

Reference Material of  
***rolling proof 2024***  
Multi-method pesticides in spinach

P2422-RMBI



Summary

Reference material P2422-RMBI is validated in the ring test P2422-RT, which is organised, performed, and evaluated according to the requirements of DIN EN ISO/IEC 17043 and the “International Harmonized Protocol”. DIN ISO 13528 is considered during the evaluation of the submitted results and during homogeneity testing. P2422-RT is part of rolling proof 2024, module vegetables and fruits.

Details related to the applied statistics are summarised in the full specification, which is provided after purchase of the reference material.

Reference material P2422-RMBI consists of 120 g of a blueberry homogenate, which is spiked with 32 multi-method pesticides. All 32 pesticides are included in the specification (see table 1).

The reference material is validated in ring test P2422-RT with 15 laboratories. The spiked levels as well as the assigned values, which are calculated of the results of the participants of the ring test P2422-RT, are summarised in table 1.

The corresponding unspiked spinach homogenate (120 g) is available as blank material P2422-BLBI. The blank material is free from all spiked parameters at a level of 0.01 mg/kg (not detected).

Table 1. Spiked levels and assigned values

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
2,4-DDE	0.027	0.0238	15
Aldicarb	0.045	0.0375	15
Atrazine	0.089	0.0782	15
Bentazone	0.055	0.0453	15
Bromophos-methyl	0.022	0.0199	15
Bromuconazole	0.042	0.0315	15
Bupirimate	0.23	0.221	15
Carbophenothion	0.044	0.0370	15
Chlozolinate	0.023	0.0193	15
Cyproconazole	0.077	0.0702	15
Demeton-S-methyl	0.021	0.0210	15
Dichlobenil	0.019	0.0161	15
Dieldrin	0.052	0.0451	15
Fenarimol	0.077	0.0664	15
Flufenoxuron	0.044	0.0427	15
Imidacloprid	0.27	0.245	15
Lenacil	0.19	0.174	15
Lindane	0.025	0.0226	15
Mecoprop (free acid)	0.12	0.107	14
Mepanipyrim	0.044	0.0366	15
Metconazole	0.21	0.189	15
Methiocarb sulfoxide	0.092	0.0849	15
Nuarimol	0.022	0.0191	15
Pyrifenox	0.021	0.0181	14
Spiromesifen	0.025	0.0238	15
Tebuconazole	0.17	0.151	15
Terbacil	0.088	0.0815	15
Thiophanate-methyl	0.081*	0.0355	15
Tolyfluanid	0.033	0.0310	15
Trichlorfon	0.017	0.0174	14
Triclopyr	0.029	0.0260	14
Triforine	0.026	0.0226	10

\* The spiked level is provided for information only. Degradation was observed during homogeneity testing, but no further during stability testing.