

Ring test

Polar pesticides in pear

P2413-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

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Project coordinator

The report was approved by

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

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PROOF-ACS is a DAkkS accredited proficiency testing provider according to DIN EN ISO 17043:2010 (D-EP-22211-01-00). This ring test is covered by the scope of accreditation.

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 the same way as other participants and the same rules of confidentiality apply.

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The proficiency test evaluates the performances of laboratories with respect to their ability to quantify polar pesticides in pears. Ten laboratories across six European countries (Austria, France, Germany, Greece, Italy, and Spain) took part in the proficiency test.

The test material is prepared of organic pears. The kernels and stems of the pears are removed, and the pulp is homogenised in a Robot Coupe R20 V.V. thereafter. The unspiked material is provided as blank material upon request. The blank material is tested for incurred residues. Incurred residues are detected of phosphonic acid.

To prepare the test material, the raw material was spiked with the polar pesticides *chlorate, perchlorate, ethephon, glyphosate, chlormequat, and mepiquat.*

The spiked pesticides as well as the incurred residue of phosphonic acid are considered for evaluation.

All labs kept the term of submission of results and are considered for evaluation.

The report contains an assessment related to

- 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 except phosphonic acid.
- the *comparability* of the results. The evaluation of the comparability is based on the z-score model. The absolute values of z-score should be at least ≤ 2 . The comparability criterion is applied to all polar pesticides.

Results

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Assigned value in % of the spiked level	No. of results	No. of results with $ z\text{-score} \leq 2$	No. of results within 70-120 % of the spiked level
Chlorate	0.065	0.0630	97	10	10	8
Perchlorate	0.035	0.0355	102	10	9	8
Ethephon	0.095	0.0879	92	9	9	9
Glyphosate	0.085	0.0843	99	10	9	8
Phosphonic acid	incurred	0.277	-	9	7	Not applicable
Chlormequat	0.12	0.120	100	10	6	6
Mepiquat	0.055	0.0546	99	10	8	7

To summarise:

- Ten laboratories took part in the tests. All labs reported results and are considered for evaluation.
- The overall performance of the labs is satisfying with respect to the polar pesticides chlorate, perchlorate, ethephon, glyphosate, and phosphonic acid. The assigned values are in good accordance with the spiked levels.
- The quantification of chlormequat and mepiquat is more challenging.
- Four out of ten labs pass the comparability criterion and the trueness criterion for all parameters within the test.