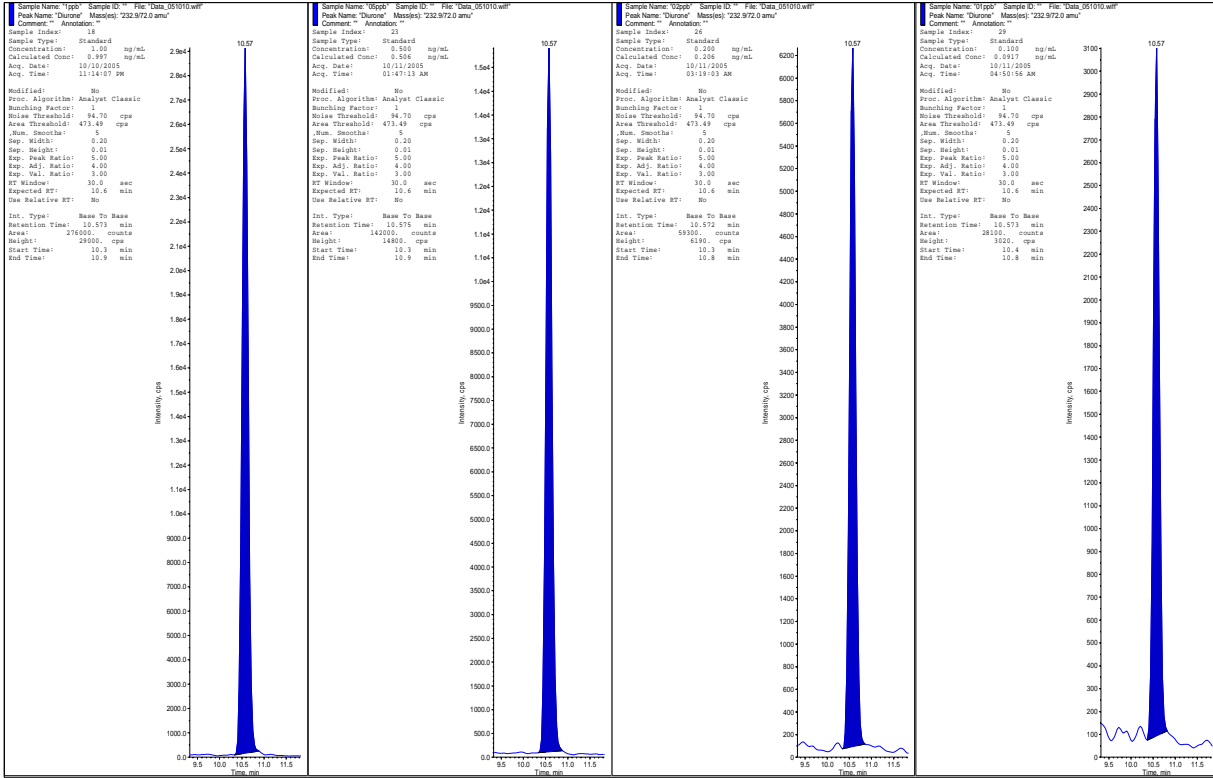
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (m)
1	1ppb Standard	Carbaryl		739000	77200		10.319
2	05ppb Standard	Carbaryl		379000	39700		10.322
3	02ppb Standard	Carbaryl		157000	16600		10.321
4	01ppb Standard	Carbaryl		81100	8690		10.317



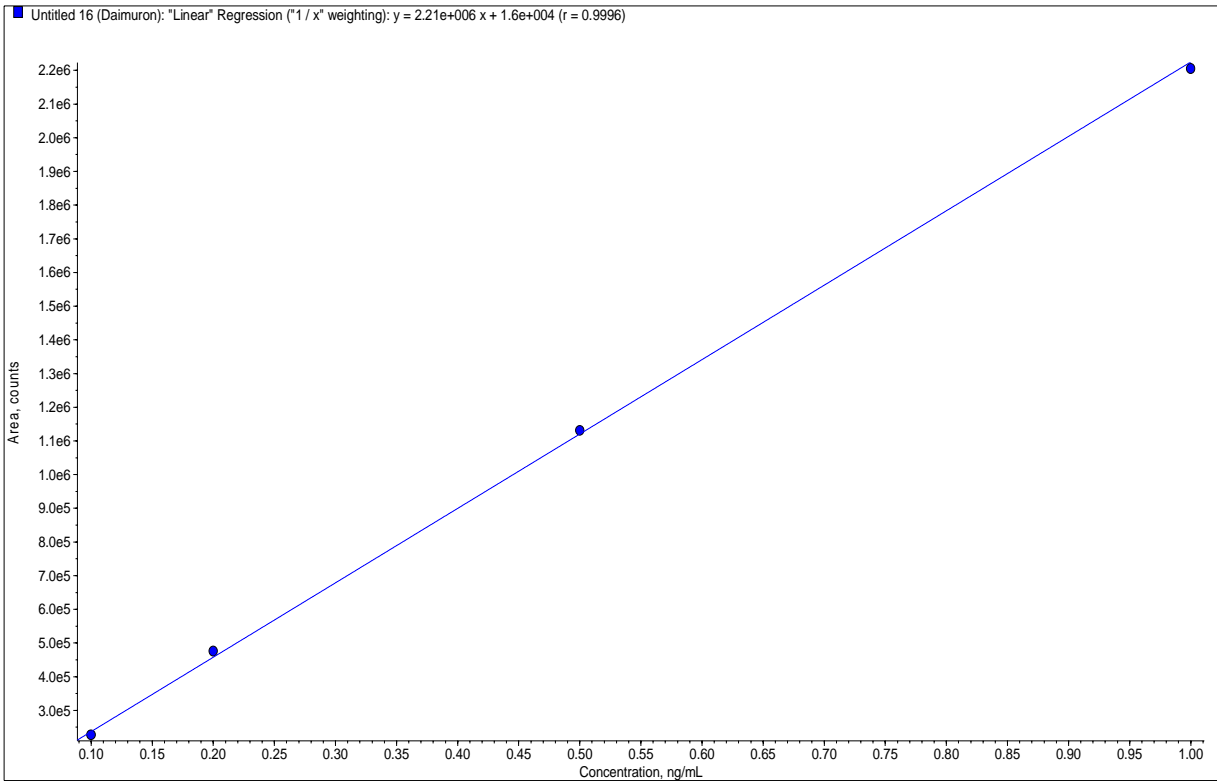
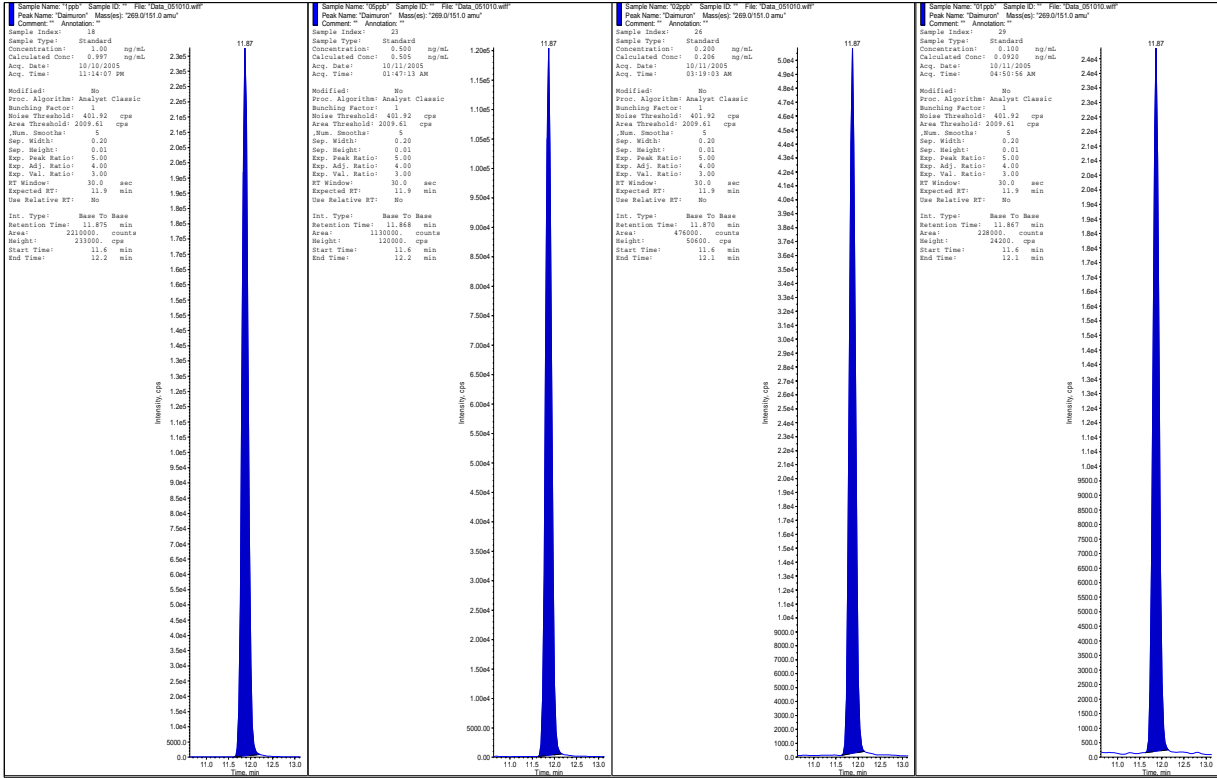
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Retention Time (m)
1	1ppb Standard	Carpromamid		660000	67800		13.068
2	05ppb Standard	Carpromamid		339000	34900		13.058
3	02ppb Standard	Carpromamid		132000	13500		13.062
4	01ppb Standard	Carpromamid		65300	6690		13.057



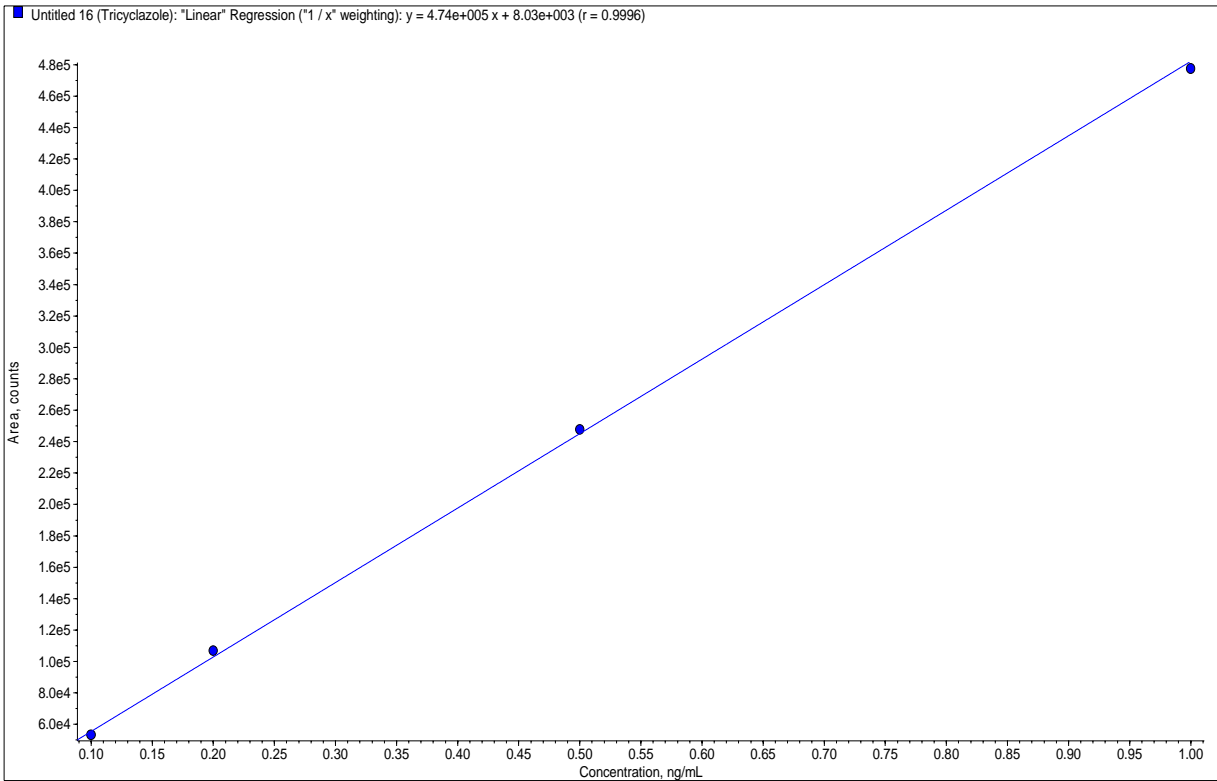
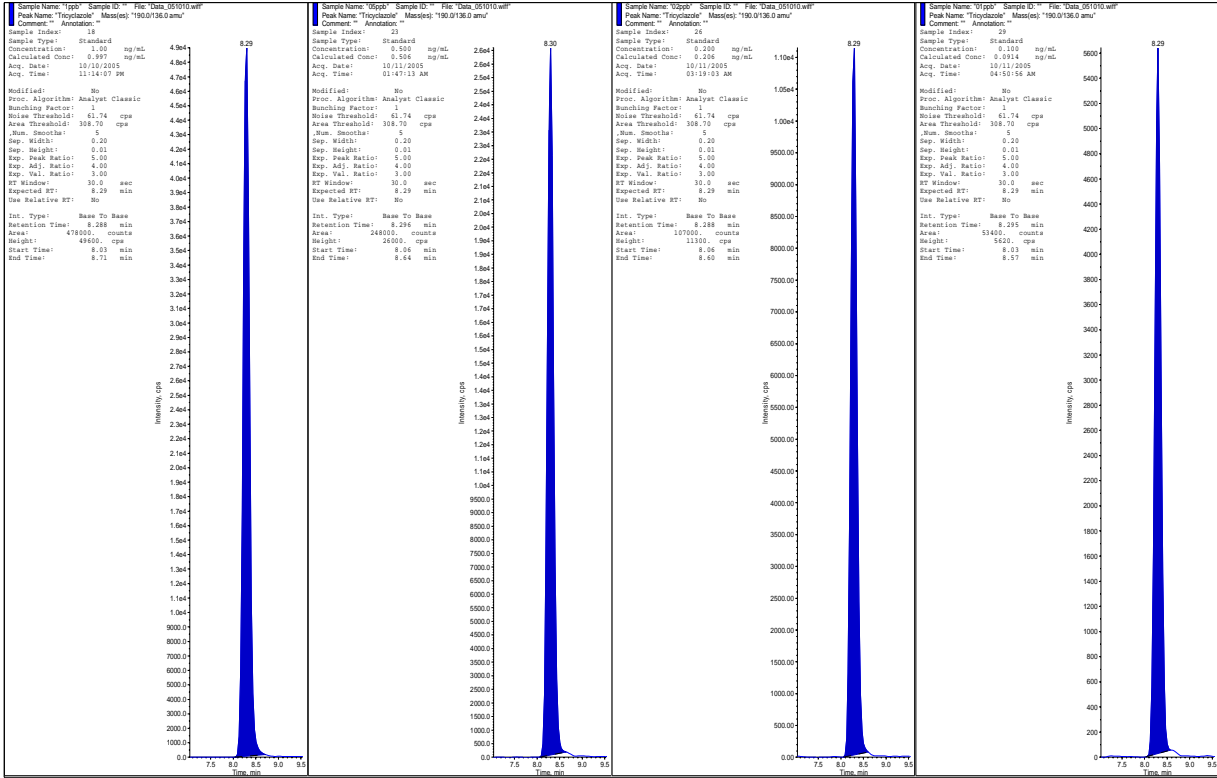
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Retention Time (m)
1	1ppb Standard	Diurone		276000	29000		10.573
2	05ppb Standard	Diurone		142000	14800		10.575
3	02ppb Standard	Diurone		59300	6190		10.572
4	01ppb Standard	Diurone		28100	3020		10.573



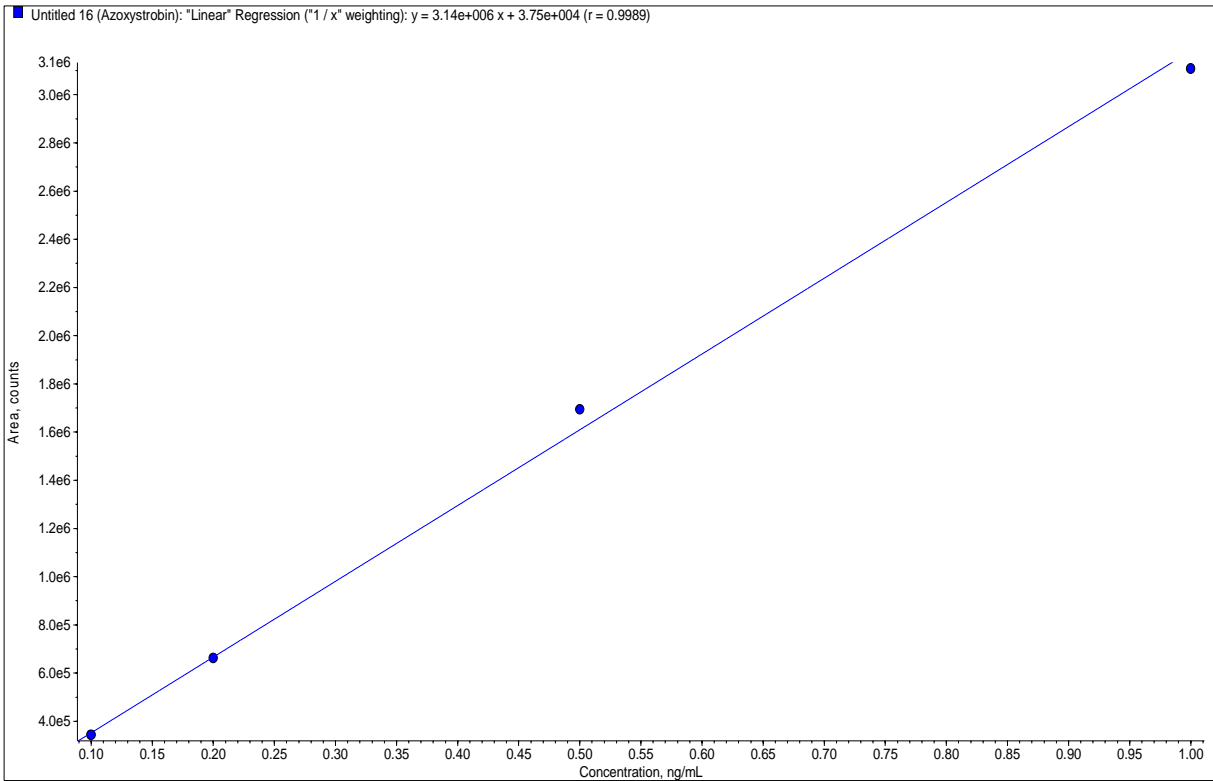
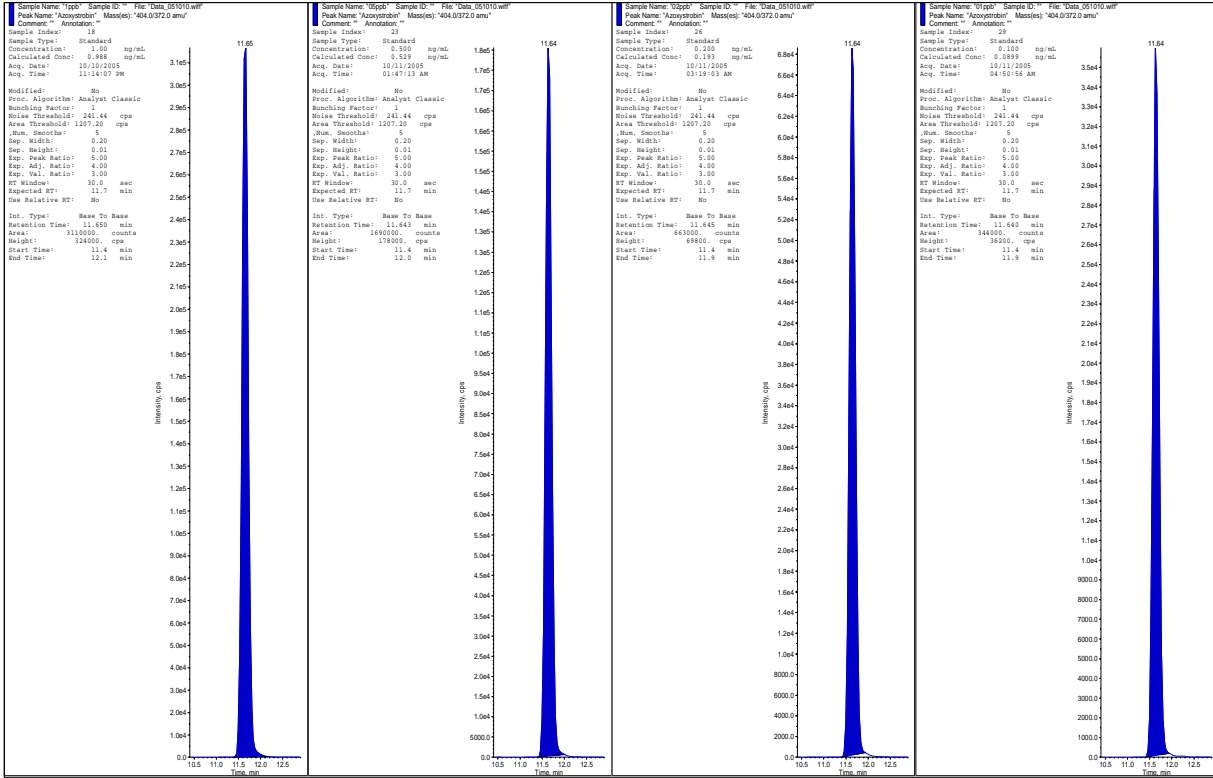
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Retention Time (m)
1	1ppb Standard	Daimuron		2210000	233000		11.875
2	05ppb Standard	Daimuron		1130000	120000		11.868
3	02ppb Standard	Daimuron		476000	50600		11.87
4	01ppb Standard	Daimuron		228000	24200		11.867



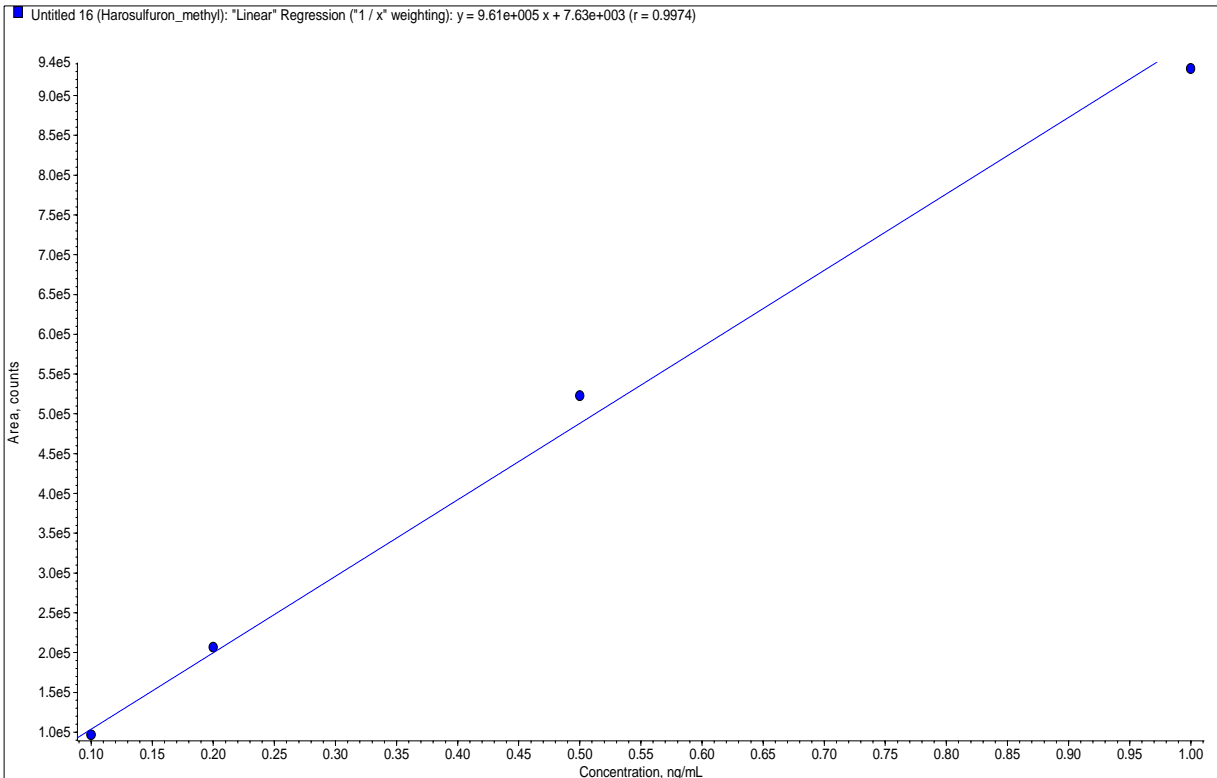
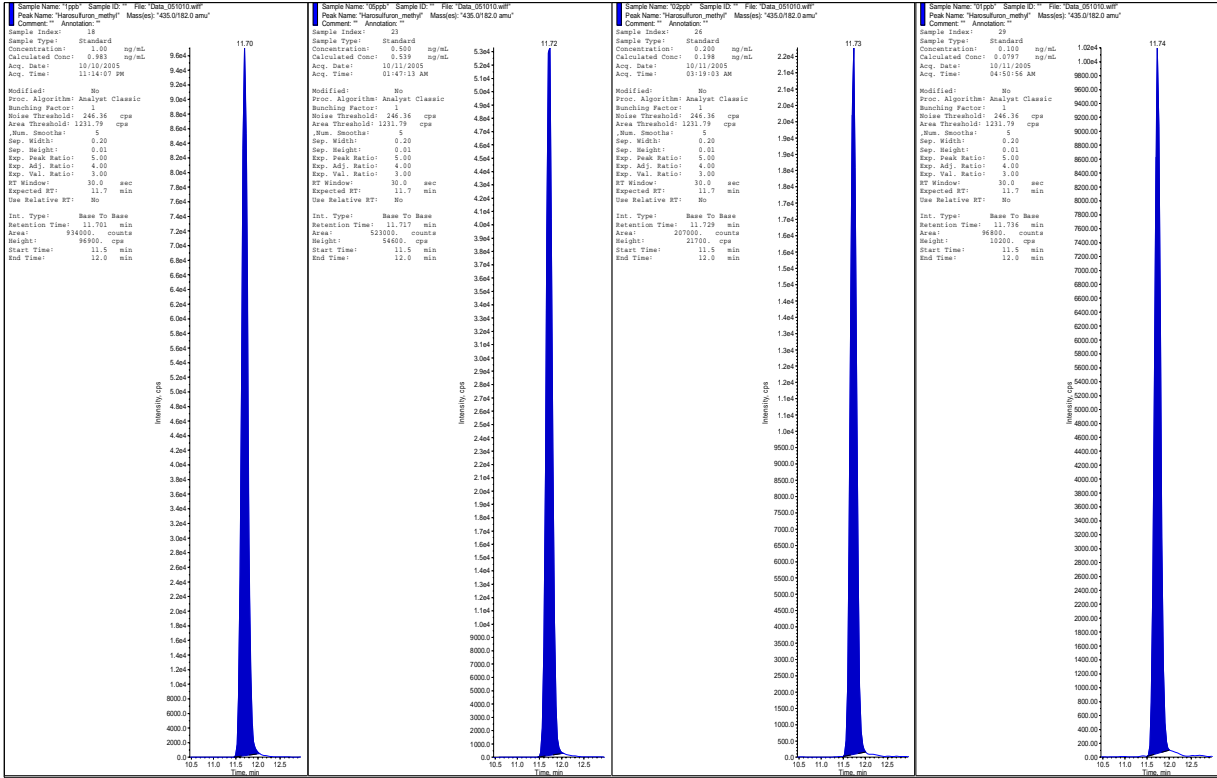
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (m)
1	1ppb Standard	Tricyclazole		478000	49600		8.288
2	05ppb Standard	Tricyclazole		248000	26000		8.296
3	02ppb Standard	Tricyclazole		107000	11300		8.288
4	01ppb Standard	Tricyclazole		53400	5620		8.295



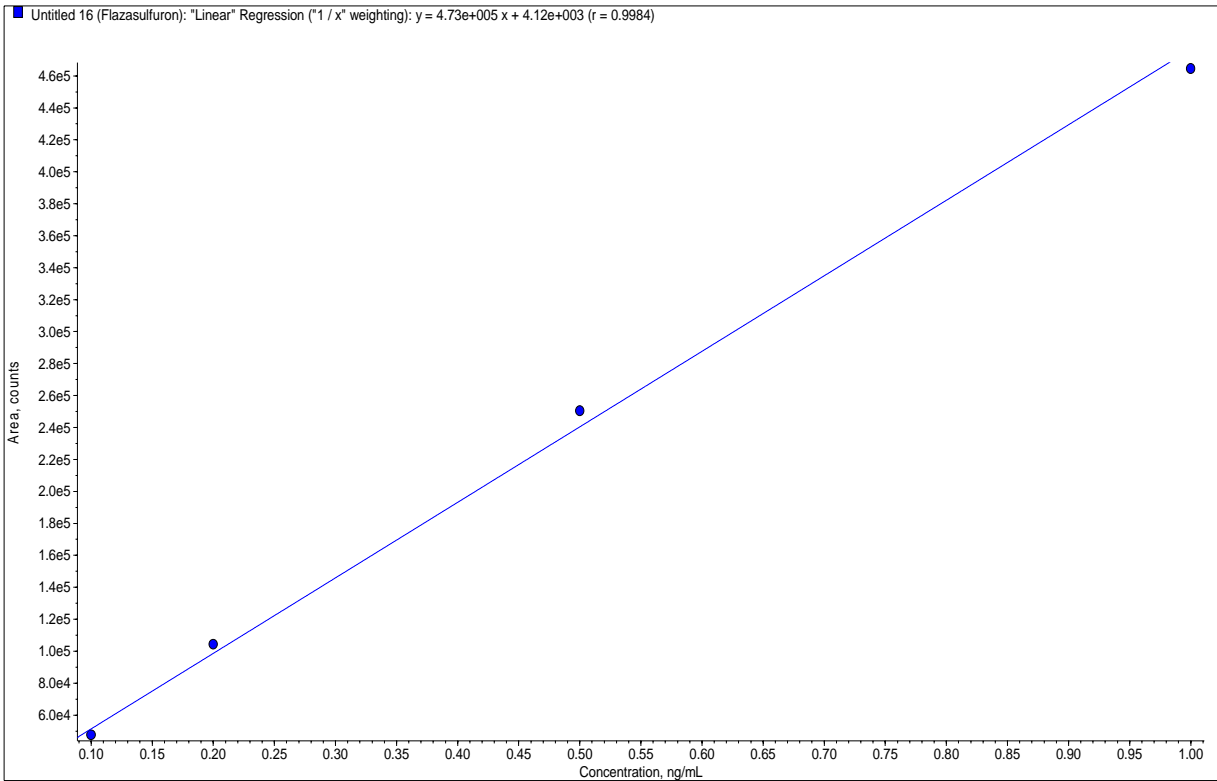
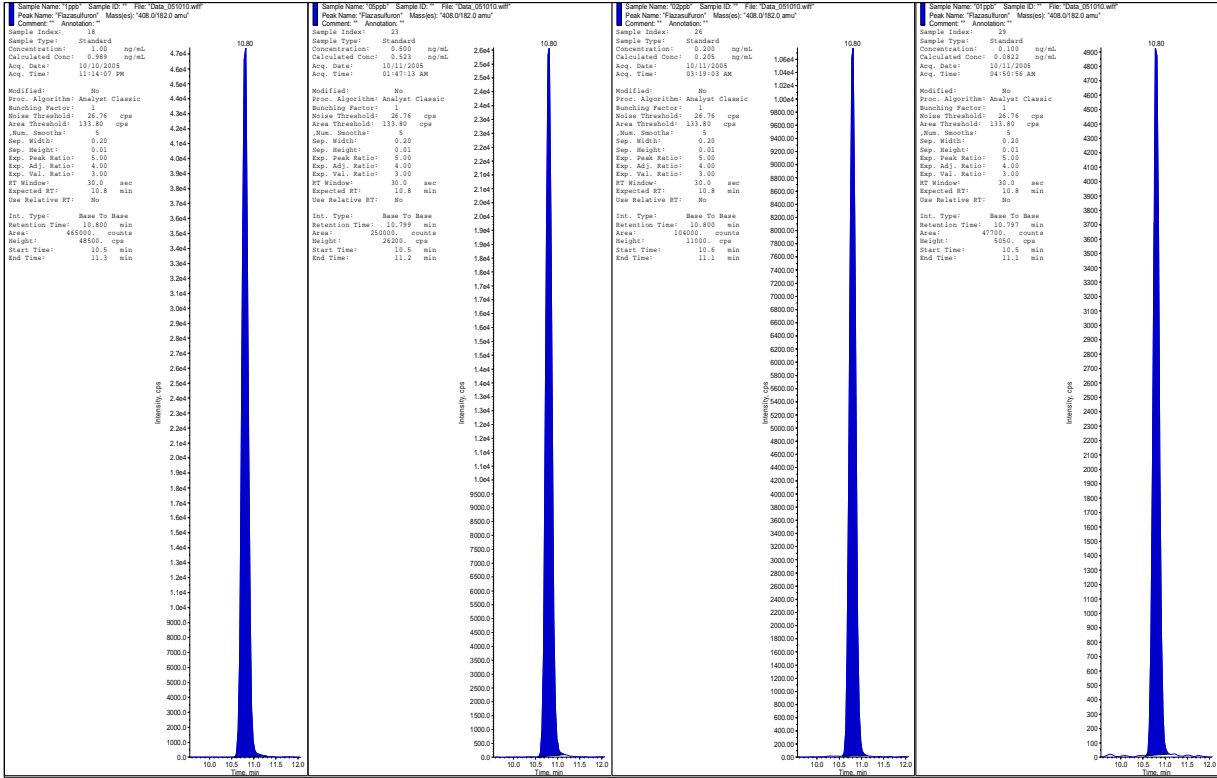
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1	1ppb Standard	Azoxystrobin		3110000	324000		11.65
2	05ppb Standard	Azoxystrobin		1690000	178000		11.643
3	02ppb Standard	Azoxystrobin		663000	69800		11.645
4	01ppb Standard	Azoxystrobin		344000	36200		11.64



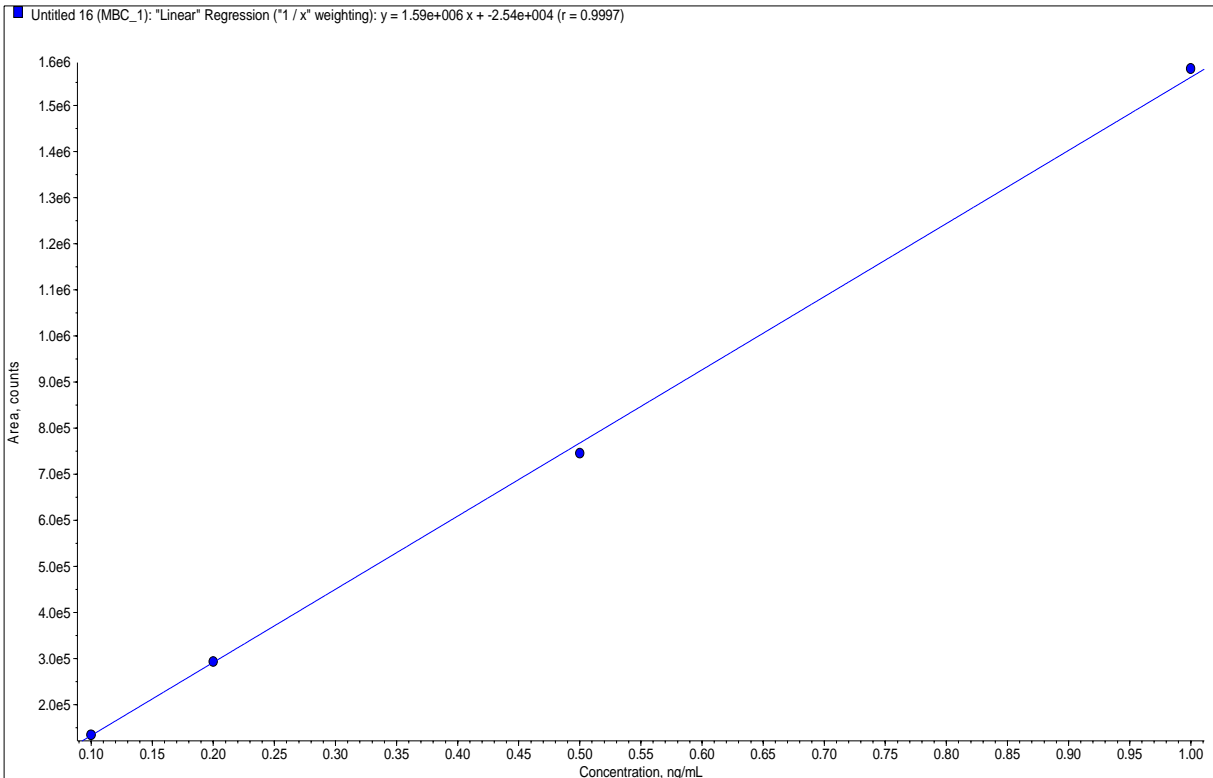
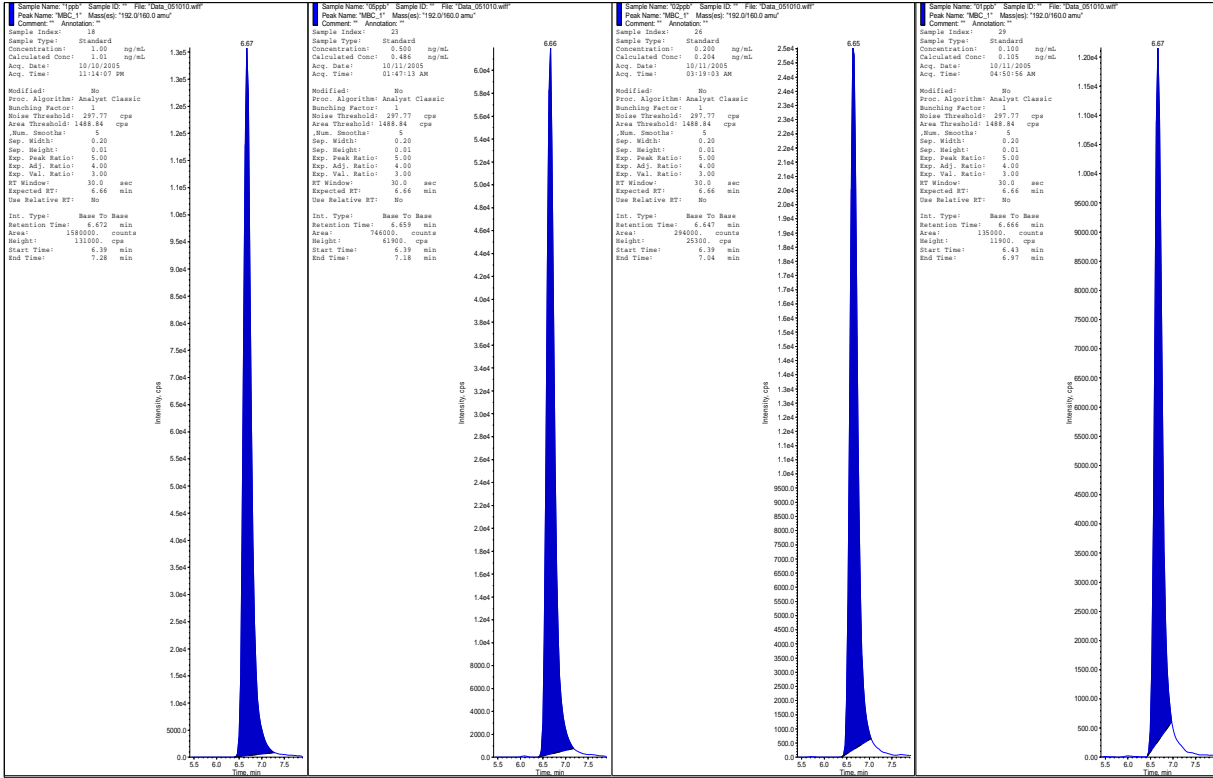
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Retention Time (m)
1	1ppb Standard	Harosulfuron_methyl	934000	96900	11.701	
2	05ppb Standard	Harosulfuron_methyl	523000	54600	11.717	
3	02ppb Standard	Harosulfuron_methyl	207000	21700	11.729	
4	01ppb Standard	Harosulfuron_methyl	96800	10200	11.736	



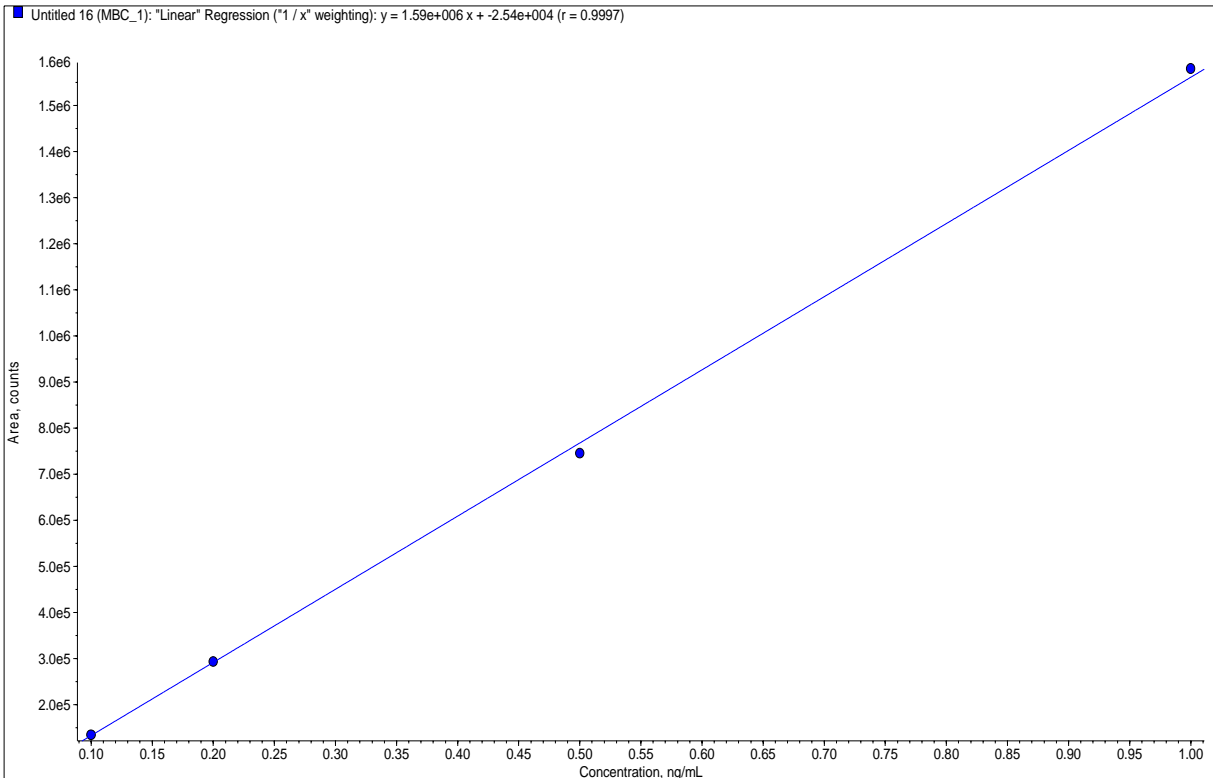
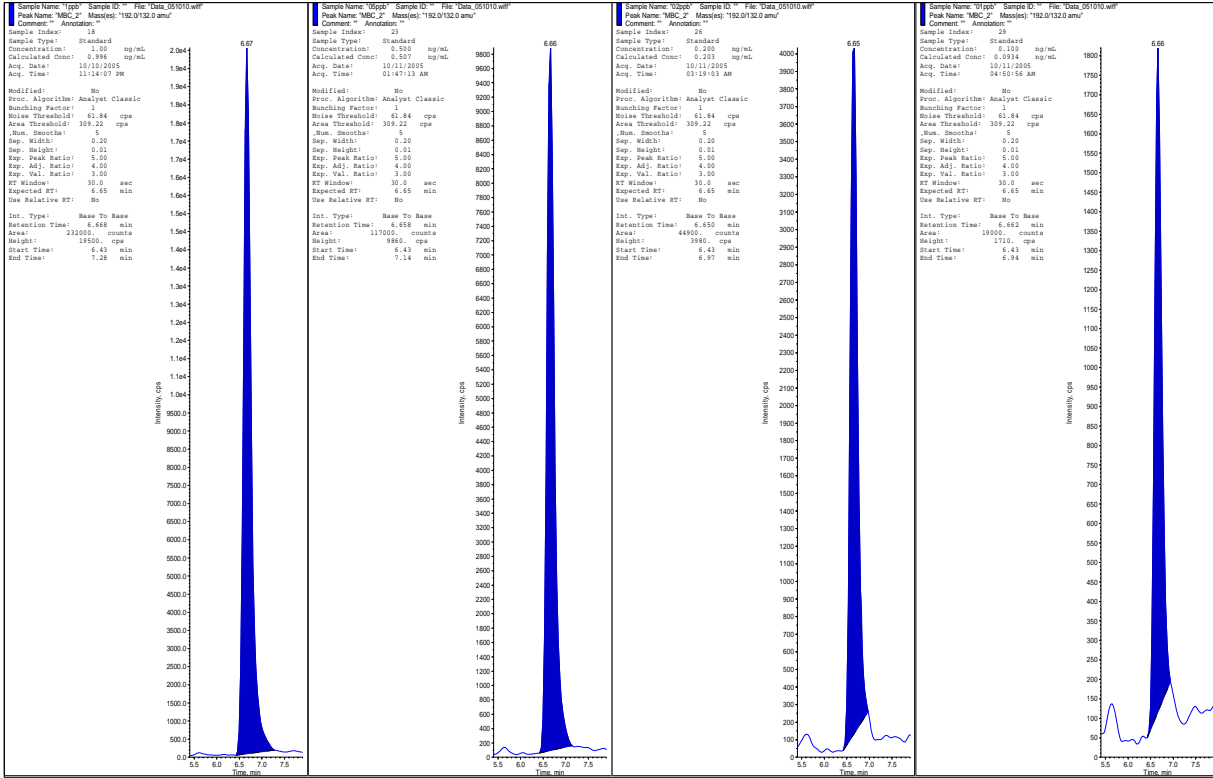
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (m)
1	1ppb Standard	Flazasulfuron		465000	48500		10.8
2	05ppb Standard	Flazasulfuron		250000	26200		10.799
3	02ppb Standard	Flazasulfuron		104000	11000		10.8
4	01ppb Standard	Flazasulfuron		47700	5050		10.797



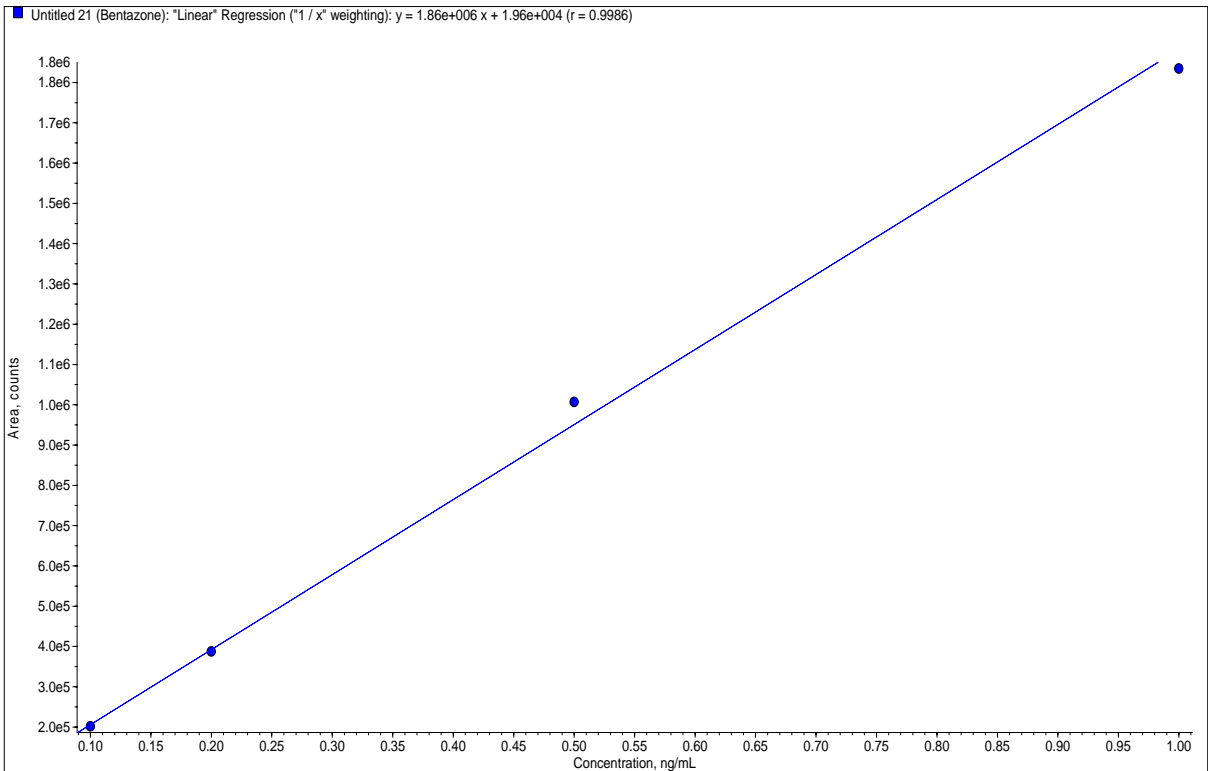
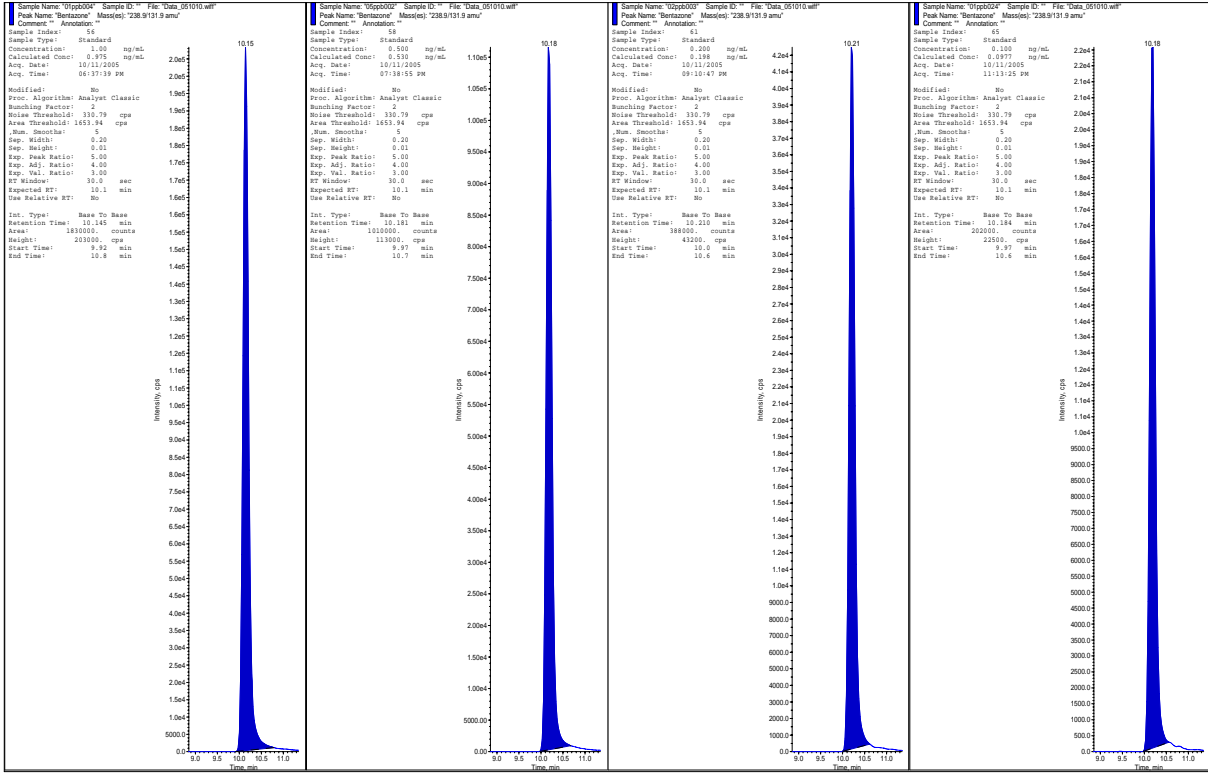
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1	1ppb Standard	MBC_1		158000	131000		6.672
2	05ppb Standard	MBC_1		746000	61900		6.659
3	02ppb Standard	MBC_1		294000	25300		6.647
4	01ppb Standard	MBC_1		135000	11900		6.666



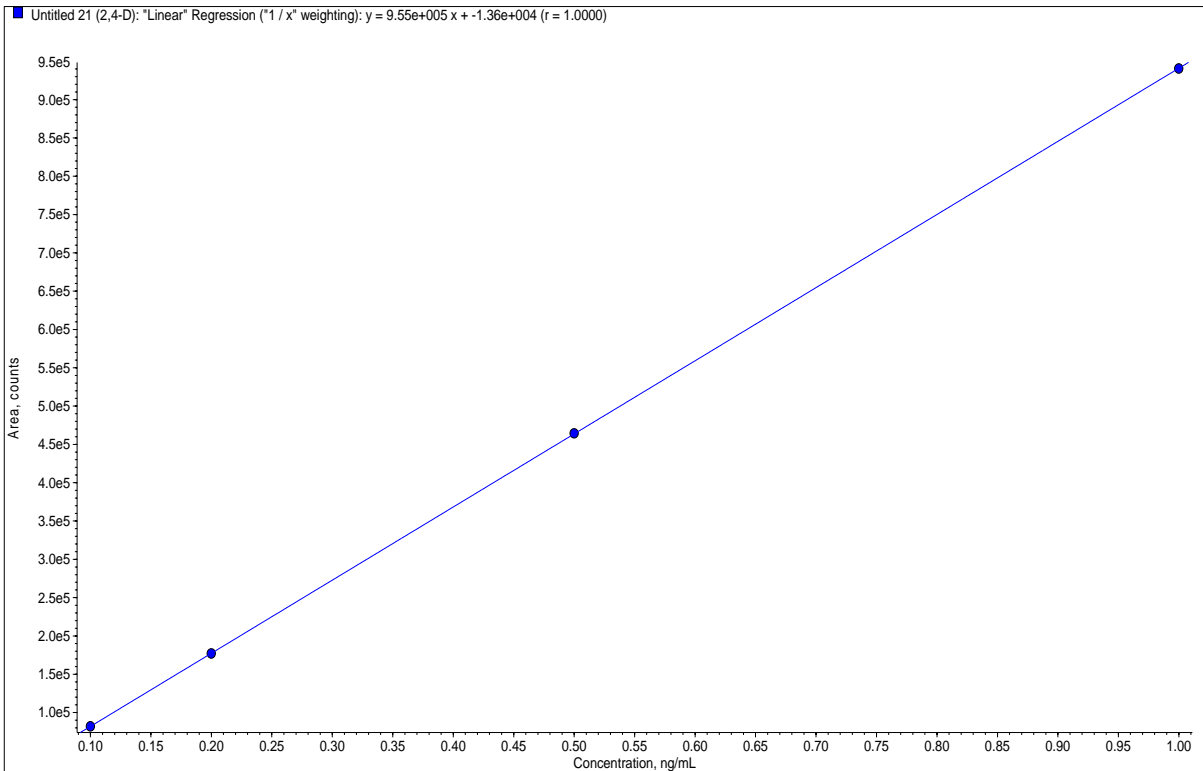
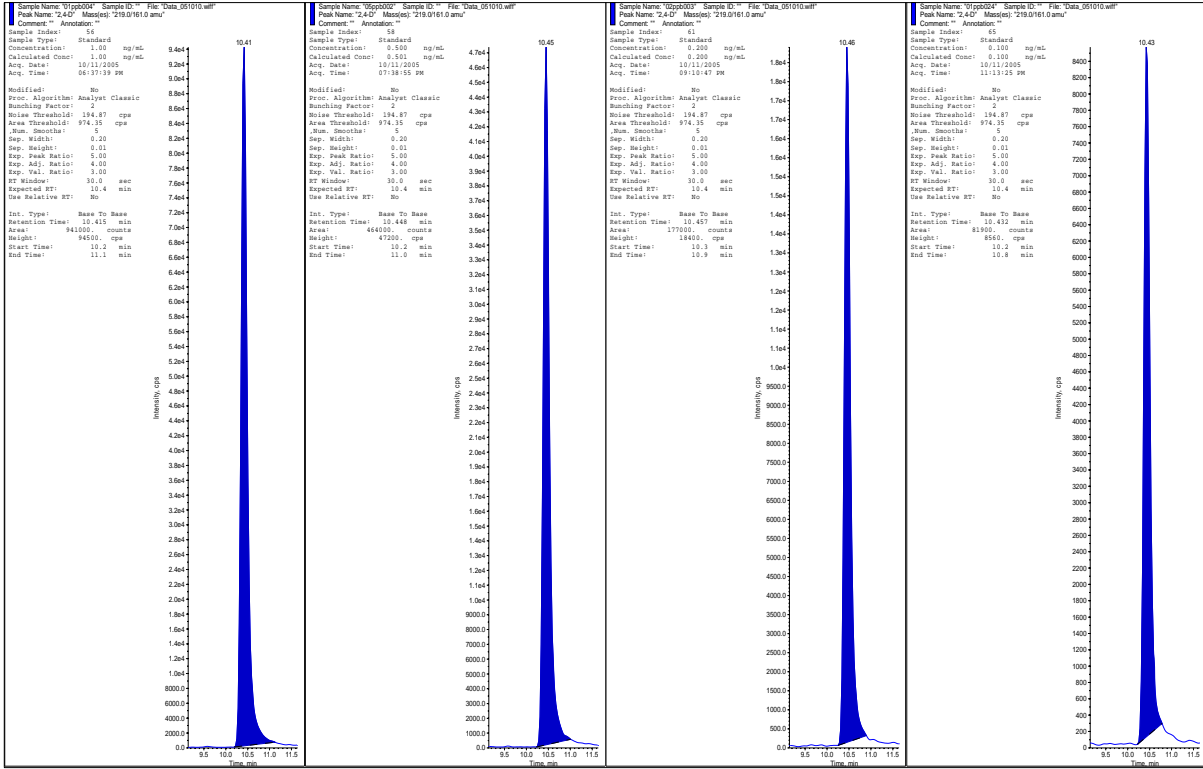
Sample Name	Sample Ty	Analyte	Peak Name	Analyte Pe	Analyte Pe	Analyte Pe	Retention Time (m)
1	1ppb Standard	MBC_2		232000	19500		6.668
2	05ppb Standard	MBC_2		117000	9860		6.658
3	02ppb Standard	MBC_2		44900	3980		6.65
4	01ppb Standard	MBC_2		19000	1710		6.662



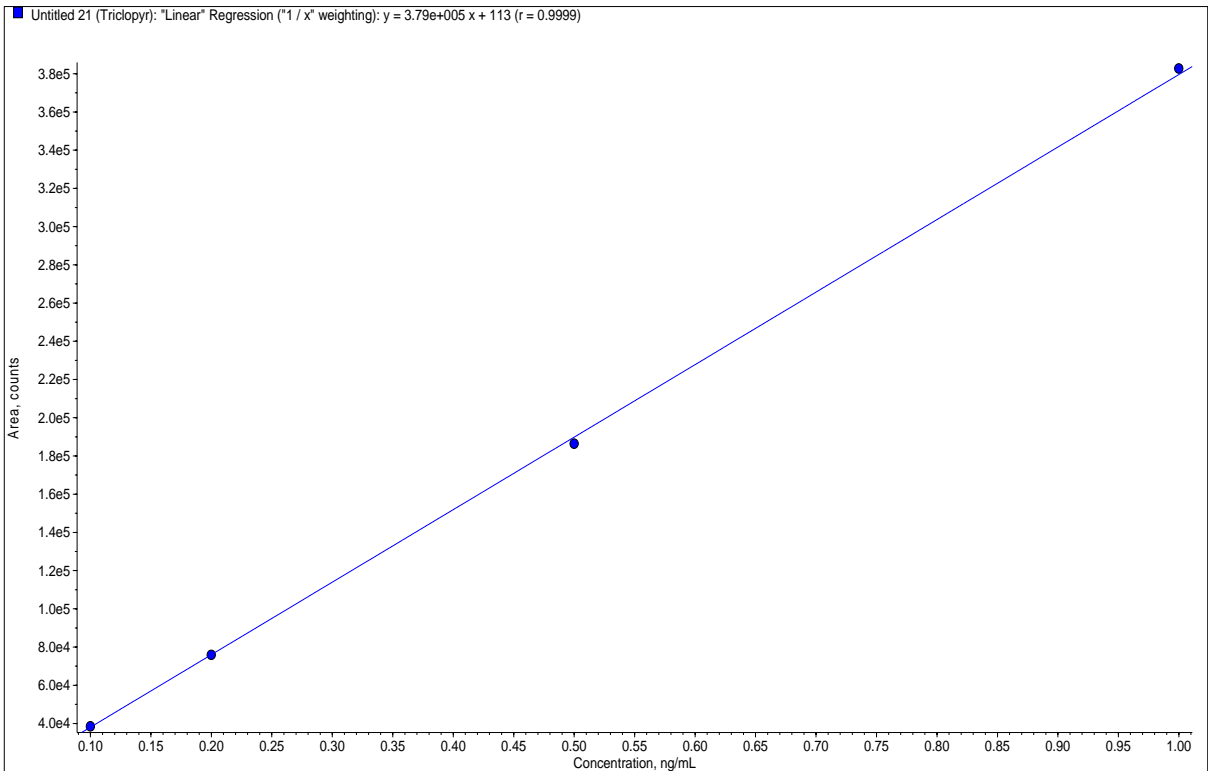
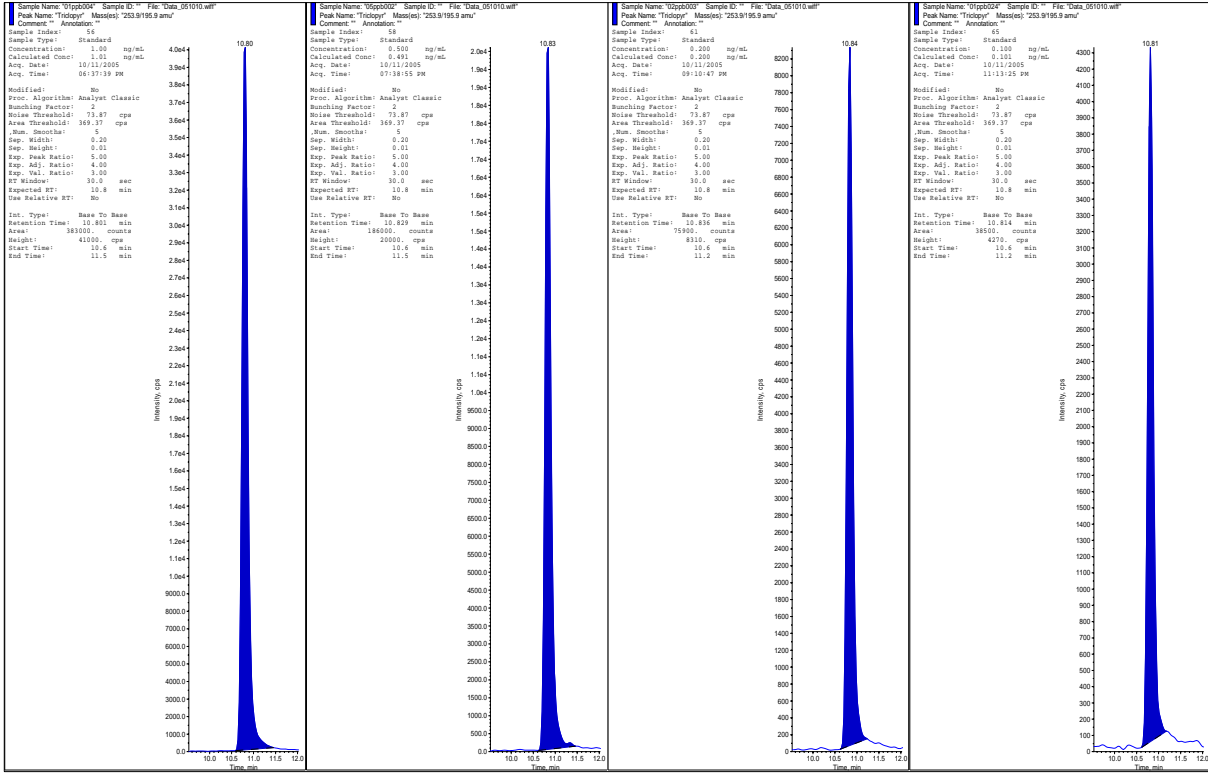
	Sample Name	Sample Ty	Analyte Peak Nam	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (t
1	01ppb004	Standard	Bentazone	1830000	203000		10.145
2	05ppb002	Standard	Bentazone	1010000	113000		10.181
3	02ppb003	Standard	Bentazone	388000	43200		10.210
4	01ppb024	Standard	Bentazone	202000	22500		10.184



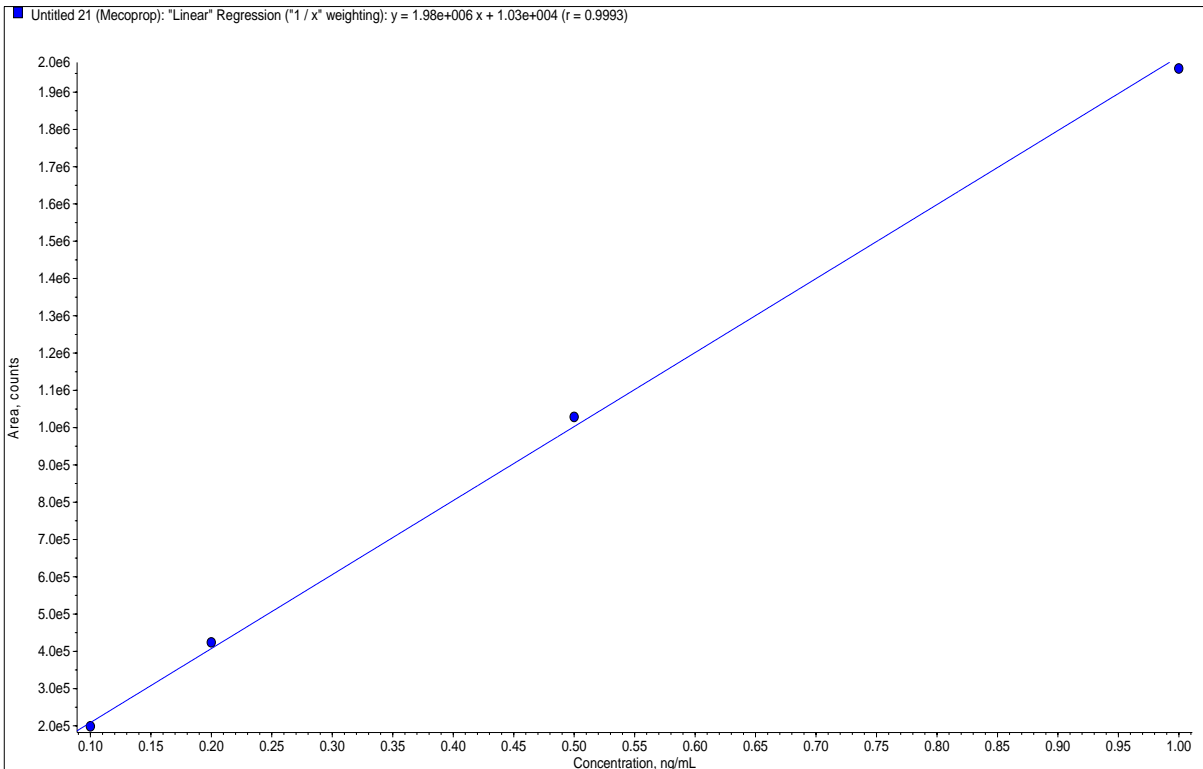
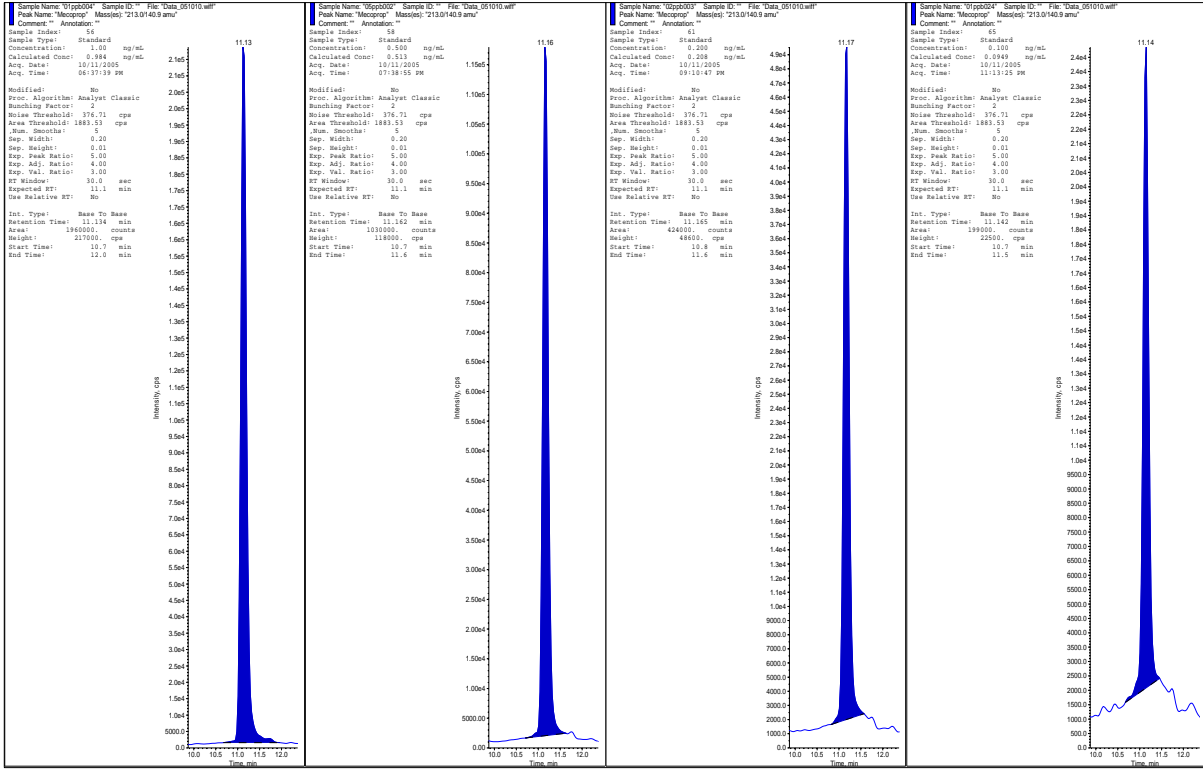
	Sample Name	Sample Ty	Analyte Peak Nam	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (t
1	01ppb004	Standard	2,4-D	941000	94500		10.415
2	05ppb002	Standard	2,4-D	464000	47200		10.448
3	02ppb003	Standard	2,4-D	177000	18400		10.457
4	01ppb024	Standard	2,4-D	81900	8560		10.432



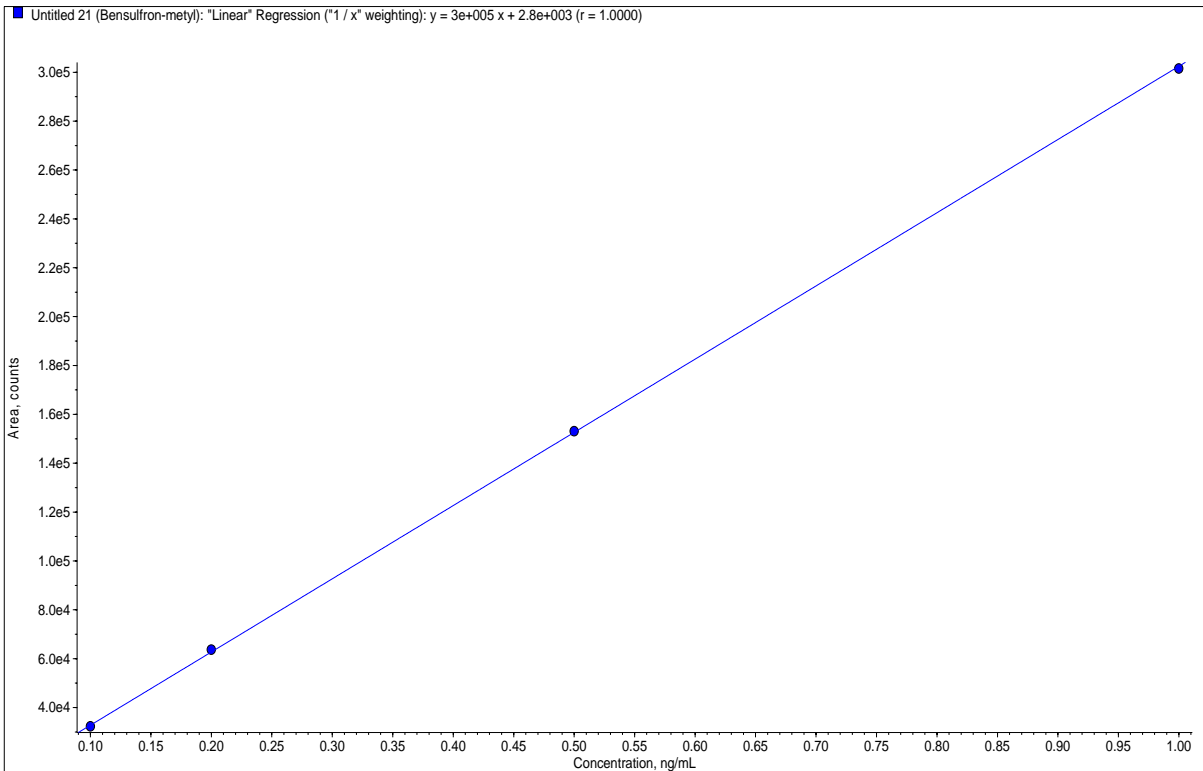
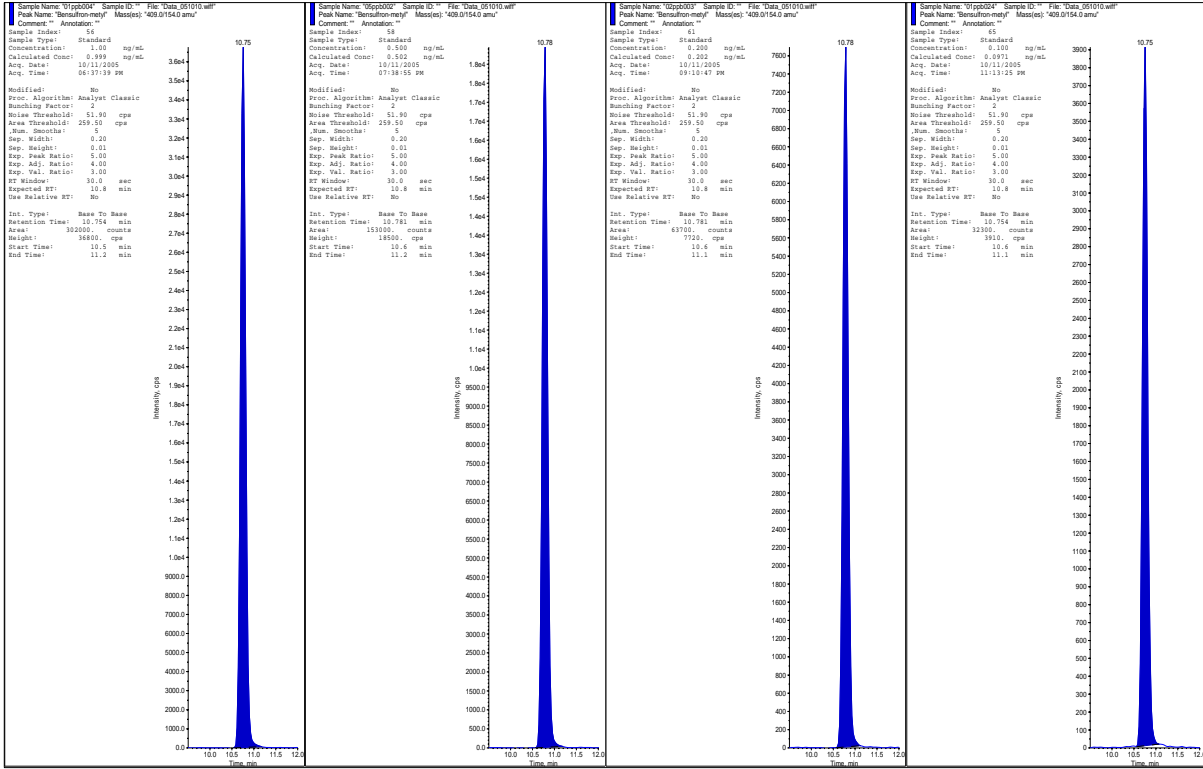
Sample Name	Sample Ty	Analyte	Peak Nam	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (t
1	01ppb004 Standard	Triclopyr		383000	41000		10.801
2	05ppb002 Standard	Triclopyr		186000	20000		10.829
3	02ppb003 Standard	Triclopyr		75900	8310		10.836
4	01ppb024 Standard	Triclopyr		38500	4270		10.814



	Sample Name	Sample Ty	Analyte Peak Nam	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (t
1	01ppb004	Standard	Mecoprop	196000	217000		11.134
2	05ppb002	Standard	Mecoprop	103000	118000		11.162
3	02ppb003	Standard	Mecoprop	424000	48600		11.165
4	01ppb024	Standard	Mecoprop	199000	22500		11.142



	Sample Name	Sample Ty	Analyte Peak Nam	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (t
1	01ppb004	Standard	Bensulfon-metyl	302000	36800		10.754
2	05ppb002	Standard	Bensulfon-metyl	153000	18500		10.781
3	02ppb003	Standard	Bensulfon-metyl	63700	7720		10.781
4	01ppb024	Standard	Bensulfon-metyl	32300	3910		10.754



	Sample Name	Sample Ty	Analyte Peak Nam	Analyte Pe	Analyte Pe	Analyte Pe	Analyte Retention Time (t
1	01ppb004	Standard	Bensulide	277000	35800		12.997
2	05ppb002	Standard	Bensulide	136000	17400		13.007
3	02ppb003	Standard	Bensulide	62300	8110		13.000
4	01ppb024	Standard	Bensulide	31100	3860		12.976

