

Ring test

Glyphosate, glyphosate metabolites, and glufosinate in soybean flour

P2005-RT



Summary

The entire report is available to participants only.

Designed, realised and evaluated by

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The proficiency test evaluates the performances of laboratories with respect to their ability to quantify glyphosate, glyphosate metabolites (N-acetyl-glyphosate, AMPA, N-acetyl-AMPA), and glufosinate in soybean flour.

Eleven laboratories across four countries (Germany, Italy, Spain, and Switzerland) took part in the test.

Organic soybean flour is used as raw material. The soybean flour is homogenised and tested for incurred residues thereafter. An analysis confirmed the absence of incurred residues of glyphosate, N-acetyl-glyphosate, AMPA, N-acetyl-AMPA, and glufosinate in the blank material.

In order to prepare the test material, the soybean flour is spiked with

glyphosate, N-acetyl-glyphosate, AMPA, N-acetyl-AMPA, and glufosinate.

The performance of laboratories in the test is evaluated according to

- the comparability of the results. The evaluation of the comparability is based on the z-score model. The z-score should be at least $\leq |2|$. The comparability criterion is not applicable to N-acetyl-glyphosate and N-acetyl-AMPA due to a limited number of reported results.
- the trueness of the results. The trueness is expressed as the coverage of the spiked level in %. The coverage should be at least between 70 and 120 % of the spiked level. The trueness criterion is applied to spiked parameters.

Results

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results	Comparability criterion: no. of participants, with z-score $\leq 2 $	Trueness criterion: no. of participants with results within 70-120 % recovery of the spiked level
Glyphosate	0.14	0.135	11	11	11
N-Acetyl-glyphosate	0.045	-*	6	Not evaluated	5
AMPA	0.090	0.0851	11	10	9
N-Acetyl-AMPA	0.075	-*	3	Not evaluated	3
Glufosinate	0.15	0.154	8	8	8

* The comparability criterion is not applicable to N-acetyl-glyphosate and N-acetyl-AMPA due to a limited number of reported results. Thus, the assigned value is not calculated.