

## Appendix J:

### *Laboratory Results*

#### **Phase 1**

EHL # 1081004 Part 1/3 October 30, 2008

EHL # 1081004 Part 2/3 November 6, 2008

EHL # 1081004 Part 3/3 November 7, 2008

EHL # 10812011 December 9, 2008

#### **Phase 2**

EHL # 10811016 March 24, 2009

EHL # 10811017 December 15, 2008

EHL # 10904016 April 19, 2009



10/30/08

**To** Richard Fenske, Ph.D  
 DEOHS, Box 357234

**From** Jianbo Yu, Ph.D, 5-2976  
 Jacqui Ahmad

**Subject** EHL #10810004 Part 1/3

**Date of Receipt** 10/07/08      **Date of Analysis** 10/20-30/2008      **Analytical Method** EHL Method:Determination Of Chlorpyrifos And Its Oxon In XAD Tube Samples By LC-MS-MS.

**Results**

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
1009	<1	<1	<1	<1
1013	<1	<1	<1	<1
1017	<1	<1	<1	<1
1021	<1	<1	<1	<1
1022	<1	<1	<1	<1
1024	<1	<1	<1	<1
1025	<1	<1	<1	<1
1029	<1	<1	<1	<1
1511	<1	<1	<1	<1
1516	<1	<1	<1	<1
1520	<1	<1	<1	<1
1525	<1	<1	<1	<1
1529	<1	<1	<1	<1
1534	<1	<1	<1	<1
1538	<1	<1	<1	<1
1542	<1	<1	<1	<1
2001	<1	11	<1	<1
2005	<1	11	<1	<1
2010	<1	12	<1	<1
2019	<1	11	<1	<1
2023	<1	12	<1	<1
2027	<1	11	<1	<1
2028	5	24	<1	<1
2033	<1	13	<1	<1
2037	<1	13	<1	<1
2501	<1	13	<1	<1
2505	<1	13	<1	<1
2509	<1	13	<1	1
2513	<1	10	<1	<1
2517	<1	11	<1	<1
2521	<1	11	<1	<1
2522	<1	11	<1	<1
2526	<1	13	<1	<1
3001	<1	<1	<1	<1
3005	<1	7	<1	<1
3009	1	6	<1	<1

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
3013	1	8	<1	<1
3021	3	7	<1	<1
3025	5	36	<1	<1
3029	1	6	<1	<1
3037	1	20	<1	<1
3039	4	44	<1	<1
3041	8	7	<1	<1
3046	1	1	<1	<1
3051	7	12	<1	<1
3057	1	8	<1	<1
3063	1	3	<1	<1
3069	1	12	<1	<1
3075	9	70	<1	<1
3077	13	78	<1	<1
3081	2	4	<1	<1
3087	4	47	<1	<1
3094	1	5	<1	<1
3099	1	11	<1	<1
3101	5	4	<1	<1
3107	1	11	<1	<1
3109	10	46	<1	<1
3113	3	8	<1	<1
3117	1	<1	<1	<1
3121	14	44	<1	<1
3123	24	44	<1	1‡
3129	1	12	<1	<1
3135	1	8	<1	<1
3137	19	19	1	<1
3141	7	2	<1	<1
3143	3	5	<1	<1
3149	13	61	<1	1‡
3155	9	59	<1	1‡
3157	10	31	<1	<1
3159	9	86	<1	1‡
3161	17	31	<1	<1
3163	17	198	<1	<1
3165	10	46	<1	<1
3167	2	<1	<1	<1
3181	15	19	<1	<1
3183	11	14	<1	<1
3187	9	37	<1	<1
3189	2	9	<1	<1
3195	1	4	1	10
3201	5	3	<1	<1
3203	7	7	<1	<1
3209	2	16	<1	<1
3221	7	3	<1	<1
3225	8	7	<1	<1
3227	16	148	<1	<1
3231	10	14	<1	<1
3233	32	254	1	2

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
3235	7	4	<1	<1
3237	15	233	<1	6
3239	12	151	<1	2
3251	24	48	<1	<1
3253	49	435	<1	6
3255	13	24	<1	<1
3257	59	662	<1	4
3259	62	451	1	7
3271	7	5	<1	<1
3273	27	106	<1	<1
3275	5	8	<1	<1
3277	3	22	<1	<1
3279	2	17	<1	<1
3291	5	9	<1	<1
3299	9	9	<1	<1
3301	28	123	<1	1
3309	8	12	<1	<1
3601	9	16	<1	<1
3603	12	35	<1	<1
3605	5	7	<1	<1
3607	3	5	<1	<1
3609	6	16	<1	1
3621	14	44	<1	<1
3623	307	1400	3	19
3625	11	24	<1	<1
3627	82	317	1	3
3629	5	16	<1	<1
3641	3	5	<1	<1
3643	17	49	<1	1
3645	6	3	<1	<1
3647	1	<1	<1	<1
3649	1	2	<1	<1
3661	16	21	<1	<1
3663	31	146	<1	2
3665	58	88	<1	<1
3667	16	1	<1	<1
3669	17	6	<1	<1
3681	2	1	<1	<1
3683	4	17	<1	<1
3685	9	33	<1	<1
3687	4	6	<1	<1
3689	2	8	<1	<1
3701	2	3	<1	<1
3703	11	40	<1	<1
3705	77	241	2	3
3707	11	10	<1	<1
3709	12	14	<1	<1
3721	14	36	<1	<1
3723	7	22	<1	<1
3725	2	5	<1	<1

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
3727	1	1	<1	<1
3729	<1	<1	<1	<1
3741	7	17	<1	<1
3743	6	14	<1	<1
3745	2	3	<1	<1
3747	1	2	<1	<1
3749	1	2	<1	<1
3761	17	21	<1	<1
3763	11	52	<1	1
3765	15	12	<1	<1
3767	6	3	<1	<1
3769	4	7	<1	<1
3781	2	10	<1	<1
3783	8	48	<1	<1
3785	31	282	<1	1
3787	6	19	<1	<1
3789	7	25	<1	<1
3801	2	5	<1	<1
3803	7	26	<1	<1
3805	7	8	<1	<1
3807	6	5	<1	<1
3809	7	7	<1	<1
3821	3	3	<1	<1

‡ secondary qualifier ion ratio is outside of the acceptable range, identification should be considered tentative.

Analyst's notes:

- 1.Results are not corrected for spike recovery efficiency
- 2.Sample 3057: sorbent was partially lost because tube broke during processing.
- 3.Samples 3195 & 6104: front section contained less sorbent than normal.
- 4.Samples 3183 & 3187: sorbent appeared damp.
- 5.Samples 3889: top of tube was observed broken off at receipt; no sorbent loss was observed.

### Quality Assurance

		chlorpyrifos oxon	chlorpyrifos
R2, Calibration	(for all cal curves used)	>0.999	>0.999
#LOD, ng/Sample		1	1
*LOQ, ng/Sample		2	2
SR Efficiency	@5ng/sample	100.9%	100.1%
STDV		4.3%	3.5%
SR Efficiency	@50ng/sample	96.7%	99.6%
STDV		4.5%	1.8%

#: LODs are defined as 3 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

\*: LOQs are defined as 10 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

Reviewed By: Russell Dills 10/30/08 Russell Dills 10/30/08  
 QA Coordinator (or designate) Date Russell Dills, Ph.D. EHL Director Date

11/6/08

**To** Richard Fenske, Ph.D  
 DEOHS, Box 357234

**From** Jianbo Yu, Ph.D, 5-2976  
 Jacqui Ahmad

**Subject** EHL #10810004 Part 2/3

**Date of Receipt** 10/07/08      **Date of Analysis** 10/20-31/2008      **Analytical Method** EHL Method:Determination Of Chlorpyrifos And Its Oxon In XAD Tube Samples By LC-MS-MS.

**Results**

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
6086	59	941	<1	8
6088	98	1357	<1	10
6092	138	1366	<1	8
6094	217	1743	<1	13
6098	130	1942	1	20
6100	158	725	<1	8
6104	152	1026	5	55
6106	151	516	<1	4
6110	384	2246	2	44
6112	134	446	<1	4
6116	76	1069	<1	13
6118	141	1376	<1	16
6120	118	243	1	4
6122	250	1667	1	20
6124	249	1656	2	39
6126	199	2060	2	45
6128	279	1709	3	29
6130	182	780	1	9
6132	175	665	1	7
6134	148	465	1	7
6135	291	2136	2	35
6502	12	46	<1	1
6504	32	133	<1	1
6506	25	61	<1	1
6508	17	49	<1	<1
6510	14	66	<1	1
6514	20	240	<1	1†
6515	31	347	<1	2
6516	17	166	<1	2
6520	90	1299	<1	18
6521	37	526	<1	5
6522	26	149	<1	2
6526	124	2160	1	35
6527	43	615	<1	4
6528	28	378	<1	5
6532	49	1714	<1	12
6533	33	614	<1	5
6534	38	433	<1	4

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
6538	20	158	<1	7
6539	6	40	<1	<1
6540	18	135	<1	2
6544	2	9	<1	<1
6545	3	24	<1	<1
6546	15	135	<1	<1
6550	19	98	<1	<1
6551	22	174	<1	<1
6552	19	177	<1	1
6556	33	198	<1	3
6557	29	231	<1	2
6558	22	176	<1	1
6562	104	1980	1	90
6563	38	582	<1	5
6564	43	327	<1	2
6568	30	143	<1	1
6570	46	293	<1	1
6574	69	460	<1	3
6576	38	249	<1	<1
6580	70	694	<1	5
6582	56	395	<1	1
6586	93	897	1	9
6588	73	439	<1	2
6592	13	75	<1	2
6594	47	307	<1	2
6598	5	27	<1	<1
6600	60	273	<1	2
6604	32	105	<1	2
6606	45	295	<1	2
6610	26	100	<1	<1
6612	57	287	<1	<1
6616	83	720	<1	4
6618	76	354	<1	1
6620	131	448	<1	4
6622	177	581	1	6
6624	149	1184	1	14
6626	235	1065	1	13
6628	40	399	<1	7
6630	60	279	<1	3
6632	115	347	<1	3
6634	120	400	<1	3
6636	232	817	<1	8

‡ secondary qualifier ion ratio is outside of the acceptable range, identification should be considered tentative.

Analyst's notes:

1. Results are not corrected for spike recovery efficiency
2. Sample 6104: front section contained less sorbent than normal.



**Quality Assurance**

		chlorpyrifos oxon	chlorpyrifos
R2, Calibration	(for all cal curves used)	>0.999	>0.999
#LOD, ng/Sample		1	1
*LOQ, ng/Sample		2	2
SR Efficiency	@5ng/sample	106.4%	101.5%
STDV		1.7%	2.5%
SR Efficiency	@1000ng/sample	78.2%	102.0%
STDV		0.8%	2.0%

#: Method LODs are defined as 3 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

\*: Method LOQs are defined as 10 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

Reviewed By: Russell Dills 11/6/08      Russell Dills 11/6/08  
 QA Coordinator (or designate) Date      Russell Dills, Ph.D. EHL Director Date



11/7/08

**To** Richard Fenske, Ph.D  
 DEOHS, Box 357234

**From** Jianbo Yu, Ph.D, 5-2976  
 Jacqui Ahmad

**Subject** EHL #10810004 Part 3/3

**Date of Receipt** 10/07/08  
**Date of Analysis** 10/20-11/04/2008  
**Analytical Method** EHL Method:Determination Of Chlorpyrifos And Its Oxon In XAD Tube Samples By LC-MS-MS.

**Results**

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
3823	17	26	<1	<1
3825	35	155	<1	2
3827	2	4	<1	<1
3829	1	3	<1	<1
3841	1	2	<1	<1
3843	8	11	<1	<1
3845	17	12	<1	<1
3847	2	1	<1	<1
3849	3	1	<1	<1
3861	1	1	<1	<1
3863	2	3	<1	<1
3865	2	2	<1	<1
3867	<1	<1	<1	<1
3869	<1	<1	<1	<1
3881	1	1	<1	<1
3883	4	8	<1	<1
3885	17	27	<1	<1
3887	1	1	<1	<1
3889	1	1	<1	<1
4002	<1	<1	<1	<1
4004	<1	<1	<1	<1
4005	<1	<1	<1	<1
4007	<1	<1	<1	<1
4010	<1	<1	<1	<1
4015	<1	<1	<1	<1
4505	<1	34	<1	<1
4506	<1	163	<1	<1
4507	<1	34	<1	<1
4508	1	152	<1	<1
4513	<1	41	<1	<1
4514	<1	198	<1	<1
5002	<1	<1	<1	<1
5004	<1	<1	<1	<1
5005	<1	<1	<1	<1
5007	<1	<1	<1	<1
5010	<1	<1	<1	<1
5014	<1	<1	<1	<1
5505	<1	39	<1	<1

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
5506	1	190	<1	<1
5507	<1	30	<1	<1
5508	<1	179	<1	3
5513	<1	33	<1	<1
5514	<1	173	<1	<1
6002	20	313	<1	4
6004	37	125	<1	1
6006	50	113	<1	2
6008	10	154	<1	3
6010	17	176	<1	3
6014	16	228	<1	3
6015	32	184	<1	2
6016	13	64	<1	<1
6020	94	1229	1	18
6021	27	190	<1	2
6022	50	246	<1	2
6026	103	2393	1	32
6027	5	79	<1	<1
6028	43	450	<1	8
6032	63	2197	<1	23
6033	6	212	<1	1
6034	43	724	<1	8
6038	106	1287	<1	7
6040	99	1017	1	16
6044	46	1302	<1	8
6045	63	1046	<1	1
6046	64	433	<1	5
6050	47	955	<1	6
6051	39	912	<1	7
6052	42	279	<1	1
6056	87	1247	1	18
6057	57	1048	<1	5
6058	66	390	<1	2
6062	91	2197	<1	42
6063	12	302	<1	3
6064	50	709	<1	4
6068	352	1904	3	34
6070	50	114	<1	3
6074	106	710	1	15
6076	43	268	<1	3
6080	127	928	<1	11
6082	84	365	<1	3

Analyst's notes:

1.Results are not corrected for spike recovery efficiency

**Quality Assurance**

		chlorpyrifos oxon	chlorpyrifos
R2, Calibration	(for all cal curves used)	>0.999	>0.999
#LOD, ng/Sample		1	1
*LOQ, ng/Sample		2	2
SR Efficiency	@5ng/sample	101.2%	96.0%
STDV		5.2%	4.0%
SR Efficiency	@1000ng/sample	75.8%	96.0%
STDV		0.9%	4.3%

#: Method LODs are defined as 3 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

\*: Method LOQs are defined as 10 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

Reviewed By: Russell Dills 11/7/08      Russell Dills 11/7/08  
 QA Coordinator (or designate) Date      Russell Dills, Ph.D. EHL Director Date



12/19/08

**To** Richard Fenske, Ph.D  
 DEOHS, Box 357234

**From** Jianbo Yu, Ph.D, 5-2976  
 Jacqui Ahmad

**Subject** EHL #10812011

**Date of Receipt** 12/09/08    **Date of Analysis** 12/15/08    **Analytical Method**  
 EHL Method:Determination Of Chlorpyrifos And Its Oxon In XAD Tube Samples By LC-MS-MS.

**Results**

Sample ID	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample	Chlorpyrifos oxon,ng/Sample	Chlorpyrifos, ng/Sample
	Front	Front	Back	Back
3058	1	12	<1	<1
3196	3	18	<1	<1

Analyst's notes:

1.Results are not corrected for spike recovery efficiency

**Quality Assurance**

		chlorpyrifos oxon	chlorpyrifos
R2, Calibration		0.9996	0.9995
#LOD, ng/Sample		1	1
*LOQ, ng/Sample		2	2
SR Efficiency	@25ng/sample	109.5%	108.4%
STDV		2.5%	3.1%

#: LODs are defined as 3 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

\*: LOQs are defined as 10 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

Reviewed By: Russell Dills 12/19/08    Russell Dills 12/19/08  
 QA Coordinator (or designate) Date    Russell Dills, Ph.D. EHL Director Date





3/24/2009

**To** Richard Fenske, Ph.D  
 DEOHS, Box 357234

**From** Jianbo Yu, Ph.D, 5-2976  
 Jacqui Ahmad

**Subject** 10811016

**Date of Receipt** 11/14/08  
**Date of Analysis** 12/02-09/2008

**Analytical Method**  
 EHL Method:Determination Of Guthion and Its Oxon, Phosmet, Malathion  
 In XAD Tube Samples By LC-MS-MS.

**Results**

Sample ID	Guthion Oxon	Guthion	Phosmet	Malathion	Guthion Oxon	Guthion	Phosmet	Malathion
	Front Sections, ng/sample				Back Sections, ng/sample			
7001	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7003	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7005	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7009	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7011	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7013	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7014	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7016	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7018	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7021	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7023	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7024	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
7501	41.0	45.3	43.1	48.7	<0.5	<0.5	<0.5	<0.4
7503	38.4	44.6	39.7	45.2	<0.5	<0.5	<0.5	<0.4
7505	37.4	45.9	39.5	46.2	<0.5	<0.5	<0.5	<0.4
7509	42.1	45.5	42.8	48.6	<0.5	<0.5	<0.5	<0.4
7511	31.1	43.7	34.3	41.0	<0.5	<0.5	<0.5	<0.4
7514	41.0	44.4	43.0	47.5	<0.5	<0.5	<0.5	<0.4
7515	35.8	43.1	32.7	41.6	<0.5	<0.5	<0.5	<0.4

Sample ID	Guthion Oxon	Guthion	Phosmet	Malathion	Guthion Oxon	Guthion	Phosmet	Malathion
	Front Sections, ng/sample				Back Sections, ng/sample			
8009	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8011	<0.5	12.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8013	<0.5	8.5	<0.5	<0.4	<0.5	2.4	<0.5	<0.4
8015	<0.5	6.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8017	0.6	26.2	1.0	<0.4	<0.5	<0.5	<0.5	<0.4
8020	0.5	18.4	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8021	<0.5	11.2	2.0	<0.4	<0.5	<0.5	<0.5	<0.4
8023	0.7	42.1	<0.5	<0.4	<0.5	0.8‡	<0.5	<0.4
8025	1.7	111.7	1.1	<0.4	<0.5	5.0	<0.5	<0.4
8027	0.6	18.2	<0.5	<0.4	<0.5	1.0	<0.5	<0.4
8029	0.7	25.7	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8031	0.8	27.1	2.0	<0.4	<0.5	<0.5	<0.5	<0.4
8033	1.2	43.9	8.9	<0.4	<0.5	1.4	1.8	<0.4
8035	4.7	164.4	2.8	<0.4	<0.5	2.7	<0.5	<0.4
8037	0.9	34.0	3.2	<0.4	<0.5	12.0	1.6	<0.4
8039	1.5	57.9	2.7	<0.4	<0.5	1.2	<0.5	<0.4
8041	<0.5	2.6	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8043	<0.5	5.6	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8045	2.2	73.2	<0.5	<0.4	<0.5	1.9	<0.5	<0.4
8047	<0.5	4.6	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8049	<0.5	5.1	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8051	<0.5	1.0	1.1	<0.4	<0.5	<0.5	<0.5	<0.4
8053	0.8	65.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8055	1.6	115.2	<0.5	<0.4	<0.5	2.0	<0.5	<0.4
8057	<0.5	1.9	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8059	<0.5	0.6‡	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8061	<0.5	4.4	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8063	0.7	41.7	3.9	<0.4	<0.5	1.0	<0.5	<0.4
8065	1.8	118.2	<0.5	<0.4	<0.5	1.9	<0.5	<0.4
8067	0.7	29.2	<0.5	<0.4	<0.5	2.0	<0.5	<0.4
8069	0.8	27.9	<0.5	<0.4	<0.5	1.3	<0.5	<0.4
8071	<0.5	9.5	4.8	<0.4	<0.5	<0.5	<0.5	<0.4
8073	12.7	932.8	<0.5	<0.4	0.5‡	49.2	<0.5	<0.4
8075	1.8	107.9	<0.5	<0.4	<0.5	10.6	<0.5	<0.4
8077	1.3	38.9	0.8	<0.4	<0.5	8.8	<0.5	<0.4
8081	<0.5	9.0	0.9	<0.4	<0.5	<0.5	<0.5	<0.4
8083	4.1	173.3	<0.5	<0.4	<0.5	7.3	<0.5	<0.4
8085	1.8	68.2	2.7	<0.4	<0.5	1.3	<0.5	<0.4
8087	0.8	24.5	5.3	<0.4	<0.5	<0.5	<0.5	<0.4
8089	1.1	32.9	1.1	<0.4	<0.5	<0.5	<0.5	<0.4
8091	<0.5	5.0	1.8	<0.4	<0.5	<0.5	<0.5	<0.4
8093	3.0	180.1	1.6	<0.4	<0.5	3.7	<0.5	<0.4
8095	1.2	39.4	<0.5	<0.4	<0.5	1.1	<0.5	<0.4
8097	1.2	50.2	0.8	<0.4	<0.5	2.1	<0.5	<0.4
8099	1.2	45.4	1.6	<0.4	<0.5	7.4	<0.5	<0.4
8101	1.8	23.6	2.2	0.7	<0.5	<0.5	<0.5	<0.4
8103	8.2	173.7	11.0	<0.4	<0.5	0.6	<0.5	<0.4
8105	7.0	226.4	7.4	<0.4	<0.5	2.6	<0.5	<0.4
8107	3.6	42.3	5.1	<0.4	<0.5	0.7	<0.5	<0.4
8109	4.3	59.5	5.4	<0.4	<0.5	<0.5	<0.5	<0.4

Sample ID	Guthion Oxon	Guthion	Phosmet	Malathion	Guthion Oxon	Guthion	Phosmet	Malathion
	Front Sections, ng/sample				Back Sections, ng/sample			
8111	<0.5	5.6	1.4	<0.4	<0.5	<0.5	<0.5	<0.4
8113	2.0	72.5	3.9	<0.4	<0.5	0.5‡	<0.5	<0.4
8115	1.9	42.4	2.2	<0.4	<0.5	1.7	<0.5	<0.4
8117	0.6	28.2	<0.5	<0.4	<0.5	2.3	<0.5	<0.4
8119	0.6	31.7	0.6	<0.4	<0.5	0.8	<0.5	<0.4
8121	<0.5	5.6	0.6	<0.4	<0.5	<0.5	<0.5	<0.4
8123	1.4	45.3	2.0	<0.4	<0.5	2.4	<0.5	<0.4
8125	1.3	27.0	2.6	<0.4	<0.5	<0.5	<0.5	<0.4
8127	1.4	20.9	0.7	<0.4	<0.5	<0.5	<0.5	<0.4
8130	0.7	16.5	1.6	0.4	<0.5	<0.5	<0.5	<0.4
8131	1.4	7.8	<0.5	1.0	<0.5	<0.5	<0.5	<0.4
8133	8.3	35.6	6.6	<0.4	<0.5	<0.5	<0.5	<0.4
8135	12.4	68.8	68.3	<0.4	<0.5	<0.5	<0.5	<0.4
8137	4.4	40.2	2.6	<0.4	<0.5	0.8	0.8	<0.4
8140	4.3	31.1	4.3	0.4	<0.5	<0.5	<0.5	<0.4
8141	<0.5	2.6	0.8	<0.4	<0.5	<0.5	<0.5	<0.4
8143	1.6	18.9	1.1	<0.4	<0.5	<0.5	<0.5	<0.4
8147	0.5	7.9	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
8149	0.7	6.9	3.5	<0.4	<0.5	<0.5	<0.5	<0.4
8151	<0.5	4.3	4.4	<0.4	<0.5	<0.5	<0.5	<0.4
8153	2.1	24.4	2.8	<0.4	<0.5	<0.5	<0.5	<0.4
8155	2.4	13.2	90.9	<0.4	<0.5	<0.5	3.0	<0.4
8157	0.8	11.7	1.1	<0.4	<0.5	<0.5	<0.5	<0.4
8159	1.4	16.7	1.6	0.5	<0.5	1.0	<0.5	<0.4
8161	0.6	8.3	6.3	0.9	<0.5	<0.5	<0.5	<0.4
8163	1.2	32.9	3.9	<0.4	<0.5	<0.5	<0.5	<0.4
8165	2.1	37.6	27.0	<0.4	<0.5	<0.5	<0.5	<0.4
8167	0.6	13.5	4.4	<0.4	<0.5	0.7	<0.5	<0.4
8169	1.1	10.7	7.0	<0.4	<0.5	0.6	<0.5	<0.4
8171	0.8	8.5	0.6	<0.4	<0.5	<0.5	<0.5	<0.4
8173	1.5	13.8	1.7	<0.4	<0.5	<0.5	<0.5	<0.4
8175	1.3	7.3	39.8	<0.4	<0.5	<0.5	2.8	<0.4
8177	0.7	14.5	2.3	<0.4	<0.5	<0.5	<0.5	<0.4
8179	1.2	6.5	1.2	<0.4	<0.5	<0.5	<0.5	<0.4
8181	0.5	8.2	2.9	<0.4	<0.5	<0.5	<0.5	<0.4
8183	1.4	24.1	6.9	0.5	<0.5	2.4	<0.5	<0.4
8185	0.9	15.2	23.4	<0.4	<0.5	<0.5	<0.5	<0.4
8187	0.6	17.7	2.4	<0.4	<0.5	<0.5	<0.5	<0.4
8189	0.9	17.8	3.6	<0.4	<0.5	0.7	<0.5	<0.4
8191	0.7	5.9	2.5	<0.4	<0.5	<0.5	<0.5	<0.4
8193	1.3	10.7	6.4	1.0	<0.5	<0.5	<0.5	<0.4
8195	2.7	23.4	15.8	<0.4	<0.5	<0.5	<0.5	<0.4
8197	1.0	8.6	1.0	<0.4	<0.5	<0.5	<0.5	<0.4
8199	1.6	9.5	3.8	0.5‡	<0.5	<0.5	<0.5	<0.4
8201	<0.5	4.2	4.4	<0.4	<0.5	<0.5	<0.5	<0.4
8203	<0.5	8.0	2.5	<0.4	<0.5	<0.5	<0.5	<0.4
8205	<0.5	9.4	7.6	<0.4	<0.5	<0.5	0.8	<0.4
8207	<0.5	16.8	1.8	<0.4	<0.5	<0.5	<0.5	<0.4
8209	0.6	13.6	4.1	<0.4	<0.5	<0.5	<0.5	<0.4
8211	0.6	5.0	1.3	<0.4	<0.5	<0.5	<0.5	<0.4

Sample ID	Guthion Oxon	Guthion	Phosmet	Malathion	Guthion Oxon	Guthion	Phosmet	Malathion
Front Sections, ng/sample				Back Sections, ng/sample				
8213	1.0	8.9	6.1	<0.4	<0.5	<0.5	<0.5	<0.4
8215	1.6	21.0	23.4	<0.4	<0.5	<0.5	0.7	<0.4
8217	0.6	7.3	4.0	<0.4	<0.5	<0.5	<0.5	<0.4
8219	0.7	7.7	5.0	<0.4	<0.5	<0.5	<0.5	<0.4
8221	<0.5	2.5	0.7	1.0	<0.5	<0.5	0.7	<0.4
8223	<0.5	4.0	1.6	1.0	<0.5	0.5	<0.5	<0.4
8225	1.0	27.4	5.2	<0.4	<0.5	<0.5	<0.5	<0.4
8227	<0.5	7.2	0.8	0.8	<0.5	<0.5	<0.5	<0.4
8229	<0.5	8.0	1.4	1.9	<0.5	<0.5	<0.5	<0.4

‡ secondary qualifier ion ratio is outside of the acceptable range; identification should be considered tentative.

Analyst's notes:

1. Results are not corrected for spike recovery efficiency

### Quality Assurance

	Guthion Oxo	Guthion	Phosmet	Malathion
R2, Calibration	>0.999	>0.999	>0.999	>0.999
#LOD, ng/Sample	0.5	0.5	0.5	0.4
*LOQ, ng/Sample	1.5	1.8	1.5	1.2
SR Efficiency@.5ng/sample	109.4%	107.9%	111.5%	114.8%
STDV	3.0%	3.7%	3.0%	2.4%
SR Efficiency@.50ng/sample	100.0%	100.3%	99.6%	104.8%
STDV	1.7%	1.6%	2.0%	2.5%

#: Method LODs are defined as 3 times the standard deviation of the lowest spike recovery results ( 8 replicates), to the nearest ppb.

\*: Method LOQs are defined as 10 times the standard deviation of the lowest spike recovery results ( 8 replicates), to the nearest ppb.

Reviewed By: \_\_\_\_\_  
 QA Coordinator (or designate) Date Russell Dills, Ph.D. EHL Director Date

12/15/08

**To** Richard Fenske, Ph.D  
 DEOHS, Box 357234

**From** Jianbo Yu, Ph.D, 5-2976  
 Jacqui Ahmad

**Subject** 10811017

**Date of Receipt** 11/14/08  
**Date of Analysis** 12/02-09/2008

**Analytical Method**  
 EHL Method:Determination Of Guthion and Its Oxon, Phosmet, Malathion  
 In XAD Tube Samples By LC-MS-MS.

**Results**

Sample ID	Guthion Oxon	Guthion	Phosmet	Malathion	Guthion Oxon	Guthion	Phosmet	Malathion
	Front Sections, ng/sample				Back Sections, ng/sample			
9001	2.9	45.9	10.8	0.7	<0.5	18.4	6.4	<0.4
9003	5.8	97.8	22.1	<0.4	<0.5	4.4	<0.5	<0.4
9005	8.1	134	31.3	0.7	<0.5	1.3	<0.5	<0.4
9007	9.6	178	39.9	0.5	<0.5	6.0	<0.5	<0.4
9009	6.9	156	24.5	0.9	<0.5	1.2	<0.5	7.2
9012	7.8	80.3	10.2	<0.4	<0.5	<0.5	<0.5	0.6
9013	3.5	19.7	4.0	<0.4	<0.5	<0.5	<0.5	<0.4
9018	5.0	193	2.3	<0.4	<0.5	4.6	<0.5	<0.4
9019	1.9	25.4	7.0	<0.4	<0.5	<0.5	<0.5	<0.4
9024	14.0	3407	8.2	<0.4	<0.5	42.0	<0.5	<0.4
9025	3.3	38.9	12.3	<0.4	<0.5	<0.5	<0.5	<0.4
9030	59.7	16368	20.6	<0.4	<0.5	75.0	<0.5	<0.4
9031	6.4	98.1	9.5	<0.4	<0.5	1.9	<0.5	<0.4
9036	74.5	21705	26.3	<0.4	<0.5	40.1	0.5	<0.4
9037	3.6	107	9.0	0.6	<0.5	1.5	<0.5	<0.4
9042	15.4	2258	36.0	<0.4	<0.5	10.7	<0.5	<0.4
9043	3.8	31.8	8.9	<0.4	<0.5	0.7	<0.5	<0.4
9048	13.9	941	22.2	<0.4	<0.5	2.9	<0.5	<0.4
9049	4.1	32.4	8.1	<0.4	<0.5	<0.5	<0.5	<0.4
9054	12.0	1869	23.2	<0.4	<0.5	2.0	<0.5	<0.4
9055	3.3	20.0	5.5	<0.4	<0.5	<0.5	<0.5	<0.4
9061	6.5	104	6.6	<0.4	<0.5	<0.5	<0.5	<0.4
9065	9.0	169	20.1	<0.4	<0.5	3.6	<0.5	<0.4
9066	3.4	53.4	7.3	<0.4	<0.5	0.7	<0.5	<0.4
9069	5.8	144	12.4	1.8	<0.5	1.1	<0.5	<0.4
9070	2.1	44.5	3.8	<0.4	<0.5	0.8	<0.5	<0.4
9073	11.0	255	8.4	0.7	<0.5	2.2	<0.5	<0.4
9074	2.6	71.0	4.8	<0.4	<0.5	0.6±	<0.5	<0.4
9077	12.8	365	12.1	0.7	<0.5	4.4	<0.5	<0.4
9078	3.2	162	5.3	0.8	<0.5	1.4	<0.5	<0.4
9081	5.8	296	15.6	1.0	<0.5	2.1	<0.5	<0.4
9082	4.0	177	3.6	<0.4	<0.5	<0.5	<0.5	<0.4
9085	4.2	132	23.0	0.9	<0.5	3.6	<0.5	<0.4
9086	1.5	55.3	9.1	<0.4	<0.5	2.2	<0.5	<0.4
9089	9.7	215	27.4	0.5	<0.5	0.8	<0.5	<0.4
9090	3.9	66.8	14.1	<0.4	<0.5	<0.5	<0.5	<0.4

Sample ID	Guthion Oxon	Guthion	Phosmet	Malathion	Guthion Oxon	Guthion	Phosmet	Malathion
9093	5.6	226	24.2	0.6	<0.5	1.6	<0.5	<0.4
9094	3.9	83.6	9.4	<0.4	<0.5	<0.5	<0.5	<0.4
9097	7.4	335	16.3	1.0	<0.5	2.5	<0.5	<0.4
9098	4.8	127	4.0	<0.4	<0.5	<0.5	<0.5	<0.4
9101	7.4	151	21.1	<0.4	<0.5	<0.5	<0.5	<0.4
9103	5.8	91.4	11.1	<0.4	<0.5	<0.5	<0.5	<0.4
9105	6.6	136	12.2	1.1	<0.5	8.3	<0.5	<0.4
9107	10.4	227	10.2	1.2	<0.5	3.0	<0.5	<0.4
9109	10.8	221	13.3	0.9	<0.5	13.1	<0.5	<0.4
9111	3.0	113	33.7	0.4	<0.5	1.3	<0.5	<0.4
9113	6.8	92.2	37.9	<0.4	<0.5	<0.5	<0.5	<0.4
9115	4.0	107	34.9	<0.4	<0.5	<0.5	<0.5	<0.4
9117	8.2	177	9.2	1.2	<0.5	13.9	0.7	<0.4
9501	<0.5	<0.5	0.5	0.9	<0.5	<0.5	<0.5	<0.4
9505	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
9509	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
9513	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.4
9701	15.7	46.5	38.1	43.2	<0.5	<0.5	<0.5	<0.4
9705	15.9	46.2	42.9	45.8	<0.5	<0.5	<0.5	<0.4
9709	16.4	47.8	46.1	47.2	<0.5	<0.5	<0.5	<0.4
9713	16.4	44.2	44.9	45.6	0.5‡	0.7	0.7	0.5

‡ secondary qualifier ion ratio is outside of the acceptable range; identification should be considered tentative.

Analyst's notes:

1. Results are not corrected for spike recovery efficiency

### Quality Assurance

	Guthion Oxon	Guthion	Phosmet	Malathion
R2, Calibration	>0.999	>0.999	>0.999	>0.999
#LOD, ng/Sample	0.5	0.5	0.5	0.4
*LOQ, ng/Sample	1.5	1.8	1.5	1.2
SR Efficiency@50ng/sample	99.7%	101.3%	102.5%	106.9%
STDV	0.8%	1.5%	0.7%	0.9%
SR Efficiency@1000ng/sample	95.9%	91.4%	93.0%	100.5%
STDV	2.7%	1.9%	4.1%	3.2%

#: Method LODs are defined as 3 times the standard deviation of the lowest spike recovery results ( 8 replicates), to the nearest ppb.

\*: Method LOQs are defined as 10 times the standard deviation of the lowest spike recovery results ( 8 replicates), to the nearest ppb.

Reviewed By: Russell Dills 12-16-08 Russell Dills 12-16-08  
 QA Coordinator (or designate) Date      Russell Dills, Ph.D. EHL Director Date

4/17/09

To  
 Richard Fenske, Ph.D  
 DEOHS, Box 357234

From  
 Jacqui Ahmad

Subject  
 EHL #10904016

Date of Receipt  
 04/13/09

Analytical Method

EHL Method: Determination Of Guthions And Its Oxon.  
 Phosmet And Malathion In XAD Tube Samples By LC-MS-MS.

**Results**

Sample ID	Guthion Oxon ppb		Guthion ppb		Phosmet, ppb		Malathion, ppb		Guthion Oxon, ppb		Guthion, ppb		Phosmet, ppb		Malathion, ppb	
	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back
8014	<1	<1	8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8038	2	43	48	3	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8078	2	48	<1	1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Analyst's notes:

1. Results are not corrected for spike recovery efficiency

**Quality Assurance**

R2, Calibration	Guthion Oxon	Guthion	Phosmet	Malathion
	0.9995	0.9995	0.9998	0.9996
RL0D, ng/Sample	1	1	1	1
*LOQ, ng/Sample	2	2	2	2
SR Efficiency @5ng/sample & 50ng/sample	110.6%	105.8%	107.4%	119.9%
STDV	10.7%	7.3%	5.6%	7.2%

#: LODs are defined as 3 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

\*: LOQs are defined as 10 times the standard deviation of the lowest spike recovery results ( 4 replicates), to the nearest ppb.

Reviewed By:

*Jacqui Ahmad* 04/17/09  
*Russell Dills* 4/17/09

OAC Coordinator (or designee) Date

Russell Dills, Ph.D. EHL Director Date