

Analytical and Bioanalytical Chemistry

Electronic Supplementary Material

Development and validation of real-time PCR screening methods for detection of *cry1A.105* and *cry2Ab2* genes in (un)authorized genetically modified organisms.

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Table S1 Ct-value for *cryIA.105* and *cry2Ab2* detection by real time PCR with reference material GM maize MON89034 tested with 8 DNA concentrations in 9 PCR runs.

A *cryIA.105* detection in 9 PCR runs

ng/PCR	Copies/PCR	1	2	3	4	5	6	7	8	9	Ct Mean	SD	
150	55046	23.77	25.08	25.58	25.66	25.80	26.81	27.03	26.23	25.21	25.72	0.73	
		23.87	24.91	25.43	25.25	25.66	25.81	24.85	25.78	24.54			
30	11009	25.66	26.03	26.28	25.94	26.07	25.98	25.70	26.24	25.67	25.96	0.29	
		25.59	25.99	26.24	25.93	26.15	26.18	25.57	26.51	25.58			
6	2202	28.38	28.45	28.45	28.26	28.34	28.45	28.09	28.68	28.21	28.34	0.24	
		28.06	28.33	28.58	28.31	28.65	28.48	27.91	28.60	28.10			
1.2	440	30.29	30.51	30.79	30.56	30.63	30.98	30.40	30.72	30.45	30.62	0.15	
		30.16	30.55	30.72	30.68	30.53	30.71	30.58	30.68	30.54			
0.6	220	31.12	31.74	31.66	31.19	31.29	31.39	31.05	31.52	31.23	31.42	0.25	
		31.07	31.51	32.08	31.27	31.79	31.68	31.31	31.88	31.44			
0.25	88	32.53	32.78	32.75	32.16	32.21	32.91	32.41	32.57	32.19	32.58	0.36	
		32.51	32.74	32.84	32.55	32.66	32.88	32.43	33.43	32.52			
0.05	18	35.59	35.52	35.10	34.87	34.71	35.23	34.58	35.31	35.16	35.40	0.58	
		35.38	34.90	36.82	35.35	35.51	36.15	35.64	35.99	34.76			
			35.36	36.19	36.07	35.52	35.19	35.15	35.84	35.90			
			35.20	36.42	35.24	35.33	34.67	35.95	34.79	35.03			
			35.79	34.99	36.03	35.77	35.70	35.57	35.61	35.11			
			35.21	35.63	34.58	35.25	35.91	34.48	37.24	35.32			
			35.26	35.38	34.93	35.57	34.25	35.67	35.40	34.99			
			36.25	35.81	34.69	34.87	37.44	34.90	35.87	34.54			
			37.04	39.17	37.24	36.22	38.71	37.33	36.84	39.65			36.98
			ND	ND	38.63	39.45	ND	ND	36.40	37.99			38.14
0.01	4		38.29	ND	38.10	38.78	36.68	36.90	38.11	36.69	37.69	1.00	
			37.42	42.25	36.80	37.66	ND	37.25	37.62	ND			
			39.21	37.91	37.23	38.36	37.91	36.79	38.21	37.73			
			ND	ND	36.47	37.94	37.22	35.55	37.26	ND			
			37.73	ND	37.06	38.18	40.01	38.47	ND	37.88			
			ND	ND	38.38	38.89	39.58	35.56	ND	ND			

B *cry2Ab2* detection in 9 PCR runs

ng/PCR	Copies/PCR	1	2	3	4	5	6	7	8	9	Ct Mean	SD	
150	55046	24.70	23.54	24.55	24.02	23.80	24.07	23.89	23.68	23.54	23.75	0.65	
		25.08	23.27	24.27	23.58	23.67	22.55	23.11	23.44	22.71			
30	11009	26.82	25.61	25.83	25.69	25.74	25.56	25.82	25.81	25.36	25.74	0.40	
		26.68	25.65	25.75	25.44	25.34	25.50	25.66	25.50	25.54			
6	2202	29.03	28.12	28.21	27.98	27.87	27.64	27.94	27.99	27.80	28.13	0.35	
		28.96	27.87	28.15	28.10	28.10	28.26	28.21	27.92	28.18			
1.2	440	31.76	30.72	30.78	30.57	30.60	30.52	30.74	30.38	30.72	30.68	0.43	
		31.78	30.62	30.48	30.67	30.18	30.40	30.50	30.38	30.44			
0.6	220	32.28	31.57	31.57	31.53	31.37	31.47	31.08	30.93	31.40	31.50	0.39	
		32.56	31.49	31.39	31.53	31.15	31.71	31.47	31.37	31.20			
0.25	88	33.58	32.24	32.84	32.57	33.03	32.69	32.68	32.60	32.54	32.76	0.42	
		34.02	32.67	32.57	32.72	32.59	32.70	32.46	32.60	32.58			
0.05	18	35.95	34.60	34.67	33.70	35.17	34.37	34.90	35.85	34.53	35.35	0.76	
		36.60	34.94	35.70	35.35	37.23	34.81	35.21	34.47	34.23			
			34.59	35.78	34.59	35.99	35.37	ND	34.65	35.30			
			35.75	35.91	35.46	35.66	35.52	ND	35.57	34.90			
			34.35	36.97	34.64	34.21	35.27	ND	35.50	34.85			
			36.19	35.39	36.19	36.12	36.43	ND	34.98	35.23			
			35.01	35.77	34.86	37.79	35.88	34.69	36.41	36.66			
			35.13	35.33	35.67	35.16	34.86	35.13	35.31	36.55			
			39.06	ND	ND	36.45	36.34	ND	ND	36.56			37.75
			38.94	37.97	ND	36.43	37.65	36.55	36.85	36.10			38.28
0.01	4		36.11	39.13	35.87	37.29	36.97	36.17	37.77	37.80	37.16	0.88	
			37.61	36.44	ND	ND	ND	37.24	36.36	ND			
			ND	ND	ND	37.67	38.84	ND	37.14	36.84			
			ND	36.39	37.75	36.94	35.78	37.72	38.59	36.95			
			37.76	ND	ND	ND	36.70	35.87	ND	35.61			
			ND	ND	36.48	36.74	ND	33.92	36.33	37.78			

*ND = not detected

**Outliers are in bold and they were not included in the analysis