Final Report

evaluation of proficiency test

DLA ptGMS1 (2025)

GMO-Screening I

5 Samples with positive and negative amounts of p-35S, t-NOS, p-FMV, CTP2:CP4 EPSPS, PAT, BAR / Maize + GMO-Maize (MIR604 and Bt176) and Soya + GMO-Soya (RR GTS 40-3-2, RR2 MON89788, DAS-44406-6)

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General Information on the proficiency test (PT)

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EP-Bericht Freigabe *PT-Report Authorization*	Dr. Matthias Besler-Scharf (Technischer Leiter / Technical Manager) *- gezeichnet / signed M. Besler-Scharf* Dr. Alexandra Scharf (QM-Beauftragte / Quality Manager) *- gezeichnet / signed A. Scharf* Datum / Date: 25. Juli 2025
Unteraufträge *Subcontractors*	Im Rahmen dieser Eignungsprüfung wurden nachstehende Leistungen im Unterauftrag vergeben: Keine. As part of the present proficiency test the following services were subcontracted: none.
Vertraulichkeit *Confidentiality*	Die Teilnehmerergebnisse sind im EP-Bericht in anonymisierter Form mit Auswertenummern benannt. Daten einzelner Teilnehmer werden ausschließlich nach vorheriger Zustimmung des Teilnehmers an Dritte weitergegeben. Participant results are named anonymously with evaluation numbers in the PT report. Data of individual participants will be passed on to third parties only with prior consent of the participant.

Contents

The **List of Abbreviations** can be found in the
“DLA Evaluation Guide 02.02 (2024) General Proficiency Test Schemes”

1. Introduction

The participation in proficiency test (PT) schemes is an essential element of the quality management system of every laboratory testing food and feed, cosmetics and food contact materials. The implementation of proficiency tests enables the participating laboratories to prove their own analytical competence under realistic conditions. At the same time they receive valuable data regarding the verification and/or validation of the particular testing method [1, 5].
The purpose of DLA is to offer proficiency tests for selected parameters in concentrations with practical relevance.
Realisation and evaluation of the present proficiency test follows the technical requirements of DIN EN ISO/IEC 17043 (2010) and DIN ISO 13528:2022 [2, 3].

The general procedure for evaluating the DLA proficiency tests can be found in the **"DLA Evaluation Guide 02.02 (2024) General Proficiency Test Schemes"**.

2. Realisation

2.1 Test material

The test materials were 5 different mixtures of commercially available food samples from European and Vietnamese suppliers, as well as certified reference materials from the AOAC International (100% GMO maize Bt176 and MIR 604) and from the JRC (100% GMO soya DAS-44406-6) (see Table 1).

Preparation of the samples:
The raw materials were crushed, sieved (mesh <400 µm, <600 µm and <1,5 mm), mixed and homogenized. The composition of the samples is given in table 1.

Before homogenization microtracer particles were added to the GMO containing samples 1, 4 and 5 in order to check the accuracy of mixing. After homogenization and bottling 10 samples were randomly selected and taken for microtracer analysis (s. 2.1.1).

Sample weighing and packaging:
After homogenisation, the samples were portioned to approximately 10 g into metallized, recyclable PP foil bags.

Table 1: Composition of DLA-Samples

DLA-Sample	Ingredients (per 100 g)	GMO-Content Maize	GMO-Content Soya
1	Wheat flour Typ 405 (72 g) Ingredients: Wheat Nutrients per 100 g: Protein 11 g, Carbohydrates 72 g, Fat 1,1 g Soybeans, Asian Supplier (9,1 g) Ingredients: **Soybeans (ground)** Soya flour, European Supplier (19 g) Ingredients: **Soya flour toasted** Nutrients per 100 g: Protein 37 g	– – –	– positive (GMO-Soya experimental) –
2	Wheat flour Typ 405 (100 g) Ingredients: Wheat Nutrients per 100 g: Protein 11 g, Carbohydrates 72 g, Fat 1,1 g	–	–
3	Wheat flour Typ 405 (78 g) Ingredients: Wheat Nutrients per 100 g: Protein 10 g, Carbohydrates 74 g, Fat 1 g Soya flour, European Supplier (7,0 g) Ingredients: **Soya flour toasted** Nutrients per 100 g: Protein 37 g Maize flour, European Supplier (15 g) Ingredients: **Maize flour** Nutrients per 100 g: Protein 7,5 g, Carbohydrates 74 g, Fat 1 g	– – –	– – –
4	Wheat flour Typ 405 (88 g) Ingredients: Wheat Nutrients per 100 g: Protein 11 g, Carbohydrates 72 g, Fat 1,1 g Soya flour, European Supplier (12 g) Ingredients: **Soya flour toasted** Nutrients per 100 g: Protein 37 g GMO Soya DAS-44406-6 (0,399 g) **Reference material: 100% GMO-Soya**	– – –	– – positive (DAS-44406-6 added)
5	Wheat flour Typ 405 (87 g) Ingredients: Wheat Nutrients per 100 g: Protein 11 g, Carbohydrates 72 g, Fat 1,1 g Maize flour, European Supplier (12 g) Ingredients: **Maize flour** Nutrients per 100 g: Protein 7,5 g, Carbohydrates 74 g, Fat 1 g GMO Maize Bt176 (0,30 g) Reference material: **100% GMO-Maize** GMO Maize MIR604 (0,47 g) Reference material: **100% GMO-Maize**	– – positive (Bt176 added) positive (MIR604 added)	– – – –

Note: *The metrological traceability of temperature, mass and volume during production of the PT samples is ensured by DAkkS-compliant calibrated reference materials.*

2.1.1 Homogeneity testing results

A specific description of the procedures can be found in the **"DLA Evaluation Guide 02.02 (2024) General Proficiency Test Schemes"**.

Homogeneity testing by microtracer

The microtracer analysis showed an acceptable homogeneity of the present PT samples 1, 4 and 5 (see Table 2).
The results of microtracer analysis are given in the documentation (see 5.2).

Table 2: Results of microtracer analysis

Evaluation method	Criterion	Sample 1	Sample 4	Sample 5
Probability (poisson distribution)	≥ 5 % (good) ≥ 25% (excellent)	93 %	89 %	92 %
HorRat Value (normal distribution)	≤ 1,3	0,92	0,85	0,85

2.1.2 Stability

The a_W values of the PT **samples in form of powder** were below < 0,6 (see Table 3). Therefore, a good storage stability with respect to the durability of the sample (spoilage) and the content of the PT parameters as established for comparable food matrices can be expected. The stability of the sample material was thus ensured during the investigation period under the specified storage conditions.

Table 3: Results of water activity (a_W value).

Evaluation method	Criterion	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
a_W value	≤ 0,6	0,53 (RT)	0,54 (RT)	0,53 (RT)	0,52 (RT)	0,49 (RT)

2.2 Sample shipment and information to the test

The portions of the test materials (samples 1 to 5) were sent to every participating laboratory on 2025-04-09. The testing method was optional. The tests should be finished at 2025-05-23 the latest.
With the cover letter along with the sample shipment, the following information was given to the participants:
DLA ptGMS1 (2025) - GMO-Screening I qualitative: 5 Samples with positive and negative amounts of p-35S, t-NOS, p-FMV, CTP2:CP4 EPSPS, PAT, BAR / Maize + GMO-Maize (MIR604 and Bt176) and Soya + GMO-Soya (RR GTS 40-3-2, RR2 MON89788, DAS-44406)

There are 5 different test samples which possibly containing the above mentioned parameters. The indication of results and evaluation will be done exclusively qualitative (positive/negative). Results for specific sequences, screening sequences and other events can be analyzed.

Please note the attached information on the proficiency test.
(see documentation, section 5.3 Information on the PT)

2.3 Submission of results

The participants submitted their results online via an internet portal (my DLA | participant's portal at https://my.dla-pt.com) filled in standardized tables. The results given as positive/negative were evaluated. Queried and documented were the indicated results and details of the test methods like specificities, test kit manufacturer and hints about the procedure.
In case participants submitted several results for the same parameter obtained by different methods, these results were evaluated with the same evaluation number with a letter as a suffix and indication of the related method.

34 out of 36 participants submitted at least one result.
2 participants did not submit any results.

3. Evaluation

The evaluation of the GMO-Screening proficiency test was done exclusively qualitative.

The results are presented for all 5 test samples in separate tables for each parameter p-35S, t-NOS, p-FMV, CTP2:CP4 EPSPS, PAT, BAR, Maize specific DNA, GMO-Maize MIR604, GMO-Maize Bt176, Soya specific DNA, GMO-Soya RR (GTS 40-3-2), GMO-Soya RR2 (MON89788), GMO-Soya DAS-44406, Lectin-DNA and further DNA.

A specific description of the concept and procedures can be found in the **"DLA Evaluation Guide 02.02 (2024) General Proficiency Test Schemes"**.

3.1 Agreement with Consensus Values from Participants

The qualitative evaluation of results of each participant is based on the agreement of the indicated results (positive or negative) with the **consensus values from participants**. A consensus value is determined if ≥ 75% positive or negative results are available for a parameter.
The assessment will be in the form that the number of matching results followed by the number of samples for which a consensus value was obtained is indicated. Behind that, the agreement is expressed as the percentage in parentheses. In all cases, it is recommended to compare the agreement with the consensus values from participants with the agreement of results with the spiking of samples (3.2).

3.2 Agreement with the Spiking of Samples

The qualitative evaluation of the results of each participant is based on the agreement of the indicated results (positive or negative) with the **spiking of the five PT-samples**.
The assessment will be in the form that the number of matching results followed by the number of samples is indicated. Behind that the agreement is expressed as the percentage in parentheses.

4. Results

All following tables are anonymized. With the delivering of the evaluation report, the participants are informed about their individual evaluation number.

The participant results and evaluation are tabulated as follows:

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with irradiation of samples	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive					
Number negative					
Percent positive					
Percent negative					
Consensus value					
Spiking					

4.1 Proficiency Test GMO

4.1.1 Results: p35S-Screening-Sequence

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
p-35S	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
1	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
2	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
3	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
4	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
5	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
6	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
7	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
8	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
9	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
10	positive	negative	positive	positive	negative	2/5 (40%)	2/5 (40%)	
11	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
12	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
13	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
15	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
16	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
17	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
18	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
19	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
20	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
22	negative	negative	negative	positive	positive	3/5 (60%)	3/5 (60%)	
23	positive	negative	positive	negative	positive	4/5 (80%)	4/5 (80%)	
24	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
25	positive	negative	positive	negative	positive	4/5 (80%)	4/5 (80%)	
26	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
27	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
28	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
29	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
30	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
31a	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
31b	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
32	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
33	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
34	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
35	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
36	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	34	0	3	2	34
Number negative	1	35	32	33	1
Percent positive	97	0	9	6	97
Percent negative	3	100	91	94	3
Consensus value	positive	negative	negative	negative	positive
Spiking	positive	negative	negative	negative	positive

Comments:

For all 5 samples consensus values with once 100%, two times 97%, once 94% and once 91% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.2 Results: t-NOS-Screening-Sequence

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
t-NOS	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
1	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
2	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
3	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
4	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
5	negative	negative	negative	negative	positive	4/5 (80%)	4/5 (80%)	
6	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
7	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
8	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
9	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
10	positive	negative	positive	positive	negative	2/5 (40%)	2/5 (40%)	
11	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
12	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
13	positive	negative	positive	negative	positive	4/5 (80%)	4/5 (80%)	
15	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
16	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
17	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
18	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
19	positive	negative	positive	negative	positive	4/5 (80%)	4/5 (80%)	
20	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
22	negative	positive	negative	positive	positive	2/5 (40%)	2/5 (40%)	
23	positive	negative	positive	negative	positive	4/5 (80%)	4/5 (80%)	
24	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
25	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
26	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
27	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
28	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
29	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
30	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
31a	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
31b	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
32	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
33	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
34	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
35	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
36	positive	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	33	1	4	2	34
Number negative	2	34	31	33	1
Percent positive	94	3	11	6	97
Percent negative	6	97	89	94	3
Consensus value	positive	negative	negative	negative	positive
Spiking	positive	negative	negative	negative	positive

Comments:

For all 5 samples consensus values with two times 97%, two times 94% and once 89% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.3 Results: p-FMV-Screening-Sequence

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
p-FMV	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
1	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
2	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
3	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
4	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
5	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
6	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
7	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
8	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
9	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
10	negative	negative	positive	positive	negative	2/5 (40%)	2/5 (40%)	
11	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
12	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
13	positive	positive	negative	negative	positive	3/5 (60%)	3/5 (60%)	
15	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
16	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
18	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
19	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
20	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
22	negative	negative	negative	negative	positive	3/5 (60%)	3/5 (60%)	
24	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
25	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
26	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
27	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
28	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
29	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
31a	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
31b	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
32	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
33	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
34	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
35	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
36	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	30	1	1	1	2
Number negative	2	31	31	31	30
Percent positive	94	3	3	3	6
Percent negative	6	97	97	97	94
Consensus value	positive	negative	negative	negative	negative
Spiking	positive	negative	negative	negative	negative

Comments:

For all 5 samples consensus values with three times 97% and two times 94% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.4 Results: CTP2:CP4 EPSPS-Screening-Sequence

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
CTP2:CP4 EPSPS	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
2	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
4	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
6	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
7	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
8	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
12	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
13	negative	negative	positive	negative	positive	2/5 (40%)	2/5 (40%)	
15	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
16	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
18	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
19	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
20	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
23	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
24	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	Traces below LOD in samples 2-5. We analyzed CTP2:CP4 EPSPS
26	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
27	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
28	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
29	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
30	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
31	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
32	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
34	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
35	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
36	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	23	0	1	0	1
Number negative	1	24	23	24	23
Percent positive	96	0	4	0	4
Percent negative	4	100	96	100	96
Consensus value	positive	negative	negative	negative	negative
Spiking	positive	negative	negative	negative	negative

Comments:

For the samples 1-5 consensus values with two times 100% and three times 96% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.5 Results: PAT-Screening-Sequence

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
PAT	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
1	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
2	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
3	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
4	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
6	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
7	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
8	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
12	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
13	negative	negative	positive	negative	positive	1/4 (25%)	1/4 (25%)	
15	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
16	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
18	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
19	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
20	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
23	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
24	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	Traces below LOD in sample 1; we detected also traces of A2704-12E
25	positive	negative	negative	positive	positive	3/4 (75%)	3/4 75%)	
26	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
27	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
28	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
29	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
30	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
31	negative	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
32	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
34	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
35	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	
36	positive	negative	negative	positive	negative	4/4 (100%)	4/4 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	13	0	1	26	2
Number negative	14	27	26	1	25
Percent positive	48	0	4	96	7
Percent negative	52	100	96	4	93
Consensus value	none	negative	negative	positive	negative
Spiking	traces*	negative	negative	positive	negative

* Sample 1 not evaluated

Comments:

For the samples 2, 3, 4 and 5 consensus values with once 100%, two times 96% and once 93% positive or negative results were obtained, respectively. These consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

No consensus value with ≥75% positive or negative results were obtained for sample 1. The sample contains small amounts (traces) of the GMO soya event A2704-12, which harbours both the 35S promoter sequence of the cauliflower mosaic virus and the phosphinothricin N-acetyltransferase gene (*pat*). The sample was not considered for evaluation.

4.1.6 Results: BAR-Screening-Sequence

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
BAR	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
1	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
2	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
3	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
4	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
6	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
7	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
8	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
9	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
12	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
13	negative	positive	negative	negative	positive	4/5 (80%)	4/5 (80%)	
15	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
16	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
18	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
19	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
20	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
23	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
24	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
25	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
27	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
28	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
29	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
30	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
31	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
34	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
35	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
36	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	0	1	0	0	26
Number negative	26	25	26	26	0
Percent positive	0	4	0	0	100
Percent negative	100	96	100	100	0
Consensus value	negative	negative	negative	negative	positive
Spiking	negative	negative	negative	negative	positive

Comments:

For all 5 samples consensus values with four times 100% and once 96% positive or negative results were obtained, respectively.

The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.7 Results: Maize-specific DNA

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
Maize specific DNA	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
2	positive	negative	positive	positive	positive	3/3 (100%)	3/5 (60%)	
3		negative	positive	positive	positive	3/3 (100%)	3/4 (75%)	
4	positive	negative	positive	positive	positive	3/3 (100%)	3/5 (60%)	
6	positive	negative	positive	negative	positive	3/3 (100%)	4/5 (80%)	
7	positive	negative	positive	positive	positive	3/3 (100%)	3/5 (60%)	
16	positive	positive	negative	negative	negative	0/3 (0%)	1/5 (20%)	
17	negative	negative	positive	negative	positive	3/3 (100%)	5/5 (100%)	
23	positive	negative	positive	positive	positive	3/3 (100%)	3/5 (60%)	
24	negative	negative	positive	negative	positive	3/3 (100%)	5/5 (100%)	Traces in sample 1 and 4
27	negative	negative	positive	negative	positive	3/3 (100%)	5/5 (100%)	
28	positive	negative	positive	positive	positive	3/3 (100%)	3/5 (60%)	
30	positive	negative	positive	positive	positive	3/3 (100%)	3/5 (60%)	
32	positive	negative	positive	positive	positive	3/3 (100%)	3/5 (60%)	
34	positive	negative	positive	positive	positive	3/3 (100%)	3/5 (60%)	
36	negative	negative	positive	positive	positive	3/3 (100%)	4/5 (80%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	10	1	14	10	14
Number negative	4	14	1	5	1
Percent positive	71	7	93	67	93
Percent negative	29	93	7	33	7
Consensus value	none	negative	positive	none	positive
Spiking	negative	negative	positive	negative	positive

Comments:

For the samples 2, 3 and 5 consensus values with three times 93% positive or negative results were obtained, respectively. These consensus values are in agreement with the addition of maize-containing ingredients (spiking).

For sample 1 and 4 no consensus values with ≥75% positive or negative results were obtained. Maize was not added to samples 1 and 4. However, traces can not be excluded.

4.1.8 Results: GMO-Maize MIR604

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
GMO maize (MIR604)	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
2	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
3	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
6	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
7	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
16	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
23	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
24	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
30	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
36	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	0	0	0	0	9
Number negative	9	9	9	9	0
Percent positive	0	0	0	0	100
Percent negative	100	100	100	100	0
Consensus value	negative	negative	negative	negative	positive
Spiking	negative	negative	negative	negative	positive

Comments:
For all 5 samples consensus values with 100% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.9 Results: GMO-Maize Bt176

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
GMO maize (Bt176)	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
2	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
3	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
6	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
7	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
16	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
23	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
24	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
27	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
28	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
30	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
32	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	
36	negative	negative	negative	negative	positive	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	0	0	0	0	12
Number negative	12	12	12	12	0
Percent positive	0	0	0	0	100
Percent negative	100	100	100	100	0
Consensus value	negative	negative	negative	negative	positive
Spiking	negative	negative	negative	negative	positive

Comments:

For all 5 samples consensus values with 100% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.10 Results: Soya-specific DNA / Lectin-DNA

Qualitative Valuation of Results

Lectin-DNA

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
Lectin-DNA	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
2	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
6	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
7	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
16	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
27	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
30	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
32	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	7	0	7	7	0
Number negative	0	7	0	0	7
Percent positive	100	0	100	100	0
Percent negative	0	100	0	0	100
Consensus value	positive	negative	positive	positive	negative
Spiking	positive	negative	positive	positive	negative

Comments:

For the samples 1 - 5 consensus values with 100% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the soya-containing ingredients (spiking).

Soya-DNA

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
Soya specific DNA	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
3	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
4	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
6	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
7	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
16	positive	negative	negative	negative	negative	3/5 (60%)	3/5 (60%)	
17	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
24	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
26	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
27	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
28	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
30	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	
34	positive	positive	positive	positive	negative	4/5 (80%)	4/5 (80%)	
36	positive	negative	positive	positive	negative	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	13	1	12	12	0
Number negative	0	12	1	1	13
Percent positive	100	8	92	92	0
Percent negative	0	92	8	8	100
Consensus value	positive	negative	positive	positive	negative
Spiking	positive	negative	positive	positive	negative

Comments:

For the samples 1-5 consensus values with two times 100% and three times 92% positive or negative results were obtained, respectively. These consensus values are in agreement with the addition of soya-containing ingredients (spiking).

4.1.11 Results: GMO-Soya RR (GTS-40-3-2)

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
GMO soya RR (GTS 40-3-2)	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
2	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
3	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
6	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
7	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
16	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
24	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
26	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
27	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
28	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
30	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
32	positive			negative		2/2 (100%)	2/2 (100%)	
34	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
36	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	13	0	0	0	0
Number negative	0	12	12	13	12
Percent positive	100	0	0	0	0
Percent negative	0	100	100	100	100
Consensus value	positive	negative	negative	negative	negative
Spiking	positive	negative	negative	negative	negative

Comments:

For the samples 1 - 5 consensus values with 100% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.12 Results: GMO-Soya RR2 (MON89788)

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
GMO soya RR2 (MON89788)	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
2	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
3	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
6	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
7	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
16	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
24	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
26	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
27	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
28	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
30	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
34	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	
36	positive	negative	negative	negative	negative	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	12	0	0	0	0
Number negative	0	12	12	12	12
Percent positive	100	0	0	0	0
Percent negative	0	100	100	100	100
Consensus value	positive	negative	negative	negative	negative
Spiking	positive	negative	negative	negative	negative

Comments:

For the samples 1 - 5 consensus values with 100% positive or negative results were obtained, respectively. The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.13 Results: GMO-Soya DAS44406-6

Qualitative Valuation of Results

Evaluation number	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Qualitative Valuation	Qualitative Valuation	Remarks
GMO soya (DAS-44406-6)	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	Agreement with consensus value	Agreement with spiking of samples	
2	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
3	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
6	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
7	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
16	positive	negative	negative	negative	negative	3/5 (60%)	3/5 (60%)	samples mixed up?
24	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
27	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
28	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
30	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
34	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	
36	negative	negative	negative	positive	negative	5/5 (100%)	5/5 (100%)	

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Number positive	1	0	0	10	0
Number negative	10	11	11	1	11
Percent positive	9	0	0	91	0
Percent negative	91	100	100	9	100
Consensus value	negative	negative	negative	positive	negative
Spiking	negative	negative	negative	positive	negative

Comments:

For samples 1-5 consensus values with three times 100% and two times 91% positive or negative results were obtained, respectively.

The consensus values are in agreement with the addition of the GMO-containing ingredients (spiking).

4.1.14 Results: Other Parameters (DNA)

Qualitative Valuation of Results

Evaluation number	Parameter	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Remarks
	further DNA	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg	
26	A2704-12 Soya	positive	negative	negative	negative	negative	GVO Soja LL (A2704-12); Sample 1 is positive within the limit of detection.
36	A2704-12 Soya	positive					Soya A2704-12, only sample 1 analyzed
17	Agroborder II	positive	negative	negative	negative	negative	
26	CaMV	negative	negative	negative	negative	negative	
19	Cry IAb/IAc	negative	negative	negative	negative	negative	
25	Cry1Ab/Ac	negative	negative	negative	negative	negative	
26	Cry1Ab/Ac	negative	negative	negative	negative	negative	
18	Cry1AbAc	negative	negative	negative	negative	negative	
8	CrylAb	negative	negative	negative	negative	negative	
4	CrylAb/Ac	negative	negative	negative	negative	negative	
17	CsVMV	negative	negative	negative	positive	negative	
4	MON87708 (soya)	negative	negative	negative	negative	negative	
6	MON88017 (maize)	negative	negative	negative	negative	negative	
6	MON889034 (maize)	negative	negative	negative	negative	negative	
12	NPT II Gene	negative	negative	negative	negative	negative	
18	OTPmEPSPS	negative	negative	negative	positive	negative	
26	plants DNA	positive	positive	positive	positive	positive	
4	Rapeseed DNA	positive	positive	positive	positive	positive	
36	Rapeseed DNA	negative	positive	negative	negative	negative	Canola specific DNA
25	t35S	negative	negative	positive	negative	positive	
18	tE9	positive	positive	negative	negative	negative	
25	tE9	negative	negative	negative	negative	negative	
32	TE9	positive	positive	negative	negative	negative	

5. Documentation

5.1 Details by the participants

5.1.1. p35S-Screening-Sequence

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
1	2025-04-23	45	Se detecta/No se detecta	Kit comercial	Kit comercial		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
4	2025-04-28	0.1					
5	2025-04-15						
6	2025-05-19	0,01%		dPCR internal method			
7	2025-04-24	0.01					
8	2025-05-13						
9	2025-04-17	0,1		fFoodproof® GMO, Screening (35S/ NOS/ bar/FMV), Hygiena, KIT230045, 2023-12	• foodproof® Sample Preparation Kit III , Hygiena, KIT230174, 2024-02		
10	2025-04-25	0,1		Hygiena GMO Screening Kit			
11	2025-05-08	0,045	DETECTED/NOT DETECTED	GMO Screening Plus			
12	2025-05-16	0,01		SUREfood GMO screen (R-BIOPHARM)			
13	2025-05-09	0,01%	target-Sequence 35S	foodproof GMO Screening 1 LyoKit, Biotecon Diagnostics	Extraction with foodproof Sample Preparation Kit III, Biotecon Diagnostics Procedure	Light Cycler 96, Roche-Pre-incubation (1 cycle) Step 1: 37oC for 4 min Step 2: 95oC for 10min & Amplification (50 cycles)	
15	2025-05-20	0.02		ISO 21569 Amd .1:2013 Annex B9			
16	2025-05-16						
17	2025-05-19			Gold Standard Diagnostic	GENESpin	GMOScreen RT	
18	2025-04-16	0,025			CTAB		
19	2025-05-08		FAM	Congen, SureFood GMO Screen 4plex, S2126	Congen, SureFood Prep Advanced, S1053		
20	2025-04-23	0,1		RomerLabs genControl RT Triplex IV 35S/NOS/FMV/IC	Maxwell® RSC PureFood GMO and Authentication Kit AS1600		
22	2025-05-19	≤ 5 DNA Kopien	35S Promotor	SureFood® GMO SCREEN 4plex 35S/NOS/FMV/IAC	SureFood® PREP Basic	Real Time PCR, 45 Cyclen	
23	2025-05-12	0,01			CTAB		
24	2025-05-23	0.01			SOP0089	SOP0040	
25	2025-05-07	0,01	Detected/Not Detected	MultiSCREEN 4-plex kit for the detection of GM markers p35S/tNOS/pFMV/t35S			
26	2025-05-15	0,03%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	
27	2025-04-15	< 0,01%			Macherey Nagel Food Kit		
28	2025-05-07	0,1		GMOScreen RT 35S/NOS/FMV IPC	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
29	2025-04-29			S2126			
30	2025-04-24	method 0,02% ; for samples 0,02% to 0,22%	detected / not detected	internal method	CTAB method		
31	2025-05-08			R-Biopharm, S2126:2023-03			VLOG
31	2025-05-08			IEH GMO Screening B-1227 2024-10			
32	2025-04-22	0,05	sequence	EURL-GMMF	CTAB	REAL TIME PCR	
33	2025-05-05	0,05		JRC QT-ELE-00-004; ISO 21569: 2005/ Amd 1.2013	Promega Wizard DNA Extraction Kit		
34	2025-04-15		Food and Feed	S2126, K01	SF Basic (S1052)	45 cycles	
35	2025-04-22	0,1	%	DIN EN ISO 21569 mod. (2013-08)	0,2g und 2g	25µl	
36	2025-04-16		pos/neg	GN308-50:2024-04	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.2 t-NOS-Screening-Sequence

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
1	2025-04-23	0,045	Se detecta/No se detecta	Kit comercial	Kit comercial		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
4	2025-04-28	0.1					
5	2025-04-15						
6	2025-05-19	0,01%		dPCR internal method			
7	2025-04-24	0.01					
8	2025-05-13						
9	2025-04-17	0,1		fFoodproof® GMO, Screening (35S/ NOS/ bar/FMV), Hygiena, KIT230045, 2023-12	• foodproof® Sample Preparation Kit III , Hygiena, KIT230174, 2024-02		
10	2025-04-25	0,1		Hygiena GMO Screening Kit			
11	2025-05-08	0,045	DETECTED/NOT DETECTED	GMO Screening Plus			
12	2025-05-16	0,01		SUREfood GMO screen (R-BIOPHARM)			
13	2025-05-09	0,01%	target-Sequence T-NOS	foodproof GMO Screening 1 LyoKit, Biotecon Diagnostics	Extraction with foodproof Sample Preparation Kit III, Biotecon Diagnostics Procedure	Light Cycler 96, Roche-Pre-incubation (1 cycle) Step 1: 37oC for 4 min Step 2: 95oC for 10min & Amplification (50 cycles)	
15	2025-05-20	0.02		ISO 21569 Amd .1:2013 Annex B6			
16	2025-05-16						
17	2025-05-19			Gold Standard Diagnostic	GENESpin	GMOScreen RT	
18	2025-04-16	0,025			CTAB		
19	2025-05-08		Cy5	Congen, SureFood GMO Screen 4plex, S2126	Congen, SureFood Prep Advanced, S1053		
20	2025-04-23	0,1		RomerLabs genControl RT Triplex IV 35S/NOS/FMV/IC	Maxwell® RSC PureFood GMO and Authentication Kit AS1600		
22	2025-05-19	≤ 5 DNA Kopien	35S Promotor	SureFood® GMO	SureFood® PREP Basic	Real Time PCR, 45 Cyclen	
23	2025-05-12	0,02			CTAB		
24	2025-05-23	0.01			SOP0089	SOP0021	
25	2025-05-07	0,01	Detected/Not Detected	MultiSCREEN 4-plex kit for the detection of GM markers p35S/tNOS/pFMV/t35S			
26	2025-05-15	0,03%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	
27	2025-04-15	< 0,01%			Macherey Nagel Food Kit		
28	2025-05-07	0,1		GMOScreen RT 35S/NOS/FMV IPC	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
29	2025-04-29			S2126			
30	2025-04-24	method 0,02% : for samples 0,03% to 0,43%	detected / not detected	internal method	CTAB method		
31	2025-05-08			R-Biopharm, S2126:2023-03			VLOG
31	2025-05-08			IEH GMO Screening B-1227 2024-10			
32	2025-04-25	0,05	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	
33	2025-05-05	0,1		JRC QL-ELE-00-011; ISO 21569: 2005/ Amd 1.2013	Promega Wizard DNA Extraction Kit		
34	2025-04-15		Food and Feed	S2126, K01	SF Basic (S1052)	45 cycles	
35	2025-04-22	0,1	%	DIN EN ISO 21569 mod. (2013-08)	0,2g und 2g	25µl	
36	2025-04-16		pos/neg	GN308-50:2024-04	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.3 p-FMV-Screening-Sequence

Evaluation number	Date of Analysis	Limit of detection number of copies / %/ ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
1	2025-04-23	0,045	Se detecta/No se detecta	Kit comercial	Kit comercial		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
4	2025-04-28	0.1					
5	2025-04-15						
6	2025-05-19	0,01%		dPCR internal method			
7	2025-04-24	0.01					
8	2025-05-13						
9	2025-04-17	0,1		fFoodproof® GMO, Screening (35S/ NOS/ bar/FMV), Hygiena, KIT230045, 2023-12	• foodproof® Sample Preparation Kit III , Hygiena, KIT230174, 2024-02		
10	2025-04-25	0,1		Hygiena GMO Screening Kit			
11	2025-05-08	0,045	DETECTED/NOT DETECTED	GMO Screening Plus			
12	2025-05-16	0,01		SUREfood GMO screen (R-BIOPHARM)			
13	2025-05-09	0,01%	target-Sequence P-FMV	foodproof GMO Screening 1 LyoKit, Biotecon Diagnostics	Extraction with foodproof Sample Preparation Kit III, Biotecon Diagnostics Procedure	Light Cycler 96, Roche-Pre-incubation (1 cycle) Step 1: 37oC for 4 min Step 2: 95oC for 10min & Amplification (50 cycles)	
15	2025-05-20	0.02		ISO 21569-5:2016			
16	2025-05-16						
18	2025-04-16	0,025			CTAB		
19	2025-05-08		ROX	Congen, SureFood GMO Screen 4plex, S2126	Congen, SureFood Prep Advanced, S1053		
20	2025-04-23	0,1		RomerLabs genControl RT Triplex IV 35S/NOS/FMV/IC	Maxwell® RSC PureFood GMO and Authentication Kit AS1600		
22	2025-05-19	≤ 5 DNA Kopien	35S Promotor	SureFood® GMO	SureFood® PREP Basic	Real Time PCR, 45 Cyclen	
24	2025-05-23	0.01			SOP0089	SOP0117	
25	2025-05-07	0,01	Detected/Not Detected	MultiSCREEN 4-plex kit for the detection of GM markers p35S/tNOS/pFMV/t35S			
26	2025-05-15	0,003%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	
27	2025-04-15	< 0,1%			Macherey Nagel Food Kit		
28		0,1		GMOScreen RT 35S/NOS/FMV IPC	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
29	2025-04-29			S2126			
31	2025-05-08			R-Biopharm, S2126:2023-03			VLOG
31	2025-05-08			IEH GMO Screening B-1227 2024-10			
32	2025-04-25	0,05	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	
33	2025-05-05	0,1		JRC QL-ELE-00-015; ISO 21569: 2005/ Amd 1.2013	Promega Wizard DNA Extraction Kit		
34	2025-04-15		Food and Feed	S2126, K01	SF Basic (S1052)	45 cycles	
35	2025-04-22	0,1	%	DIN EN ISO 21569 mod. (2013-08)	0,2g und 2g	25µl	
36	2025-04-16		pos/neg	GN308-50:2024-04	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.4 CTP2:CP4 EPSPS-Screening-Sequence

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
2	2025-05-22	0.01			in-house method		
4	2025-04-28	0.1					
6	2025-05-19	0,01%		dPCR internal method			
7	2025-04-24	0.01					
8	2025-05-13						
12	2025-05-16	0,01		SUREfood GMO screen (R-BIOPHARM)			
13	2025-05-15	0,01%	target-Sequence CP4 EPSPS	foodproof GMO Screening 2 LyoKit, Biotecon Diagnostics	Extraction with foodproof Sample Preparation Kit III, Biotecon Diagnostics Procedure	Light Cycler 96, Roche-Pre-incubation (1 cycle) Step 1: 37oC for 4 min Step 2: 95oC for 10min & Amplification (50 cycles)	
15	2025-05-20	0.02		ISO 21569 Amd .1:2013 Annex C8			
16	2025-05-19						
18	2025-04-16	0,025			CTAB		
19	2025-05-20			Congen, SureFood GMO Screen 4plex, S2128	Congen, SureFood Prep Advanced, S1053		
20	2025-04-23	0,1		RomerLabs genControl RT Triplex V pat/bar/CTP2-CP4-EPSPS	Maxwell® RSC PureFood GMO and Authentication Kit AS1600		
23	2025-05-22	0,01			CTAB		
24	2025-05-23	0.01			SOP0089	SOP0006	Traces below LOD in samples 2-5. We analyzed CTP2:CP4 EPSPS
26	2025-05-15	0,03%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	
27	2025-04-15	< 0,01%			Macherey Nagel Food Kit		
28		0,1		QL-ELE-epsps1 1-5'/epsps2 3-3'/QL-ELE-epsps2 1-5'/epsps2 1-3'	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
29	2025-04-29			S2126			
30	2025-04-24	method 0,01% ; for samples 0,02% to 0,22%	detected / not detected	internal method	CTAB method		
31	2025-05-08			R-Biopharm, S2127:2023-03			
32	2025-04-28	0,05	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	
34	2025-04-15		Food and Feed	in-house method, S2127, K02	SF Basic (S1052)	45 cycles	
35	2025-04-22	0,1	%	GN309-50/-100 GEN-IAL® genControl Triplex 5 bar/pat/EPSPS PCR Kit (2025-03)	0,2g und 2g	20µl	
36	2025-04-16		pos/neg	GN309-50:2024-05	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.5 PAT-Screening-Sequence

Evaluation number	Date of Analysis	Limit of detection number of copies / %/ ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
1	2025-04-25	0,045	Se detecta/No se detecta	Kit comercial	Kit comercial		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
4	2025-04-28	0.1					
6	2025-05-19	0,01%		dPCR internal method			
7	2025-04-24	0.01					
8	2025-05-13						
12	2025-05-16	0,01		SUREfood GMO screen (R-BIOPHARM)			
13	2025-05-15	0,01%	target-Sequence P-35S-PAT	foodproof GMO Screening 2 LyoKit, Biotecon Diagnostics	Extraction with foodproof Sample Preparation Kit III, Biotecon Diagnostics Procedure	Light Cycler 96, Roche-Pre-incubation (1 cycle) Step 1: 37oC for 4 min Step 2: 95oC for 10min & Amplification (50 cycles)	
15	2025-05-20	0.04		Kit AccuPid pat Gene Detection			
16	2025-05-19						
18	2025-04-16	0,025			CTAB		
19	2025-05-20			Congen, SureFood GMO Screen 4plex, S2128	Congen, SureFood Prep Advanced, S1053		
20	2025-04-23	0,1		RomerLabs genControl RT Triplex V pat/bar/CTP2-CP4-EPSPS	Maxwell® RSC PureFood GMO and Authentication Kit AS1600		
23	2025-05-22	0,01			CTAB		
24	2025-05-23	0.01			SOP0089	SOP0134	Traces below LOD in sample 1; we detected also traces of A2704-12E
25	2025-05-07	0,01	Detected/Not Detected	MODIfinder MultiSCREEN 3-plex for the detection of GM markers pat/bar/cry1Ab\Ac			
26	2025-05-15	0,03%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	
27	2025-04-15	< 0,02%			Macherey Nagel Food Kit		
28		0,1		QT-ELE-00-002	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
29	2025-04-29			S2126			
30	2025-04-24	method 0,02% ; for samples : 0,03% to 0,43%	detected / not detected	internal method	CTAB method		
31	2025-05-08			R-Biopharm, S2127:2023-03			
32	2025-04-25	0,05	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	
34	2025-04-15		Food and Feed	in-house method, S2127, K02	SF Basic (S1052)	45 cycles	
35	2025-04-22	0,1	%	GN309-50/-100 GEN-IAL® genControl Triplex 5 bar/pat/EPSPS PCR Kit (2025-03)	0,2g und 2g	20µl	
36	2025-04-16		pos/neg	GN309-50:2024-05	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.6 BAR-Screening-Sequence

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
1	2025-04-25	0,045	Se detecta/No se detecta	Kit comercial	Kit comercial		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
4	2025-04-28	0.1					
6	2025-05-19	0,01%		dPCR internal method			
7	2025-04-29	0.01					
8	2025-05-13						
9	2025-04-17	0,1		fFoodproof® GMO, Screening (35S/ NOS/ bar/FMV), Hygiena, KIT230045, 2023-12	• foodproof® Sample Preparation Kit III , Hygiena, KIT230174, 2024-02		
12	2025-05-16	0,01		SUREfood GMO screen (R-BIOPHARM)			
13	2025-05-15	0,01%	target-Sequence BAR	foodproof GMO Screening 2 LyoKit, Biotecon Diagnostics	Extraction with foodproof Sample Preparation Kit III, Biotecon Diagnostics Procedure	Light Cycler 96, Roche-Pre-incubation (1 cycle) Step 1: 37oC for 4 min Step 2: 95oC for 10min & Amplification (50 cycles)	
15	2025-05-20	0.02		ISO 21569 Amd .1:2013 Annex B8			
16	2025-05-19						
18	2025-04-16	0,025			CTAB		
19	2025-05-20			Congen, SureFood GMO Screen 4plex, S2128	Congen, SureFood Prep Advanced, S1053		
20	2025-04-23	0,1		RomerLabs genControl RT Triplex V pat/bar/CTP2-CP4-EPSPS	Maxwell® RSC PureFood GMO and Authentication Kit AS1600		
23	2025-05-22	0,01			CTAB		
24	2025-05-23	0.01			SOP0089	SOP0135	
25	2025-05-07	0,01	Detected/Not Detected	MODIfinder MultiSCREEN 3-plex for the detection of GM markers pat/bar/cry1Ab\Ac			
27	2025-04-15	< 0,02%			Macherey Nagel Food Kit		
28		0,1		QL-ELE-00-014	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
29	2025-04-29			S2126			
30	2025-04-24	method 0,02% ; for samples : 0,03% to 0,43%	detected / not detected	internal method	CTAB method		
31	2025-05-08			R-Biopharm, S2127:2023-03			
34	2025-04-15		Food and Feed	in-house method, S2127, K02	SF Basic (S1052)	45 cycles	
35	2025-04-22	0,1	%	GN309-50/-100 GEN-IAL® genControl Triplex 5 bar/pat/EPSPS PCR Kit (2025-03)	0,2g und 2g	20µl	
36	2025-04-16		pos/neg	GN309-50:2024-05	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.7 Maize-specific DNA

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
4	2025-04-28	0.1					
6	2025-05-19	0,01%		dPCR internal method		Trace ammout close to the LOD for sample 1	
7	2025-04-24	0.01					
16	2025-05-20						
17	2025-05-19			Gold Standard Diagnostic	GENESpin	SpeciesIdent RT Maize	
23	2025-05-12	0,01			CTAB		
24	2025-05-23	0.01			SOP0089	SOP0004	Traces in sample 1 and 4
27	2025-04-15				Macherey Nagel Food Kit		
28		0,1		Hernández et al., J. Agric. Food Chem. 49 (2001)	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
30	2025-04-24		detected / not detected	internal method	CTAB method		
32	2025-04-22	0,1	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	
34	2025-04-15	0.01	Food and Feed	S2156, K01	SF Basic (S1052)	35 cycles	
36	2025-04-16		pos/neg	GN224-50:2022-04	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.8 GMO-Maize MIR604

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
6	2025-05-19	0,01%		dPCR internal method		5,044% [3,509%,6,578%]	
7	2025-04-25	0.01					
16	2025-05-20						
23	2025-05-12	0,01			CTAB		
24	2025-05-23	0.03			SOP0089	SOP0156	
30	2025-04-24	method 0,01% ; sample : 0,20%	detected / not detected	internal method	CTAB method		
36	2025-04-16		pos/neg	GN507-50:2022-04	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.9 GMO-Maize Bt176

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
6	2025-05-19	0,01%		dPCR internal method		6,178% [4,667%,7,689%]	
7	2025-04-25	0.01					
16	2025-05-22						
23	2025-05-12	0,01			CTAB		
24	2025-05-23	0.03			SOP0089	SOP0011	
27	2025-04-16				Macherey Nagel Food Kit		
28		0,1		QT-EVE-ZM-023	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
30	2025-04-24	method 0,01% ; sample : 0,20%	detected / not detected	internal method	CTAB method		
32	2025-04-29	0,05	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	
36	2025-04-16		pos/neg	GEN-IAL PCR Kit	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.10 Soya-specific DNA / Lectin DNA

Lectin-DNA

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
2	2025-05-22	0.01			in-house method		
6	2025-05-19	0,01%		dPCR internal method			
7	2025-04-24	0.01					
16	2025-05-21						
27							
30	2025-04-24		detected / not detected	internal method	CTAB method		
32	2025-04-22	0,1	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	

Soya-specific DNA

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
3	2025-05-22	0,01					
4	2025-05-09	0.1					
6	2025-05-19	0,01%		dPCR internal method			
7	2025-04-24	0.01					
16	2025-05-21						
17	2025-05-19			Gold Standard Diagnostic	GENESpin	SpeciesIdent RT Soy	
24	2025-05-23	0.01			SOP0089	SOP0005	
26	2025-05-15	0,7 ppm	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	
27	2025-04-15				Macherey Nagel Food Kit		
28		0,1		S. Vollenhofer et al., Journal of Agricultural and Food Chemistry (1999)	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
30	2025-04-24		detected / not detected	internal method	CTAB method		
34	2025-04-15	0.01	Food and Feed	S2156, K01	SF Basic (S1052)	35 cycles	
36	2025-04-16		pos/neg	GN224-50:2022-04	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.11 GMO-Soya RR (GTS-40-3-2)

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
2	2025-05-22	0.01			in-house method		
3	2025-05-05	0,01					
6	2025-05-19	0,01%		dPCR internal method		< 0,1% for quantification	
7	2025-04-24	0.01					
16	2025-05-21						
24	2025-05-23	0.01			SOP0089	SOP0019	
26	2025-05-15	0,05%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	
27	2025-04-24	< 0,01%			Macherey Nagel Food Kit		0,1%
28		0,1		foodproof® GMO RR Soya Quantification Kit (Biotecon)	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		concetration estimation of event: 0,14+-0,07%
30	2025-04-24	method 0,01% ; sample : 0,02%	detected / not detected	internal method	CTAB method		
32	2025-04-29	0,1	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	
34	2025-04-15	0.01	Food and Feed	S2162 K02, + in-house method (EU Soya)	SF Basic (S1052)	45 cycles	
36	2025-04-16		pos/neg	GN400-50:2024-04	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.12 GMO-Soya RR2 (MON89788)

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
2	2025-05-22	0.01			in-house method		
3	2025-05-05	0,01					
6	2025-05-19	0,01%		dPCR internal method		0,249% [0.215%,0,282%]	
7	2025-04-24	0.01					
16	2025-05-21						
24	2025-05-23	0.01			SOP0089	SOP0139	
26	2025-05-15	0,0015%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	
27	2025-04-24	< 0,03%			Macherey Nagel Food Kit		0,34%
28		0,1		QT-EVE-GM-006	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
30	2025-04-24	method 0,01% ; sample : 0,02%	detected / not detected	internal method	CTAB method		
34	2025-04-15	0.01	Food and Feed	S2162 K02, + in-house method (EU Soya)	SF Basic (S1052)	45 cycles	
36	2025-04-16		pos/neg	GN401-50:2022-04	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.13 GMO-Soya DAS44406-6

Evaluation number	Date of Analysis	Limit of detection number of copies / % / ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
2	2025-05-22	0.01			in-house method		
3	2025-05-22	0,01					
6	2025-05-19	0,01%		dPCR internal method		3,043% [2,841%,3,245%]	
7	2025-04-28	0.01					
16	2025-05-21						
24	2025-05-23	0.01			SOP0089	SOP0473	
27	2025-04-24	< 0,1%			Macherey Nagel Food Kit		
28		0,1		QT-EVE-GM-015	DNeasy mericon Food Kit/ QIAsymphony mericon Bacteria Kit		
30	2025-04-24	method 0,01% ; sample : 0,03%	detected / not detected	internal method	CTAB method		
34	2025-04-15	0.01	Food and Feed	S2162 K02, + in-house method (EU Soya)	SF Basic (S1052)	45 cycles	
36	2025-04-16		pos/neg	In-house method	FFS Kit Promega	RT-PCR, 45 Cyclen	

5.1.14 Other Parameters (DNA)

Evaluation number	Date of Analysis	Limit of detection number of copies / %/ ct-value	Results Given as	Test-Kit or Literature	Notes to Extraction	Notes to PCR-reaction	Further Remarks
	Day/Month				e.g. Extraction solution / time / temperature		
4	2025-05-09						for GMO MON87708,
4	2025-05-09						Rapeseed DNA
6	2025-05-19	0,01%		dPCR internal method		All samples Negative for MON88017 and MON889034	
8	2025-05-13						CryIAb
12	2025-05-16	0,01		SUREfood GMO screen (R-BIOPHARM)			NPT II Gene
17	2025-05-19			Gold Standard Diagnostic	GENESpin	GMOScreen RT	Agroborder II
17	2025-05-19			Gold Standard Diagnostic	GENESpin	GMOScreen RT	CsVMV
18	2025-04-16	25					Cry1AbAc
18	2025-04-16	25					tE9
18	2025-04-16	25					OTPmEPSPS
19			Cry IAb/IAc	Congen, SureFood GMO Screen 4plex, S2128	Congen, SureFood Prep Advanced, S1053		Cry IAb/IAc
25	2025-05-07	0,01	Detected/Not Detected	MultiSCREEN 4-plex kit for the detection of GM markers p35S/tNOS/pFMV/t35S			t35S
25	2025-05-07	0,01	Detected/Not Detected	MODIfinder Real-Time PCR GMO detection kit - Marker tE9			tE9
25	2025-05-07	0,01	Detected/Not Detected	MODIfinder MultiSCREEN 3-plex for the detection of GM markers pat/bar/cry1Ab\Ac			Cry1Ab/Ac
26	2025-05-15	0,1%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	Pflanzen
26	2025-05-15	0,001%	Target-DNA	genControl RT CaMVirus Kit, GEN-IAL GmbH	Genomic DNA from Food, Macherey-Nagel	real-time PCR	CaMV
26	2025-05-15	0,03%	Target-DNA GVO Soja LL (A2704-12)	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	GVO Soja LL (A2704-12); Probe 1 ist positiv im Bereich der Nachweisgrenze.
26	2025-05-15	0,03%	Target-DNA	Hausverfahren	Genomic DNA from Food, Macherey-Nagel	real-time PCR	Cry1Ab/Ac
32	2025-04-22	0,05	Positive sequence	EURL-GMMF	CTAB	REAL TIME PCR	TE9
36	2025-05-15		pos/neg	GN405-50:2024-06	FFS Kit Promega	RT-PCR, 45 Cyclen	Soya A2704-12, only sample 1 analyzed
36	2025-04-16		pos/neg	GN224-50:2022-04	FFS Kit Promega	RT-PCR, 45 Cyclen	Canola specific DNA

5.2 Homogeneity

5.2.1 Microtracer homogeneity test of final PT-samples

Microtracer Homogeneity Test
DLA ptGMS1 (2025) Sample 1

Weight whole sample	0,66	kg
Microtracer	FSS-rot lake	
Particle size	75 – 300	µm
Weight per particle	2,0	µg
Addition of tracer	17,4	mg/kg

Result of analysis

Sample	Weight [g]	Particle number	Particles [mg/kg]
1	5,07	52	20,5
7	5,03	50	19,9
13	5,07	50	19,7
19	5,00	42	16,8
25	5,11	44	17,2
31	5,05	42	16,6
37	5,09	47	18,5
43	5,02	45	17,9
49	5,06	51	20,2
60	5,04	39	15,5

Poisson distribution		
Number of samples	10	
Degree of freedom	9	
Mean	46,2	Particles
Standard deviation	4,39	Particles
χ^2 (CHI-Square)	3,76	
Probability	**93**	%
Recovery rate	105	%

Normal distribution		
Number of samples	10	
Mean	18,3	mg/kg
Standard deviation	1,74	mg/kg
rel. Standard deviaton	9,5	%
Horwitz standard deviation	10,3	%
HorRat-value	**0,92**	
Recovery rate	105	%

Microtracer Homogeneity Test
DLA ptGMS1 (2025) Sample 4

Weight whole sample	0,65	kg
Microtracer	FSS-rot lake	
Particle size	75 – 300	µm
Weight per particle	2,0	µg
Addition of tracer	26,6	mg/kg

Result of analysis

Sample	Weight [g]	Particle number	Particles [mg/kg]
1	5,08	82	32,3
7	5,06	73	28,9
13	5,08	79	31,1
19	5,03	73	29,0
25	5,05	67	26,5
31	5,01	73	29,1
37	5,03	63	25,0
43	5,00	75	30,0
49	5,08	68	26,8
60	5,06	66	26,1

Poisson distribution		
Number of samples	10	
Degree of freedom	9	
Mean	71,9	Particles
Standard deviation	5,87	Particles
χ^2 (CHI-Square)	4,32	
Probability	**89**	%
Recovery rate	107	%

Normal distribution		
Number of samples	10	
Mean	28,5	mg/kg
Standard deviation	2,33	mg/kg
rel. Standard deviaton	8,2	%
Horwitz standard deviation	9,7	%
HorRat-value	**0,85**	
Recovery rate	107	%

Microtracer Homogeneity Test
DLA ptGMS1 (2025) Sample 5

Weight whole sample	0,65	kg
Microtracer	FSS-rot lake	
Particle size	75 – 300	µm
Weight per particle	2,0	µg
Addition of tracer	23,6	mg/kg

Result of analysis

Sample	Weight [g]	Particle number	Particles [mg/kg]
1	5,06	56	22,1
7	5,06	57	22,5
13	5,00	54	21,6
19	5,07	62	24,5
25	5,07	54	21,3
31	5,11	61	23,9
37	5,08	68	26,8
43	5,04	65	25,8
49	5,07	63	24,9
60	5,07	67	26,4

Poisson distribution		
Number of samples	10	
Degree of freedom	9	
Mean	60,7	Particles
Standard deviation	5,09	Particles
χ^2 (CHI-Square)	3,85	
Probability	**92**	%
Recovery rate	102	%

Normal distribution		
Number of samples	10	
Mean	24,0	mg/kg
Standard deviation	2,01	mg/kg
rel. Standard deviaton	8,4	%
Horwitz standard deviation	9,9	%
HorRat-value	**0,85**	
Recovery rate	102	%

5.3 Information on the Proficiency Test (PT)

Before the PT, the participants received the following information in the sample cover letter:

PT number	***DLA ptGMS1 (2025)***
PT name	***GMO-Screening I (qualitative): 5 Samples with positive and negative amounts of p-35S, t-NOS, p-FMV, CTP2:CP4 EPSPS, PAT, BAR / Maize + GMO-Maize (MIR604 and Bt176) and Soya + GMO-Soya (RR GTS 40-3-2, RR2 MON89788, DAS-44406)***
*Sample matrix**	*5 different Samples: possible ingredients: Products of soybean, maize and wheat flour*
Number of samples and sample amount	*5 different samples, 10 g each.*
Storage	*Samples: dry and dark at room temperature (long term cooled 2 - 10°C)*
Intentional use	*Laboratory use only (quality control samples)*
Parameter	***Qualitative: p-35S, t-NOS, p-FMV, CTP2:CP4 EPSPS, PAT, BAR / Maize + GMO-Maize (MIR604 and Bt176) and Soya + GMO-Soya (RR GTS 40-3-2, RR2 MON89788, DAS-44406)***
Methods of analysis	*Analytical methods are optional*
Notes to analysis	*The analysis of PT samples should be performed like a routine laboratory analysis.* *In general we recommend to homogenize a representative sample amount before analysis according to good laboratory practice, especially in case of low sample weights.*
Result table	*One result each should be determined for Samples 1-5 per parameter and filled in the result entry table.*
Units	*positive / negative (limit of detection: copies or percentage)*
Number of significant digits	*only qualitative*
Further information	*Further information can be given in the result submission file.*
Result submission	*online via **my DLA | participant's portal** (https://my.dla-pt.com)* *you will receive further information about the access by e-mail*
Last Deadline	***the latest May 2025-05-23***
Evaluation report	*The evaluation report is expected to be completed 6 weeks after deadline of result submission and will be provided as a PDF file in the DLA | Participant Portal (https://my.dla-pt.com/).*
Coordinator and contact person of PT	*Alexandra Scharf PhD*

** Control of mixture homogeneity and qualitative testings are carried out by DLA. Any testing of the content, homogeneity and stability of PT parameters is subcontracted by DLA.*

6. Index of participant laboratories in alphabetical order

Participant	Town	Country

[The address data of the participants were deleted for publication of the evaluation report.]

7. Index of references

The list of **references no. 1-56** can be found in the
“DLA Evaluation Guide 02.02 (2024) General Proficiency Test Schemes”.