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Ring test
Polar pesticides in cherries
P2213-RT

Summary

The entire report is available to participants only.

The ring test was designed, realised, evaluated and authorised on behalf of PROOF-ACS GmbH by

Dr. Birgit Schindler
Managing Director PROOF-ACS GmbH
Project coordinator

The report was approved by

Dr. Birgit Schindler
18 July 2022

Participants with any comments or concerns related to this ring test are invited to contact:

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PROOF-ACS GmbH does not have any analytical laboratory facilities of its own. Homogeneity testing and stability testing are subcontracted to laboratories, accredited according to DIN EN ISO 17025. The subcontracted laboratory may also participate in the ring tests. If so, the laboratory is treated in exactly the same way as other participants and the same rules of confidentiality apply.

The proficiency test evaluates the performances of laboratories with respect to their ability to quantify the five most relevant polar pesticides in cherries.

18 laboratories across eight European countries (Austria, Belgium, Germany, Greece, Italy, Netherlands, Portugal and Spain) took part in the test. It was up to the participants to analyse all polar pesticides or a selection of the parameters only. The total number of participants per parameter are summarised in the table below.

Organic deep-frozen cherries are used as raw material. An analysis of the raw material confirms the absence of all spiked parameters. However, incurred residues of phosphonic acid in the blank material of about 0.01 mg/kg were reported by some of the participants.

In order to prepare the test material, the cherries are homogenised and spiked with

chlorate, perchlorate, ethephon, glyphosate, and phosphonic acid.

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 *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 not applicable to phosphonic acid due to traces of phosphonic acid in the blank material.

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
Chlorate	0.085	0.0835	18	18	18
Perchlorate	0.037	0.0302	18	18	16
Ethephon	0.24	0.223	18	17	16
Glyphosate	0.044	0.0424	17	17	16
Phosphonic acid	0.031*	0.0416	18	18	Not evaluated

* The spiked level related to phosphonic acid is presented for information only.