

# rolling proof 2020

## Module tea and spices

### Paprika powder P2013-RT



## Summary

The entire report is available to the participants only.

Designed, realised and evaluated by

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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.

The module “tea and spices” of **rolling proof** is designed for difficult or unique commodities (according to SANTE 12682/2019, Annex A) and includes

- teas like black tea, green tea, herbal tea, fruit tea, rooibos tea etc., and
- spices like pepper, curry powder, paprika powder, etc.

The module “tea and spices” covers all in all a minimum of 150 of the most relevant pesticides. The scope of pesticides covered by **rolling proof** is defined in a provided list. All pesticides are tested within a period of five years. Thus, the laboratories that take part in **rolling proof** are able to test their pesticide multi-methods for a large number of pesticides and a variety of matrices within one cycle of accreditation. However, it is up to the participants to join all tests of the 5-year programme of **rolling proof**, or to book the tests individually.

**rolling proof** evaluates the performance of laboratories according to:

- the correct identification of the spiked pesticides. Pesticides, which are not reported and not marked as “not analysed” are considered false negative.
- 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.

In 2020, paprika powder is chosen as matrix of **rolling proof** – module “tea and spices”. Twelve laboratories across three European countries (Austria, Germany, and Spain) took part in the test.

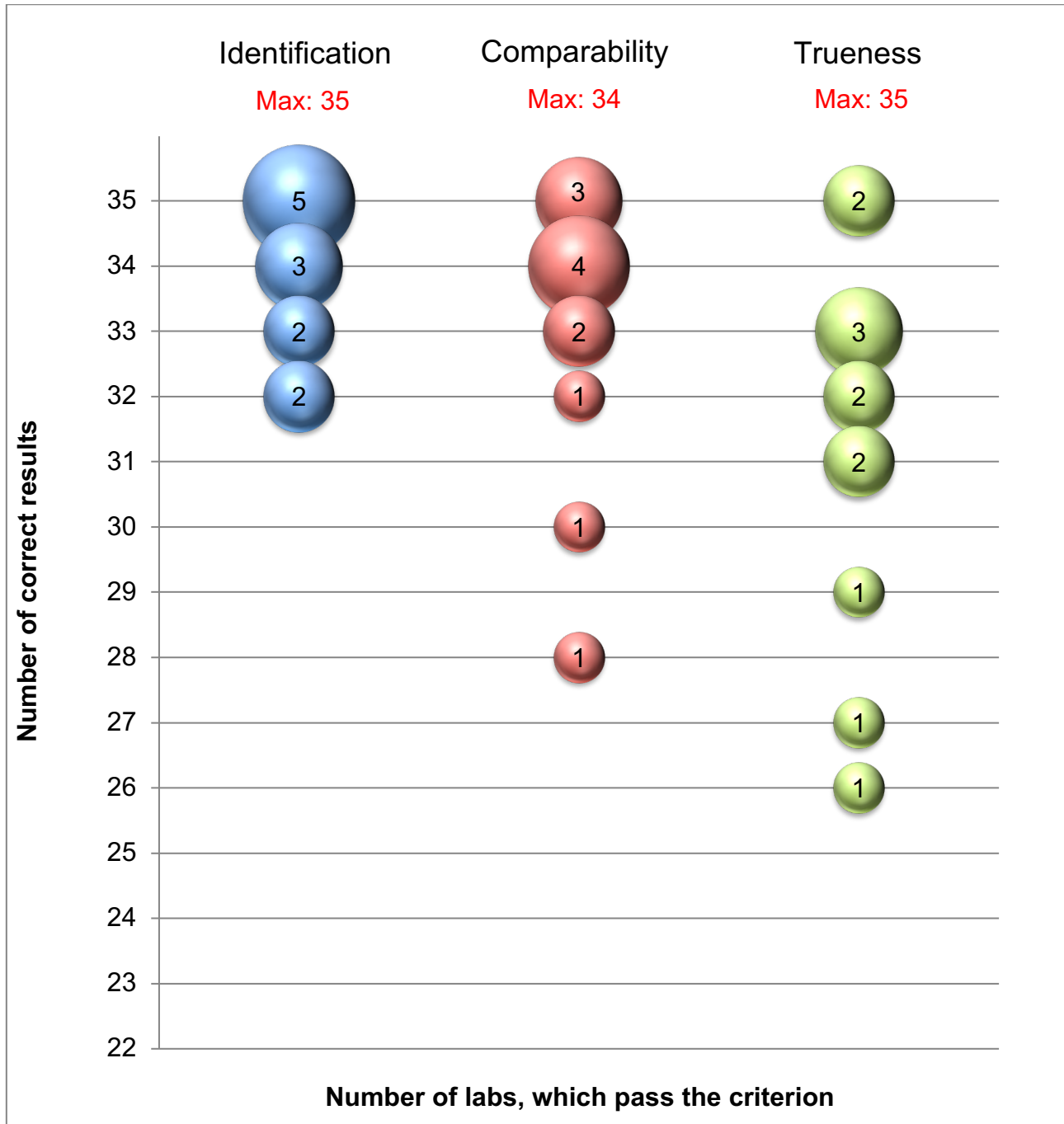
The test material is prepared of organic paprika powder. The raw material is homogenised, tested for incurred residues and spiked with 35 pesticides thereafter.

The analytical challenge is to identify and quantify 35 pesticides in the test material. The identity of the pesticides, the spiked levels and a summary of the overall performance of the laboratories are provided in the table below.

## Summary of results

Pesticide	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results	Comparability criterion: no. of participants, which pass the criterion (z-score $\leq  2 $ )	Trueness criterion: no. of participants which pass the criterion (70-120 % recovery of the spiked level)
2,4-D	0.12	0.134	11	11	8
Acetamiprid	0.028	0.0279	12	12	11
Azoxystrobin	0.075	0.0758	12	12	12
Bifenthrin	0.035	0.0383	11	11	9
Boscalid	0.10	0.0950	12	11	11
Carbendazim	0.14	0.145	12	11	11
Carbofuran	0.020	0.0200	12	11	10
Chlorantraniliprole	0.069	0.0728	12	11	10
Chlorfenapyr	0.10	0.0961	12	12	12
Chlorpyrifos	0.030	0.0305	12	12	12
Cyfluthrin	0.085	0.0766	12	12	12
$\lambda$ -Cyhalothrin	0.088	0.0869	12	11	10
$\alpha$ -Cypermethrin	0.27	0.252	11	11	11
Deltamethrin	0.054	0.0517	12	12	11
Difenoconazole	0.092	0.0896	12	12	12
Fenpropathrin	0.024	0.0249	10	10	9
Fipronil	0.032	0.0295	12	12	12
Imidacloprid	0.055	0.0559	12	12	12
Indoxacarb	0.035	0.0339	12	12	11
Lufenuron	0.13	0.124	11	10	10
MCPA (free acid)	0.042	0.0461	10	9	8
Methamidophos	0.091	0.0926	12	11	10
Methomyl	0.038	0.0396	12	12	11
Methoxyfenozide	0.047	0.0398	12	11	10
Myclobutanil	0.075	0.0713	12	12	12
Pendimethalin	0.054	0.0578	12	12	11
Permethrin	0.25	0.210	12	11	10
Piperonyl butoxide	0.078	0.0793	12	12	12
Prochloraz	0.086	0.0838	12	12	12
Procymidone	0.19	0.195	12	12	12
Propamocarb	0.062	0.0652	10	10	9
Tebuconazole	0.14	0.139	12	12	12
Tebufenozide	0.024	0.0251	11	11	10
Triadimenol	0.18	0.180	11	11	11
Triazophos	0.069	0.0629	11	11	11

Summary of the performance of the laboratories:



Total No. of labs: 12