

Table 1: Results and z-Scores for Bromopropylate and Ethion in Lettuce Purée Test Material

laboratory number	analyte							
	bromopropylate assigned value 13.4 µg/kg				ethion assigned value 24.4 µg/kg			
	result µg/kg	recovery %	LoQ µg/kg	z-score	result µg/kg	recovery %	LoQ µg/kg	z-score
001	13		10	-0.1	35		5	2.0
002	10	70	5	-1.1	25	88	10	0.1
003	12	100	10	-0.5	19	100	10	-1.0
004	7.4*	98	10	-2.0	17	105	10	-1.4
005	15.0	116	5	0.5	30.0	91	5	1.1
006	14	98	5	0.2	29	95	5	0.9
007	♣ <10	104	10		16.4	107	10	-1.5
008	<LOQ		10		26.7		10	0.4
009	12	85	10	-0.5	#			
010	12	95	10	-0.5	38	80	10	2.5
011	12	85	10	-0.5	22	78	10	-0.4
012	12*	80	30	-0.5	28	105	20	0.7
013	#				#			
014	15	79	10	0.5	18	77	10	-1.2
015	12	96	10	-0.5	25	102		0.1
016	<LOQ		10		26	98.7	5	0.3
017	#				#			
018	#				#			
019	18	108	10	1.6	34	107	10	1.8
020	#				#			
021	#				#			
022	#				#			
023	#				34.9	94.1	10	2.0
024	#				#			
025	#				#			

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**

= pesticide not analysed

Participant comments:♣ = Bromopropylate detected at <10ug/kg(5.8 extrapolated)

LoQ = limit of quantification

* = Result is less than LoQ

Table 1 (continued): Results and z-Scores for Bromopropylate and Ethion in Lettuce Purée Test Material

laboratory number	analyte							
	bromopropylate assigned value 13.4 µg/kg				ethion assigned value 24.4 µg/kg			
	result µg/kg	recovery %	LoQ µg/kg	z-score	result µg/kg	recovery %	LoQ µg/kg	z-score
026	#				#			
027	9*	90	10	-1.5	18	90	10	-1.2
028	13.0	105	10	-0.1	30.5	88	10	1.1
029	#				#			
030	#				#			
031	#				#			
032	#				#			
033	7.0	100	5	-2.2	13.8	100	10	-2.0
034	9*		10	-1.5	29			0.9
035	#				#			
036	13	85	10	-0.1	26	95	10	0.3
037	17	88.1	0.0051	1.2	25	98.4	0.0051	0.1
038	#				#			
039	#				#			
040	#				#			
041	#				#			
042	#				#			
043	#				#			
044	#				#			
045	#				#			
046	#				#			
047	#				#			
048	11.0	102.2	10	-0.8	23.5	96.2	10	-0.2
049	10	108	5	-1.1	25	102	5	0.1
050	15.2	97.7	10	0.6	32.0	119.4	10	1.4

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**
= pesticide not analysed

LoQ = limit of quantification
* = Result is less than LoQ

Table 1 (continued): Results and z-Scores for Bromopropylate and Ethion in Lettuce Purée Test Material

laboratory number	analyte							
	bromopropylate assigned value 13.4 µg/kg				ethion assigned value 24.4 µg/kg			
	result µg/kg	recovery %	LoQ µg/kg	z-score	result µg/kg	recovery %	LoQ µg/kg	z-score
051	#				18	77	10	-1.2
052	#				#			
053	10	73.21	0.01 ppm	-1.1	20		0.01 ppm	-0.8
054	<LOQ		10		26.3	86.41	10	0.4
055	#				#			
056	10	78	5	-1.1	28	83	5	0.7
057	16	90	10	0.9	29	90	10	0.9
058	<LOQ		50		19	90	10	-1.0
059	<LOQ		50		<LOQ		100	
060	9*	111	10	-1.5	20	114	10	-0.8
061	<LOQ		10		0		10	-4.5
062	#				#			
063	16	103	10	0.9	29	117	10	0.9
064	16	123	10	0.9	28	114	10	0.7
065	#				#			
066	10.5	109	10	-1.0	20.6	109	10	-0.7
067	#				#			
068	<LOQ	90	10		21	90	10	-0.6
069	♣	0		-4.5	0			-4.5
070	12	82		-0.5	26	87		0.3
071	10.0		10	-1.1	19.0		10	-1.0
072	15	83	10	0.5	31	78	10	1.2
073	#				#			
074	20	81	10	2.2	30	96	10	1.1
075	14	84	10	0.2	25	88	10	0.1

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**

= pesticide not analysed

Participant comments: ♣ = None of possible pesticides is confirmed by GC-MS (sic)

LoQ = limit of quantification

* = Result is less than LoQ

Table 1 (continued): Results and z-Scores for Bromopropylate and Ethion in Lettuce Purée Test Material

laboratory number	analyte							
	bromopropylate assigned value 13.4 µg/kg				ethion assigned value 24.4 µg/kg			
	result µg/kg	recovery %	LoQ µg/kg	z-score	result µg/kg	recovery %	LoQ µg/kg	z-score
076	#				25	94.7	10	0.1
077	12.18	94.05	10	-0.4	17.98	87	10	-1.2
078	#				27	98.7	9	0.5
079	21	85	8	2.6	28	93	10	0.7
080	#				#			
081	#				40	113	10	2.9
082	#				#			
083	#				#			
084	#				#			
085	#				27.760	99.8	10	0.6
086	10	98	10	-1.1	15	100	10	-1.7
087	16	102	10	0.9	22	98	10	-0.4
088	10	95	10	-1.1	22	92	10	-0.4
089	#				#			
090	† 12.6	96.3	5	-0.3	2.2	102	1	-4.1
091	† 25.43	95%	20	4.1	0			-4.5
092	<LOQ		10		24		10	-0.1
093	#				0		10	-4.5
094	#				#			
095	13.8	103	9	0.1	22.4	99	7	-0.4
096	<LOQ		10		10		10	-2.7
097	† 13.7	95	10	0.1	18.6	112	10	-1.1
098	17		10	1.2	33			1.6
099	12	87	10	-0.5	30	82	10	1.1
100	16.3	105	5	1.0	31.3	103	5	1.3

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**
† = additional pesticides reported (see Table 3)
= pesticide not analysed

LoQ = limit of quantification

Table 1 (continued): Results and z-Scores for Bromopropylate and Ethion in Lettuce Purée Test Material

laboratory number	analyte							
	bromopropylate assigned value 13.4 µg/kg				ethion assigned value 24.4 µg/kg			
	result µg/kg	recovery %	LoQ µg/kg	z-score	result µg/kg	recovery %	LoQ µg/kg	z-score
101	20		10	2.2	17		10	-1.4
102	#				#			
103	#				#			
104	#				#			
105	30	205	10	5.6	23	55	1	-0.3
106	#				#			
107	#				#			
108	#				#			
109	11.5		10	-0.6	26.9		10	0.5
110	11			-0.8	26			0.3
111	0			-4.5	#			
112	19	70-110	10	1.9	30	70-110	10	1.1
113	15.0		10	0.5	29.8		10	1.0
114	#				#			
115	8*	91	10	-1.8	17	92	10	-1.4
116	0.014	123	0.01	-4.5	0.029	149	0.01	-4.5
117	#				0			-4.5
118	#				#			
119	12.7	98	0.005	-0.2	25.8	97	0.005	0.3
120	12	96	10	-0.5	29	92	10	0.9
121	<50	86	50		14.6	61	10	-1.8
122	12	100		-0.5	23	101	10	-0.3
123	16	90	10	0.9	30	95	10	1.1
124	#				#			
125	#				#			

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**
= pesticide not analysed

LoQ = limit of quantification
* = Result is less than LoQ

Table 1 (continued): Results and z-Scores for Bromopropylate and Ethion in Lettuce Purée Test Material

laboratory number	analyte							
	bromopropylate assigned value 13.4 µg/kg				ethion assigned value 24.4 µg/kg			
	result µg/kg	recovery %	LoQ µg/kg	z-score	result µg/kg	recovery %	LoQ µg/kg	z-score
126	12	118	5	-0.5	25	87	10	0.1
127	#				#			
128	#				#			
129	11.5	82.0	10	-0.6	26.2	92.5	10	0.3
130	#				0.015		0.005	-4.5
131	17	90	10	1.2	28	90	10	0.7
132	16		10	0.9	0		10	-4.5
133	13	110	10	-0.1	23	106	10	-0.3
134	15	95	10	0.5	20	102	10	-0.8
135	10	89	10	-1.1	18	90	10	-1.2
136	0			-4.5	#			
137	<LOQ		10		7.5	84.8	5	-3.1
138	10	106	10	-1.1	18	85	10	-1.2
139	† 4		4	-3.2	19	94.2	4	-1.0
140	15		10	0.5	#			

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold** LoQ = limit of quantification
= pesticide not analysed † = additional pesticides reported (see Table 3)

Table 2: Results and z-Scores for γ -HCH, Results for Myclobutanil in Lettuce Purée Test Material

laboratory number	analyte							
	γ -HCH assigned value 21.1 $\mu\text{g}/\text{kg}$				myclobutanil assigned value not set			
	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score not set
001	25		2	0.8	20		10	
002	19	84	5	-0.5	16	86	10	
003	26	100	10	1.0	11	100	10	
004	10.5	99	10	-2.3	12.5	102	10	
005	25.5	92.6	5	0.9	20.0	117	5	
006	28	96	5	1.5	22	93	5	
007	19.8	95	10	-0.3	13.4	98	10	
008	17.7		10	-0.7	17.7		10	
009	#				#			
010	0			-4.5	19	83	10	
011	13	70	10	-1.7	14	85	10	
012	14	70	10	-1.5	16*	110	20	
013	21	108.0	10	0.0	20	98.2	10	
014	#				22	82	10	
015	19	109		-0.5	0		10	
016	28	99.7	5	1.5	17	97.4	5	
017	#				#			
018	#				#			
019	31	94	10	2.1	26	105	10	
020	#				#			
021	#				#			
022	#				#			
023	26.7	100.6	10	1.2	0			
024	#				#			
025	#				#			

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**
= pesticide not analysed for

LoQ = limit of quantification
* = Result is less than LoQ

Table 2 (continued): Results and z-Scores for γ -HCH, Results for Myclobutanil in Lettuce Purée Test Material

laboratory number	analyte							
	γ -HCH assigned value 21.1 $\mu\text{g}/\text{kg}$				myclobutanil assigned value not set			
	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score not set
026	#				#			
027	16	70	10	-1.1	13	100	10	
028	22.2	105	10	0.2	18.1	109	10	
029	#				#			
030	#				#			
031	#				#			
032	#				#			
033	17.8	100	10	-0.7	0		10	
034	22			0.2	0		10	
035	#				#			
036	25	100	10	0.8	19	110	10	
037	22	96.1	0.0051	0.2	14	93.5	0.0051	
038	#				#			
039	#				#			
040	#				#			
041	#				#			
042	#				#			
043	#				#			
044	#				#			
045	#				#			
046	#				#			
047	44	standard addition	10	4.9	#			
048	15.5	104.5	10	-1.2	0		10	
049	21	104	1	0.0	20	100	2	
050	40.6	92.2	10	4.2	24.2	119.7	10	

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**
 # = pesticide not analysed for

LoQ = limit of quantification

Table 2 (continued): Results and z-Scores for γ -HCH, Results for Myclobutanil in Lettuce Purée Test Material

laboratory number	analyte							
	γ -HCH assigned value 21.1 $\mu\text{g}/\text{kg}$				myclobutanil assigned value not set			
	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score not set
051	#				#			
052	#				#			
053	0	69.85	0.1 ppm	-4.5	0	62.08	0.1 ppm	
054	23.8	80.98	10	0.6	0		10	
055	#				#			
056	22	74	5	0.2	13	80	5	
057	23	90	10	0.4	24	90	2	
058	15	90	10	-1.3	#			
059	<LOQ		100		0		10	
060	19	78	10	-0.5	19	108	10	
061	0		10	-4.5	0		10	
062	#				#			
063	22	93	10	0.2	18	90	10	
064	23	100	10	0.4	14	118	10	
065	#				#			
066	0		10	-4.5	13.8	89	10	
067	#				47	82	20	
068	#				25	90	10	
069	♣	0		-4.5	0			
070	25	89		0.8	16	86		
071	12.0		10	-2.0	0		10	
072	22	72	10	0.2	0		10	
073	#				#			
074	20	91	10	-0.2	10	93	10	
075	19	85	10	-0.5	0	91	10	

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**

LoQ = limit of quantification

= pesticide not analysed for

Participant comments: ♣ = None of possible pesticides is confirmed by GC-MS

Table 2 (continued): Results and z-Scores for γ -HCH, Results for Myclobutanil in Lettuce Purée Test Material

laboratory number	analyte							
	γ -HCH assigned value 21.1 $\mu\text{g}/\text{kg}$				myclobutanil assigned value not set			
	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score not set
076	20	90.5	10	-0.2	17	85.0	10	
077	12.90	96.51	10	-1.8	0	120	10	
078	23	102.3	11	0.4	#			
079	26	85	10	1.0	<LOQ	101	12	
080	#				#			
081	0			-4.5	30	104	10	
082	20.603	100.34	6	-0.1	#			
083	21.740*	6	99.7	0.1	#			
084	22.640	100.2	6	0.3	#			
085	21.740	101.5	6	0.1	#			
086	13	91	10	-1.7	0		10	
087	22	95	10	0.2	17	103	10	
088	17	90	10	-0.9	0	84	10	
089	#				#			
090	† 28.8	94.6	5	1.6	14.2	114	1	
091	† #				0			
092	13		10	-1.7	40		10	
093	0		10	-4.5	0		10	
094	21.5	101.2	1	0.1	#			
095	14.5	81	5	-1.4	16.8	90	2	
096	18		10	-0.7	0		10	
097	† 29.3	100	10	1.8	<LOQ	77	30	
098	22			0.2	18			
099	22	96	10	0.2	17	98	10	
100	25.3	104	5	0.9	21.4	101	5	

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold** LoQ = limit of quantification
 # = pesticide not analysed for † = additional pesticides reported (see Table 3)
 * = Result is less than LoQ

Table 2 (continued): Results and z-Scores for γ -HCH, Results for Myclobutanil in Lettuce Purée Test Material

laboratory number	analyte							
	γ -HCH assigned value 21.1 $\mu\text{g}/\text{kg}$				myclobutanil assigned value not set			
	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score not set
101	0			-4.5	16		10	
102	#				#			
103	#				#			
104	#				#			
105	33	138	10	2.6	0	117	5	
106	22	95		0.2	39	216		
107	19.61	98	3	-0.3	#			
108	#				#			
109	20.8		10	-0.1	0		10	
110	22			0.2	0			
111	21.4	-	0.3	0.1	#			
112	23	70-110	10	0.4	23	70-110	10	
113	26.2		10	1.1	19.4		10	
114	#				#			
115	19	98	10	-0.5	13	100	10	
116	0.017	114	0.01	-4.5	0.022	105	0.01	
117	#				#			
118	7	>90		-3.0	#			
119	22.5	104	0.005	0.3	18.2	98	0.005	
120	25	91	10	0.8	18	93	10	
121	11.9	71	10	-2.0	#			
122	10	82	10	-2.4	17	100	10	
123	33	100	10	2.6	20	95	10	
124	0.022	75	0.001	-4.5	#			
125	14	96	10	-1.5	#			

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold**
= pesticide not analysed for

LoQ = limit of quantification

Table 2 (continued): Results and z-Scores for γ -HCH, Results for Myclobutanil in Lettuce Purée Test Material

laboratory number	analyte							
	γ -HCH assigned value 21.1 $\mu\text{g}/\text{kg}$				myclobutanil assigned value not set			
	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score	result $\mu\text{g}/\text{kg}$	recovery %	LoQ $\mu\text{g}/\text{kg}$	z-score not set
126	21	93	5	0.0	18	74	10	
127	#				#			
128	21.64	98.2	4	0.1	#			
129	21.0	100.0	10	0.0	18.7	100.0	10	
130	0.014		0.005	-4.5	#			
131	18	90	10	-0.7	20	90	10	
132	0		10	-4.5	<LOQ		50	
133	23	102	10	0.4	0		10	
134	25	88	10	0.8	20	98	10	
135	15	67	10	-1.3	13	76	10	
136	0			-4.5	0			
137	31		10	2.1	10	90	10	
138	29	82		1.7	0		10	
139	† 2	85.3	2	-4.1	24	86.7	4	
140	10		3	-2.4	15		10	

z-scores outside the satisfactory range, i.e. $|z| > 2$, are shown in **bold** LoQ = limit of quantification
 # = pesticide not analysed for † = additional pesticides reported (see Table 3)

Table 3: Additional Pesticide Residues Reported

laboratory number	pesticide residue > 15 µg/kg	result µg/kg	recovery %	LoQ µg/kg
090	diphenylamine	21.2	94.4	5
091	folpet	21.63	90	200
097	acephate	27.6	76	25
139	lambda-cyhalothrin	17	92.1	4

Table 4: Assigned Values and Target Standard Deviations

analyte	assigned value, µg/kg				target standard deviation, µg/kg	
	data points <i>n</i>	robust mean \hat{X}	robust sd $\hat{\sigma}$	uncertainty <i>u</i>	derived from	σ_p
bromopropylate	47	13.4	3.0	0.4	Horwitz*	2.9
ethion	63	24.4	6.2	0.8	Horwitz*	5.4
γ-HCH	63	21.1	5.5	0.7	Horwitz*	4.6

* see page 7 for appropriate form of the Horwitz equation

Table 5: Number and Percentage of Satisfactory z-Scores

analyte	number of satisfactory scores $ z \leq 2$	total number of scores	satisfactory %
bromopropylate	60	71	85
ethion	74	87	85
γ -HCH	73	97	75

Table 6: Number and Percentage of Participants Correctly Identifying and Obtaining Satisfactory z-Scores for Pesticides Present $>15 \mu\text{g}/\text{kg}$

criteria	number of satisfactory participants	total number of participants	satisfactory %
correctly identified all four pesticides	40	140	29
correctly identified all four pesticides and obtained satisfactory z-scores for bromopropylate, ethion and γ -HCH	33	140	24