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Ring test
Ethylene oxide in peppercorn
P2420-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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DAkkS Deutsche Akkreditierungsstelle D-EP-22211-01-00

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.

The proficiency test evaluates the performances of laboratories with respect to their ability to quantify ethylene oxide resp. 2-chloroethanol in peppercorn (piper nigrum). 8 laboratories across five countries (France, Germany, Greece, Italy, and Netherlands) took part in the proficiency test. 7 out of 8 labs reported results and are considered for evaluation.

The test material is prepared of ground black peppercorn. The ground peppercorn is homogenised, tested for incurred residues of ethylene oxide, and provided as blank material upon request. The blank material is free from ethylene oxide (< 0.01 mg/kg).

The raw material was spiked with 2-chloroethanol to prepare the test material.

The results are evaluated with respect 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 comparability criterion (|z-score| ≤ 2) is not applicable due to the low number of participants and the high variance of the reported results.

Results

Parameter	Spiked level [mg/kg]	No. of results	No. of results within 70-120 % of the spiked level
Ethylene oxide (Sum of ethylene oxide and 2-chloroethanol, expressed as ethylene oxide)	0.088	7	4
2-Chloroethanol	0.16*	-	-

* 2-Chloroethanol was spiked to the test material. The spiked level of ethylene oxide is calculated based on the spiked level of 2-chloroethanol.