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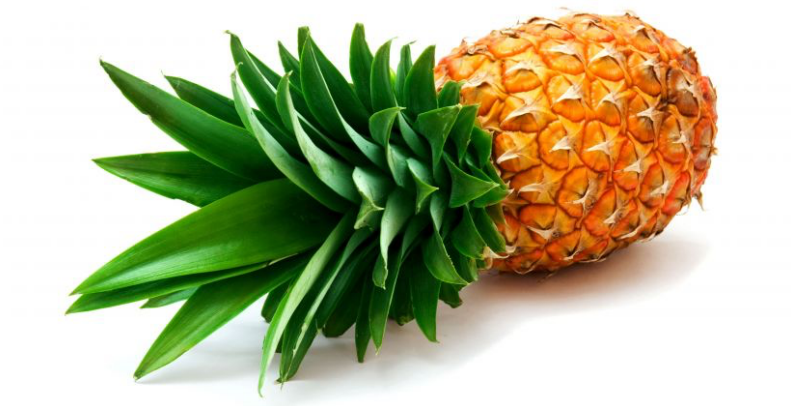
Ring test
Polar pesticides in pineapple
P2316-RT



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

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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 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.

The proficiency test evaluates the performances of laboratories with respect to their ability to quantify polar pesticides in pineapple. Eight laboratories across four European countries (Austria, Germany, Italy, and Spain) took part in the proficiency test.

The test material is prepared of organic deep-frozen pineapples. A subsample of the pineapples is tested for incurred residues before homogenisation. Incurred residues are detected of chlorate and phosphonic acid.

The deep-frozen pieces of pineapple are homogenised in a Robot Coupe R20 V.V. The unspiked material is provided as blank material.

To prepare the test material, the raw material was spiked with

perchlorate, ethephon and phosphonic acid.

Furthermore, the incurred residues of chlorate 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 chlorate.
- 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 all parameters.

Results

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Assigned value in % of the spiked level	No. of results	No. of results with a z-score ≤ |2|	No. of results within 70-120 % of the spiked level
Chlorate	incurred	0.0101	-	7	6	Not applicable
Perchlorate	0.028	0.0316	113	8	8	7
Ethephon	0.41	0.429	105	8	8	6
Phosphonic acid	0.33	0.321	97	8	7	7

To summarise:

- Eight laboratories took part in the tests. All laboratories reported results related to all four parameters.
- The overall performance of the labs in the test is satisfying. The assigned values are in good accordance with the spiked levels for perchlorate, ethephon and phosphonic acid (97 to 113 % recovery of the spiked level).

The concentration level of chlorate was quite low (assigned value 0.0101 mg/kg). Nevertheless, 6 out of 8 labs pass the comparability criterion, while the reporting limit of one lab was too high to quantify the incurred residues.