



## Validation Report

### RIDASCREEN® T-2/HT-2 Toxin (Art. No. R3805)

#### Limit of detection (LOD)

Oats				
Negative samples	Pilot 1	Pilot 2	Pilot 3	HPLC sum T-2/HT-2
	concentration [ppb (µg/kg)]	concentration [ppb (µg/kg)]	concentration [ppb (µg/kg)]	
Oats n = 16	9.13	12.65	12.11	9.0
	7.59	12.86	9.62	9.0
	9.00	12.30	10.05	9.0
	10.11	11.37	11.81	9.0
	13.43	19.22	20.56	5.1
	9.68	15.49	15.15	8.4
	8.96	14.05	13.06	3.8
	9.84	17.43	16.58	3.8
	13.06	15.64	14.31	2.9
	10.00	13.91	13.00	7.5
	10.88	17.03	17.73	7.5
	13.85	17.31	16.59	7.1
	14.02	18.08	19.48	9.5
	18.04	21.70	23.13	8.9
	9.65	13.04	15.32	5.8
	18.81	20.15	22.10	9.6
Mean	11.63	15.76	15.66	–
SD	3.28	3.08	4.11	–
LOD	21.48	24.99	27.99	–
Mean sum pilot 1, pilot 2, pilot 3	14.35			
SD	4.0			
LOD	26			

SD = standard deviation  
LOD = mean + 3 x standard deviation



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### RIDASCREEN® T-2/HT-2 Toxin (Art. No. R3805)

#### Recovery

Oats						
Spiked samples	Pilot 1		Pilot 2		Pilot 3	
	c* [ppb (µg/kg)]	recovery [%]	c* [ppb (µg/kg)]	recovery [%]	c* [ppb (µg/kg)]	recovery [%]
+ 20 ppb						
100 % T-2 Toxin / 0 % HT-2 Toxin	24.01	72	29.09	86	26.2	76
75 % T-2 Toxin / 25 % HT-2 Toxin	24.62	75	30.63	94	29.79	94
50 % T-2 Toxin / 50 % HT-2 Toxin	24.42	74	32.81	105	31.43	103
25 % T-2 Toxin / 75 % HT-2 Toxin	26.83	86	32.81	105	32.16	106
0 % T-2 Toxin / 100 % HT-2 Toxin	29.30	99	31.49	98	29.09	91
+ 50 ppb						
100 % T-2 Toxin / 0 % HT-2 Toxin	53.10	87	51.96	80	52.95	84
75 % T-2 Toxin / 25 % HT-2 Toxin	52.73	86	61.15	99	57.04	92
50 % T-2 Toxin / 50 % HT-2 Toxin	56.31	94	56.86	90	54.77	88
25 % T-2 Toxin / 75 % HT-2 Toxin	61.54	104	60.42	97	64.47	107
0 % T-2 Toxin / 100 % HT-2 Toxin	66.29	113	69.06	114	69.35	117
+ 100 ppb						
50 % T-2 Toxin / 50 % HT-2 Toxin	106.92	99	123.14	110	101.56	92
50 % T-2 Toxin / 50 % HT-2 Toxin	106.92	97	121.18	104	117.42	101
50 % T-2 Toxin / 50 % HT-2 Toxin	109.47	99	120.23	103	116.19	98
+ 200 ppb						
100 % T-2 Toxin / 0 % HT-2 Toxin	156.55	73	193.11	91	163.22	76
75 % T-2 Toxin / 25 % HT-2 Toxin	184.94	88	209.53	99	176.88	83
50 % T-2 Toxin / 50 % HT-2 Toxin	195.47	93	222.94	106	204.63	97
25 % T-2 Toxin / 75 % HT-2 Toxin	214.78	103	225.51	107	192.85	91
0 % T-2 Toxin / 100 % HT-2 Toxin	229.16	110	232.12	110	199.12	94
Mean		92		100		94

\*c = concentration

Concentrations of negative samples (blank) were subtracted from the concentration of spiked samples. Recovery rate was calculated based on corrected concentration of spiked sample.



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### RIDASCREEN® T-2/HT-2 Toxin (Art. No. R3805)

#### Limit of detection (LOD)

Barley			
Negative samples	Pilot 1	Pilot 2	Pilot 3
	c* [ppb (µg/kg)]	c [ppb (µg/kg)]	c [ppb (µg/kg)]
Barley n = 6	22.89	27.69	26.06
	4.61	8.35	8.49
	7.72	13.02	9.72
	0	2.85	5.78
	4.94	7.46	8.52
	6.77	8.89	9.37
Mean	7.82	11.38	11.32
SD	8.63	7.35	7.35
LOD	33.71	33.43	33.38
Mean	10.17		
SD	7.7		
LOD	33		

#### Recovery

Barley						
Spiked samples	Pilot 1		Pilot 2		Pilot 3	
	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]
+ 20 ppb						
100 % T-2 Toxin / 0 % HT-2 Toxin	16.99	85	22.41	98	21.00	76
50 % T-2 Toxin / 50 % HT-2 Toxin	14.24	71	27.97	126	21.61	79
0 % T-2 Toxin / 100 % HT-2 Toxin	15.16	76	29.67	134	23.11	87
+ 50 ppb						
100 % T-2 Toxin / 0 % HT-2 Toxin	40.67	81	50.08	94	44.29	77
50 % T-2 Toxin / 50 % HT-2 Toxin	44.40	89	53.82	102	50.86	90
0 % T-2 Toxin / 100 % HT-2 Toxin	46.78	94	60.94	116	48.86	86
+ 100 ppb						
50 % T-2 Toxin / 50 % HT-2 Toxin	112.16	86	133.51	98	128.29	98
50 % T-2 Toxin / 50 % HT-2 Toxin	98.38	91	115.97	103	102.03	92
50 % T-2 Toxin / 50 % HT-2 Toxin	98.07	91	117.16	108	108.54	99
+ 200 ppb						
100 % T-2 Toxin / 0 % HT-2 Toxin	150.19	75	186.00	92	166.24	80
50 % T-2 Toxin / 50 % HT-2 Toxin	169.88	85	219.38	108	191.75	93
0 % T-2 Toxin / 100 % HT-2 Toxin	215.02	108	258.23	128	224.93	110
Mean	86		109		89	

\*c = concentration

Concentrations of negative samples (blank) were subtracted from the concentration of spiked samples. Recovery rate was calculated based on corrected concentration of spiked sample.



## Validation Report

### RIDASCREEN® T-2/HT-2 Toxin (Art. No. R3805)

#### Limit of detection (LOD)

Wheat			
Negative samples	Pilot 1	Pilot 2	Pilot 3
	c* [ppb (µg/kg)]	c [ppb (µg/kg)]	c [ppb (µg/kg)]
Wheat n = 18	16.60	23.25	21.71
	0	4.94	4.36
	0	4.47	0
	3.69	7.12	5.71
	0	3.91	0
	0	6.32	5.78
	0	3.98	0
	2.02	0	4.09
	0	3.64	3.81
	3.38	2.91	0
	0	5.74	0
	0	7.59	4.81
	3.81	6.49	7.16
	0	9.33	7.34
	0	6.86	3.93
	6.74	11.84	10.76
	9.96	13.60	12.38
	0	5.85	6.05
Mean	2.57	7.10	5.44
SD	4.5	5.1	5.4
LOD	16	22	22
Mean sum pilot 1, pilot 2, pilot 3		5.04	
SD		5.3	
LOD		21	

\*c = concentration



## Validation Report

### RIDASCREEN® T-2/HT-2 Toxin (Art. No. R3805)

#### Recovery

Wheat							
Naturally contaminated samples (Trilogy)	Pilot 1		Pilot 2		Pilot 3		HPLC sum T-2/HT-2
	c* [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	
Wheat T-W-977	117.46	98	140.94	117	125.24	104	120
Spiked samples	Pilot 1		Pilot 2		Pilot 3		
	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	
+ 20 ppb							
100 % T-2 Toxin / 0 % HT-2 Toxin	13.71	69	24.40	106	19.19	96	
75 % T-2 Toxin / 25 % HT-2 Toxin	15.54	78	23.38	101	19.7	99	
50 % T-2 Toxin / 50 % HT-2 Toxin	15.42	77	25.13	109	19.84	99	
25 % T-2 Toxin / 75 % HT-2 Toxin	17.30	87	25.74	112	21.53	108	
0 % T-2 Toxin / 100 % HT-2 Toxin	16.61	83	25.31	110	21.04	105	
+ 50 ppb							
100 % T-2 Toxin / 0 % HT-2 Toxin	41.77	84	46.14	86	42.52	85	
75 % T-2 Toxin / 25 % HT-2 Toxin	45.45	91	49.04	92	48.03	96	
50 % T-2 Toxin / 50 % HT-2 Toxin	46.47	93	51.60	97	47.84	96	
25 % T-2 Toxin / 75 % HT-2 Toxin	51.88	104	54.83	103	48.64	97	
0 % T-2 Toxin / 100 % HT-2 Toxin	51.20	102	58.58	111	51.92	104	
+ 100 ppb							
50 % T-2 Toxin / 50 % HT-2 Toxin	92.58	89	94.34	87	94.32	89	
50 % T-2 Toxin / 50 % HT-2 Toxin	71.13	69	78.48	78	77.12	73	
50 % T-2 Toxin / 50 % HT-2 Toxin	95.12	91	112.00	106	105.44	98	
+ 200 ppb							
100 % T-2 Toxin / 0 % HT-2 Toxin	176.00	88	198.95	98	194.24	97	
75 % T-2 Toxin / 25 % HT-2 Toxin	184.27	92	215.60	106	217.74	109	
50 % T-2 Toxin / 50 % HT-2 Toxin	205.77	103	215.60	106	205.51	103	
25 % T-2 Toxin / 75 % HT-2 Toxin	203.60	102	212.92	105	221.61	111	
0 % T-2 Toxin / 100 % HT-2 Toxin	219.80	110	210.28	104	224.24	112	
Mean		89		101		99	

\*c = concentration

Concentrations of negative samples (blank) were subtracted from the concentration of spiked samples. Recovery rate was calculated based on corrected concentration of spiked sample.



## Validation Report

### RIDASCREEN® T-2/HT-2 Toxin (Art. No. R3805)

#### Limit of detection (LOD)

Corn			
Negative samples	Pilot 1	Pilot 2	Pilot 3
	c* [ppb (µg/kg)]	c [ppb (µg/kg)]	c [ppb (µg/kg)]
<b>Corn</b> n = 19	0	0	5.71
	2.40	5.62	3.73
	0	1.94	0
	3.18	4.45	0
	0	0	0
	0	4.49	5.33
	0	0	4.36
	0	5.61	7.78
	4.54	6.67	5.98
	4.35	9.04	8.39
	0	0	4.52
	0	4.62	7.65
	0	0	3.93
	0	0	0
	3.90	7.30	5.41
	0	0	8.42
	0	5.12	6.43
	0	5.14	6.89
	0	0	4.69
<b>Mean</b>	0.97	3.16	4.70
<b>SD</b>	1.7	3.1	2.9
<b>LOD</b>	6	12	13
<b>Mean sum pilot 1, pilot 2, pilot 3</b>	2.94		
<b>SD</b>	3.0		
<b>LOD</b>	12		

\*c = concentration



## Validation Report

### RIDASCREEN® T-2/HT-2 Toxin (Art. No. R3805)

#### Recovery

Corn							
Samples Trilogy	Pilot 1		Pilot 2		Pilot 3		HPLC Sum
	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	
Corn 91 T-C-973	2852.32	113	3023.52	119	2851.45	113	2534
Corn 91 1:5 diluted	2342.70	92	3162.81	125	2433.37	96	2534
Corn 93 T-C-970	712.39	96	749.60	102	728.71	99	739
Corn 129 T-C-9999					798.67	101	787
Spiked samples	Pilot 1		Pilot 2		Pilot 3		
	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	c [ppb (µg/kg)]	recovery [%]	
+ 20 ppb							
100 % T-2 Toxin / 0 % HT-2 Toxin	14.73	74	21.58	92	18.55	93	
75 % T-2 Toxin / 25 % HT-2 Toxin	14.66	73	21.29	90	18.82	94	
50 % T-2 Toxin / 50 % HT-2 Toxin	15.16	76	22.24	95	19.23	96	
25 % T-2 Toxin / 75 % HT-2 Toxin	16.88	84	22.60	97	21.18	106	
0 % T-2 Toxin / 100 % HT-2 Toxin	16.33	82	25.98	114	22.74	114	
+ 50 ppb							
100 % T-2 Toxin / 0 % HT-2 Toxin	38.72	77	44.03	82	42.60	85	
75 % T-2 Toxin / 25 % HT-2 Toxin	43.47	87	48.48	91	44.80	90	
50 % T-2 Toxin / 50 % HT-2 Toxin	45.25	91	51.60	97	45.17	90	
25 % T-2 Toxin / 75 % HT-2 Toxin	53.96	108	53.83	101	48.23	96	
0 % T-2 Toxin / 100 % HT-2 Toxin	67.84	136	71.86	137	67.14	134	
+ 100 ppb							
50 % T-2 Toxin / 50 % HT-2 Toxin	102.81	100	112.00	106	103.95	100	
50 % T-2 Toxin / 50 % HT-2 Toxin	105.17	101	112.55	106	103.22	97	
50 % T-2 Toxin / 50 % HT-2 Toxin	102.81	99	112.55	105	101.56	96	
+ 200 ppb							
100 % T-2 Toxin / 0 % HT-2 Toxin	197.37	99	214.25	106	188.95	94	
75 % T-2 Toxin / 25 % HT-2 Toxin	205.77	103	210.28	104	202.03	101	
50 % T-2 Toxin / 50 % HT-2 Toxin	212.56	106	225.33	111	212.73	106	
25 % T-2 Toxin / 75 % HT-2 Toxin	232.99	116	240.20	119	224.24	112	
0 % T-2 Toxin / 100 % HT-2 Toxin	230.23	115	243.32	120	238.03	119	
Mean		96		104		101	

\*c = concentration

Concentrations of negative samples (blank) were subtracted from the concentration of spiked samples. Recovery rate was calculated based on corrected concentration of spiked sample.



## Validation Report

### RIDASCREEN® T-2/HT-2 Toxin (Art. No. R3805)

#### Cross reactivity

	in buffer	in matrix (oats)
T-2 Triol	< 0.5 %	not tested
T-2 Tetraol	< 0.5 %	not tested
<b>T-2 Toxin</b>		
Pilot 1	88 %	79 %
Pilot 2	86 %	79 %
Pilot 3	84 %	76 %
Mean Pilot 1 - 3	86 %	78 %
<b>HT-2 Toxin</b>		
Pilot 1	100 %	100 %
Pilot 2	100 %	100 %
Pilot 3	100 %	100 %
Mean Pilot 1 - 3	100 %	100 %