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proof acs

rolling proof 2016

Module cereals and pulses

Dried beans – P1623-RT

Summary

The entire report is made available to the participants only.

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rolling proof is an on-going scheme of ring tests. 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.

The module "cereals and pulses" of ***rolling proof*** is focused on the commodity group "high starch and/or protein content and low water and fat content" (SANTE 11945/2015, Annex A), which consists of the commodity categories

- dry legume vegetables/pulses (e.g. dried beans and lentils), and
- cereal grain and products thereof (e.g. grains, maize, rice, breakfast cereals, bread).

One test is performed for the module "cereals and pulses" in each year. The matrix of the test material is chosen of the commodity categories above. In 2016, dried beans are selected as representative commodity of the commodity category "dry legume vegetables/pulses".

The module "cereals and pulses" 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.

The performance of laboratories in the test is evaluated according 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.

Seven laboratories across four countries (Austria, Germany, Spain and Switzerland) took part in the test. Six of them reported results and were considered for evaluation.

The test material was prepared of organic bean flour. The raw material was homogenised, tested for incurred residues and spiked with 34 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]	Total number of results	No. of participants, which pass the **trueness criterion**
Acephate	0.038	6	6
Acetamiprid	0.055	6	5
Boscalid	0.12	6	6
Chlorpyrifos	0.062	6	5
λ-Cyhalothrin	0.044	6	4
α-Cypermethrin	0.041	6	5
Deltamethrin	0.092	6	6
p,p`-Dicofol	0.086	5	Not evaluated
Difenoconazole	0.053	6	6
Emamectin	0.036	6	5
α-Endosulfan	0.061	6	5
Endosulfan sulfate	0.056	6	6
Fenhexamid	0.024	6	5
Fluazifop	0.088	6	3
Fludioxonil	0.12	6	5
Flufenoxuron	0.045	6	5
Flusilazole	0.035	6	6
Hexaconazole	0.044	6	6
Imidacloprid	0.13	6	6
Iprodione	0.17	6	6
Lenacil	0.076	6	6
Oxamyl	0.028	6	6
Phosmet	0.039	6	6
Pirimicarb	0.095	6	6
Propamocarb	0.037	6	6
Pyrethrins	0.25	3	Not evaluated
Pyridaben	0.045	6	6
Pyrimethanil	0.079	6	6
Spinosad	0.030	6	6
Tebuconazole	0.14	6	5
Tebufenpyrad	0.055	6	6
Thiacloprid	0.068	6	6
Thiophanate-methyl	0.11	6	6
Triadimenol	0.090	6	6

Summary of the performances of the laboratories:

- **Dried horse beans are a challenging matrix due to the high levels of lecithins.**
- **Two laboratories *identified all 34 pesticides* correctly, while the other four laboratories *identified 33 out of 34 pesticides* correctly.**
- **One of the participants reported a *false positive* result of fenpropathrin at a level of 0.050 mg/kg, while none of the other participants reported any false positive results.**
- **The most challenging parameters in the test were p,p`-dicofol and the pyrethrins. Dicofol and pyrethrins were evaluated with respect to the correct identification only.**
- **None of the laboratories quantified all pesticides correctly. However, all laboratories quantified more than 90 % correctly, which means at least 29 out of 32 pesticides (p,p`-dicofol and the pyrethrins were evaluated with respect to the correct identification only).**