Facing analytical quality.

rolling proof 2020

Module vegetables and fruits

Grapes – P2010-RT

Summary

The entire report is available to participants only.

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rolling proof is developed to support laboratories in meeting the requirements of accreditation bodies. According to advisory document EA-4/18:2010 analytical laboratories are requested to establish a PT participation plan for accredited analytical methods. ***rolling proof*** is an on-going scheme of ring tests.

Two commodity groups (according to SANTE 12682/2019, Annex A) are included ***rolling proof*** - module "vegetables and fruits":

- vegetables and fruits (high water content),
- citrus fruits, small fruits and berries (high acid content).

Two test materials are provided related to the module "vegetables and fruits" in each year, one for each of the two commodity groups above.

In 2020, grapes and fresh peas are chosen as matrices for ***rolling proof*** – module "vegetables and fruits".

A list of pesticides is provided to the participating laboratories, which defines the scope of pesticides, covered by ***rolling proof***. The module "vegetables and fruits" covers all in all a minimum of 300 pesticides. All pesticides are tested within a period of six years. Thus, the laboratories that take part in ***rolling proof*** are able to test their pesticide multi-residue methods for a large number of pesticides and a variety of matrices within one cycle of accreditation.

It is up to the participants to join all tests of the 6-year programme of ***rolling proof***, or to book the tests individually. In 2020, 14 laboratories across six countries (Austria, Germany, Italy, South Africa, Spain, and Switzerland) took part in ***rolling proof*** module "vegetables and fruits" for one or both matrices.

The test materials were prepared of organic grapes resp. fresh peas. The raw materials were homogenised, tested for incurred residues and spiked with pesticides thereafter.

rolling proof evaluates the performance of the laboratories according to:

- The correct *identification* of the spiked pesticides.
- 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.

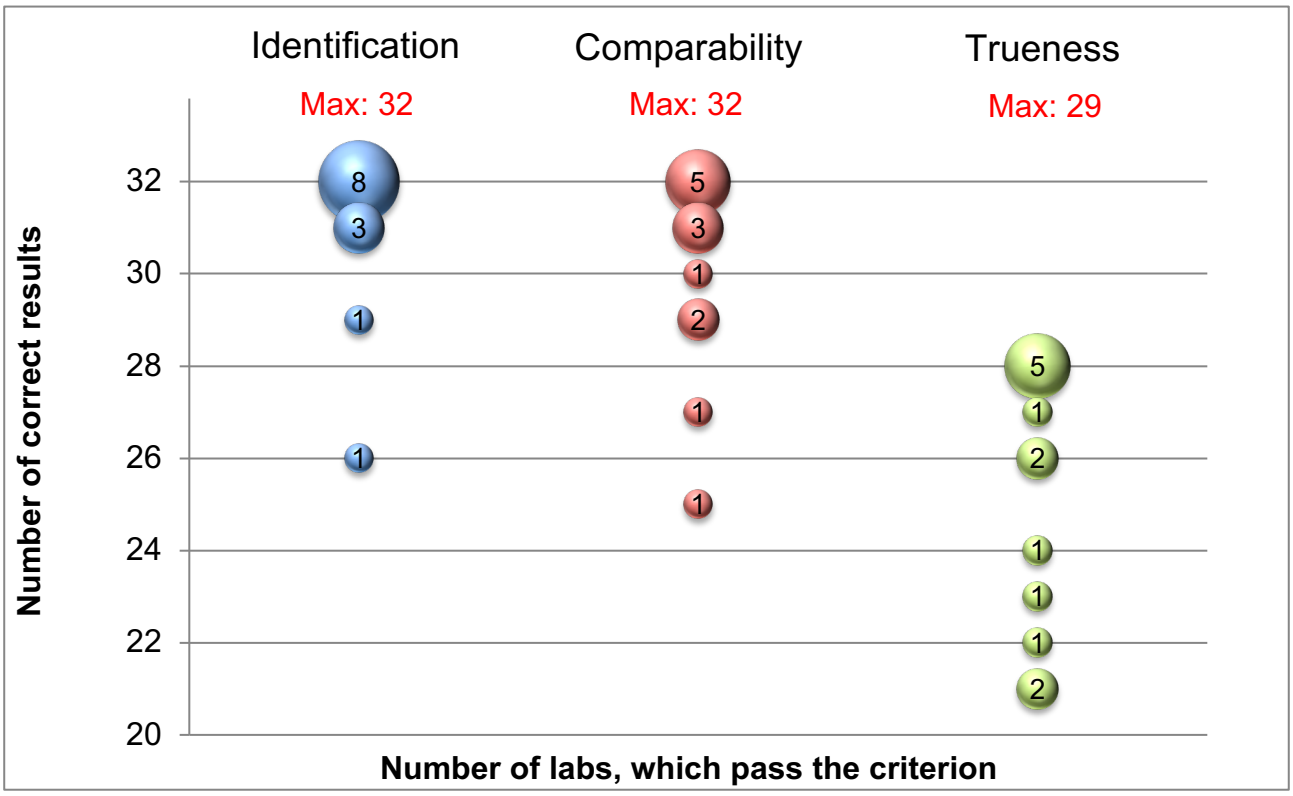
Test material grapes (P2010-RT)

The analytical challenge was to identify and quantify 32 pesticides in the test material grapes. The identity of the pesticides, the spiked levels and a summary of the overall performance of the laboratories are provided in the table below.

Pesticide	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results	**Comparability criterion:** no. of participants, which pass the criterion (z-score ≤ |2|)	**Trueness criterion:** no. of participants which pass the criterion (70-120 % recovery of the spiked level)
Acetamiprid	0.037	0.0388	13	13	11
Azoxystrobin	0.099	0.0911	13	13	12
Benthiavalicarb isopropyl	0.035	0.0356	13	13	12
Bromacil	0.026	0.0285	13	13	12
Bromophos-ethyl	0.058	0.0518	13	13	12
Bromuconazole	0.022	0.0247	11	10	8
Demeton-S-methyl sulfone	0.049	0.0518	13	13	11
Dichlofluanid	0.088	0.0674	13	11	8
Difenoconazole	0.083	0.0730	13	13	12
DMST	0.092	0.0920	12	11	11
EPN	0.066	0.0553	13	13	10
Fenamidone	0.044	0.0399	13	13	13
Fenamiphos sulfone	0.034*	0.0163	13	13	Not evaluated
Fenhexamid	0.25	0.248	13	13	13
Heptachlor epoxide cis	0.015	0.0130	11	10	10
Hexaconazole	0.032	0.0300	13	13	13
Isofenphos-methyl	0.030	0.0260	12	12	11
Mecoprop (free acid)	0.078	0.0758	10	9	9
Methiocarb sulfoxide	0.066	0.0748	12	12	12
Metrafenone	0.24	0.209	13	13	12
Molinate	0.033	0.0307	13	12	12
Nitrothal isopropyl	0.077	0.0722	13	11	10
Paraoxon-methyl	0.069	0.0598	13	13	12
Promecarb	0.057	0.0569	13	13	13
Quinalphos	0.025	0.0225	12	11	11
Spirodiclofen	0.087*	0.0623	13	13	Not evaluated
Tebuconazole	0.11	0.101	13	13	12
Tetraconazole	0.075	0.0710	13	13	13
Thiodicarb	0.039	0.0346	13	13	12
Trifloxystrobin	0.055	0.0490	13	13	12
Triflumizole	0.043*	0.0241	12	12	Not evaluated
Zoxamide	0.060	0.0568	13	12	11

* The spiked levels of fenamiphos sulfone, spirodiclofen and triflumizole are provided for information only.

Grapes – Summary of the performances of participating laboratories:



Total No of labs: 13