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Reference Material
Polar pesticides and contaminants in peppercorn (piper nigrum)

P2618-RMPe



Summary

Reference material P2618-RMPe is validated in the ring test P2618-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. Details related to the applied statistics are summarised in the full specification, which is provided after purchase of the reference material.

Reference material P2618-RMPe consists of 100 g of ground peppercorn (piper nigrum). The reference material is spiked with 11 polar pesticides and contaminants (see table 1).

The corresponding unspiked ground peppercorn (100 g) is available as blank material P2618-BLPe. The blank material contains incurred residues of anthraquinone, chlorate (traces), perchlorate, nicotine, and TFA, while it is free from incurred residues of all other spiked parameters.

The reference material is validated in ring test P2618-RT with 17 laboratories. The spiked levels as well as the assigned values, which are calculated of the results of the participants of the ring test P2618-RT, are summarised in table 1. Assigned values of diquat, paraquat, difluoroacetic acid, and trifluoroacetic acid are not available due to limited number of data reported in P2618-RT. The spiked levels and the trueness criterion (70 to 120 % recovery of the spiked level) are considered for evaluation of the parameters.

It is recommended to order the reference material and the blank material to evaluate the trueness of the results.

Table 1. Spiked levels and assigned values

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
Anthraquinone	0.095	0.116*	14
Biphenyl	0.27	0.244	15
Chlorate	0.13	0.138*	14
Perchlorate	0.092	0.128*	14
Ethephon	0.076	0.0731	12
Phosphonic acid	0.23	0.226	12
Nicotine	0.24	0.241	9
Diquat	0.042	-	5
Paraquat	0.073	-	5
Difluoroacetic acid	0.088	-	6
Trifluoroacetic acid	0.15	-	4

* The assigned values refer to the spiked levels plus the incurred levels in the blank materials.