

Ring test

Polar pesticides and amino alcohols in lemon

P2110-RT



Summary

The entire report is available to participants only.

Designed, realised and evaluated by

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The proficiency test evaluates the performances of laboratories with respect to their ability to quantify polar pesticides and amino alcohols in lemons.

21 laboratories across seven countries (Bulgaria, Chile, Germany, Greece, Italy, Netherlands and Spain) took part in the test. It was up to the participants to analyse all polar pesticides and amino alcohols or a selection of the parameters only. 21 labs participated for the polar pesticides, while 12 labs analysed the amino alcohols as well.

Organic lemons are used as raw material. The lemons are homogenised and tested for incurred residues. The lemon homogenate is free from incurred residues of all spiked parameters.

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

chlorate, perchlorate, ethephon, phosphonic acid, morpholine, diethanolamine, and triethanolamine.

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 $\leq |2|$.
- 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.

Results

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results	Comparability criterion: no. of participants, with z-score $\leq 2 $	Trueness criterion: no. of participants with results within 70-120 % recovery of the spiked level
Chlorate	0.045	0.0468	21	21	20
Perchlorate	0.077	0.0714	21	21	19
Ethephon	0.087	0.0818	21	20	20
Phosphonic acid	0.15	0.150	21	21	18
Morpholine	0.077	0.0902	12	12	8
Diethanolamine	0.045	0.0650	12	10	4
Triethanolamine	0.059	0.0719	12	10	6