Facing analytical quality.

Ring test
Polar pesticides in grapes
P2113-RT

Summary

The entire report is available to participants only.

Designed, realised and evaluated by

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November 2021,

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The proficiency test evaluates the performances of laboratories with respect to their ability to quantify glyphosate and glufosinate as well as metabolites thereof in grapes.

Nine laboratories across four European countries (Austria, Germany, Italy, and Spain) took part in the test. It was up to the participants to analyse all parameters or a selection of them only.

Organic grapes are used as raw material. The grapes are homogenised and tested for incurred residues. The grape homogenate is free from incurred residues of all spiked parameters (not detected, < 0.01 mg/kg).

In order to prepare the test material, the grape homogenate is spiked with

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

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 ≤ |2|. The comparability criterion is applied to glyphosate, AMPA, and glufosinate. It is not applicable to N-acetyl glyphosate, N-acetyl AMPA, N-acetyl glufosinate, and MPPA due to the 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 all parameters.

Results

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results	**Comparability criterion:** no. of participants, with z-score ≤ |2|	**Trueness criterion:** no. of participants with results within 70-120 % recovery of the spiked level
Glyphosate	0.055	0.0541	9	9	9
N-Acetyl glyphosate	0.020	-	5	not applicable	2
AMPA	0.042	0.0442	9	9	8
N-Acetyl AMPA	0.035	-	4	not applicable	4
Glufosinate	0.047	0.0443	8	8	7
N-Acetyl glufosinate	0.036	-	6	not applicable	5
MPPA	0.025	-	6	not applicable	4