rolling proof 2017
Module tea and spices

Mixed herbal tea – P1713-RT

Summary

The entire report is made available to participants only.

Designed, realised and evaluated by

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The aim of *rolling proof* is to offer laboratories the opportunity to test the applied pesticide multi-residue methods for the most relevant pesticides and in different matrices within one cycle of accreditation.

Thus, *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 11945/2015, 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.
- 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* of the results. The evaluation of the comparability is based on the z-score model. The z-score should be at least ≤ |2|.
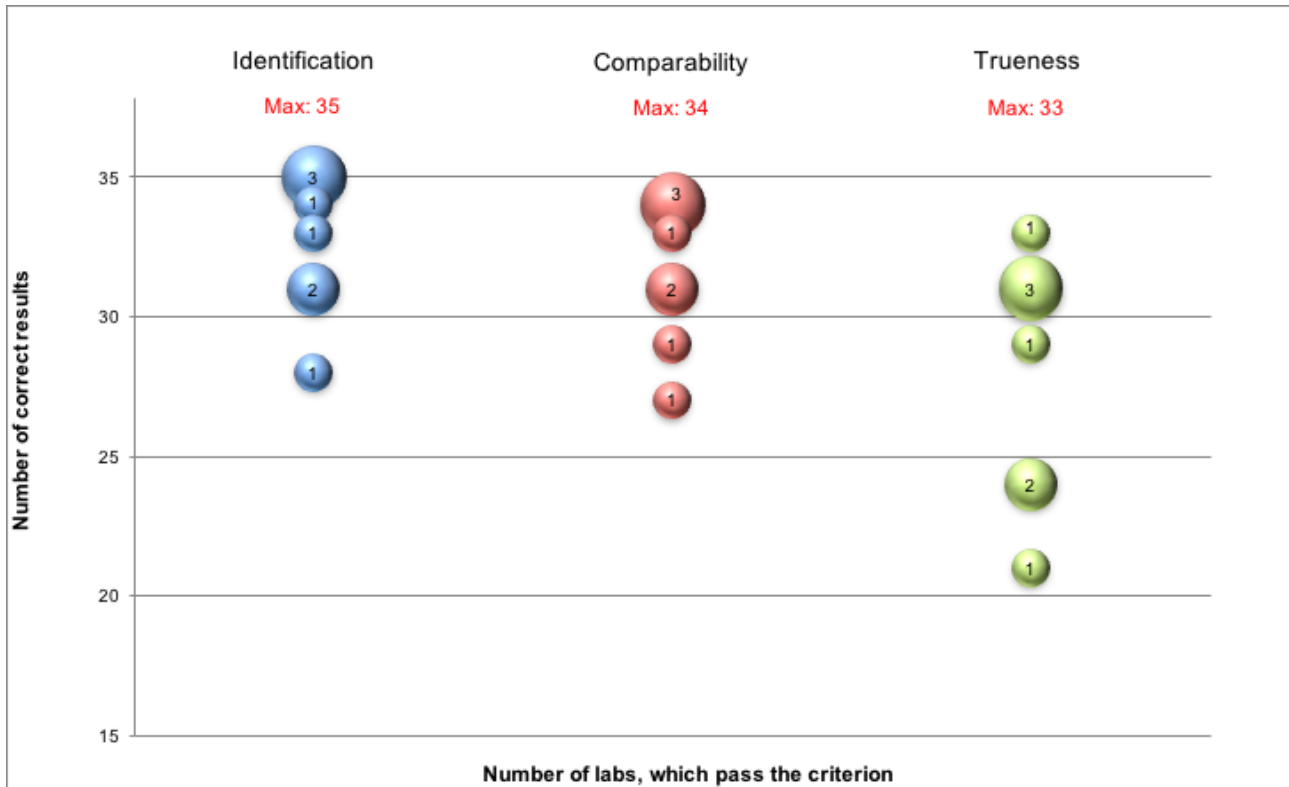
In 2017, a mixed herbal tea is chosen as matrix for *rolling proof* – module "tea and spices". Eight laboratories across four countries (Austria, Germany, Spain and Switzerland) took part in the test. All of them reported results and are considered for evaluation.

The test material was prepared of a mixed organic herbal tea (anise hyssop, lemon balm, apple mint, peppermint, red clover, lemon thyme, sage, yarrow, and basil). The raw material was milled to a fine powder, homogenised, tested for incurred residues and spiked with 35 pesticides thereafter. 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	No. of participants, which pass the **comparability criterion** (z-score ≤ |2|)	No. of participants which pass the **trueness criterion** (70-120 % recovery of the spiked level)
Acephate	0.058	0.0555	6	6	5
Bentazone	0.072	0.0808	7	6	4
Carbofuran	0.030	0.0243	7	7	6
Chlorantraniliprole	0.083	0.0814	7	7	5
Chlorothalonil	0.067*	0.0329	8	7	not evaluated
Clomazone	0.097	0.0959	7	7	7
Cyprodinil	0.12	0.113	8	8	8
Dimethomorph	0.028	0.0269	8	8	8
Dodine	0.068	0.0634	7	7	6
Endosulfan-beta	0.10	0.0860	8	8	8
Fenoxycarb	0.044	0.0446	8	8	8
Fluazifop-P-butyl	0.035	0.0341	7	7	7
Flufenoxuron	0.042	0.0411	8	7	7
Flusilazole	0.073	0.0655	8	8	8
HCH-alpha	0.030	0.0281	8	8	6
Imazalil	0.045	0.0376	7	7	7
Imidacloprid	0.075	0.0701	8	8	8
Indoxacarb	0.15	0.131	8	8	6
Linuron	0.067	0.0663	6	6	6
Malathion	0.026	0.0219	8	8	7
MCPA (free acid)	0.022	-	5	not evaluated	4
Methidathion	0.089	0.0797	8	8	8
Methoxyfenozide	0.051	0.0363	7	7	5
Omethoate	0.025	0.0269	7	7	6
Penconazole	0.072	0.0678	8	8	8
Pirimicarb	0.13	0.121	8	8	7
Pirimiphos-methyl	0.045	0.0464	8	8	7
Procymidone	0.040	0.0385	8	8	8
Prometryn	0.026	0.0244	8	8	8
Propyzamide	0.033	0.0319	8	8	8
Pyrimethanil	0.052	0.0517	8	8	8
Quizalofop-ethyl	0.091	0.0992	6	6	4
Spinosad	0.049*	0.0579	8	7	not evaluated
Tebuconazole	0.085	0.0745	8	8	8
Trifluralin	0.060	0.0565	8	8	8

* For information purposes only.

Summary of the performance of the laboratories:

Total No. of labs: 8