

Reference Material

Polar pesticides and contaminants in green tea

P2515-RMGt



Summary

Reference material P2515-RMGt is validated in the ring test P2515-RT, which is organised, performed, and evaluated according to the requirements of DIN EN ISO/IEC 17043 and the “International Harmonized Protocol”. 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 P2515-RMGt consists of 100 g of milled green tea. The reference material contains incurred residues trimesium and is spiked with 12 polar pesticides and contaminants (see table 1). 2-chloroethanol is spiked to the reference material. The specified value refers to the sum of 2-chloroethanol and ethylene oxide, expressed as ethylene oxide (ethylene oxide (sum)). The incurred residues of trimesium are not specified.

The corresponding unspiked milled green tea (100 g) is available as blank material P2515-BLGt. The blank material contains incurred residues of perchlorate (about 0.01 mg/kg) and trimesium (not specified), while it is free from incurred residues of all other spiked parameters.

The reference material is validated in ring test P2515-RT with 12 laboratories. The spiked levels as well as the assigned values, which are calculated of the results of the participants of the ring test P2515-RT, are summarised in table 1. Assigned values of biphenyl, glyphosate, AMPA, diquat, paraquat, matrine, oxymatrine, and ethylene oxide are not available due to limited number of data reported in P2515-RT. The spiked levels are considered for evaluation of the parameters.

Table 1. Spiked levels and assigned values

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
Anthraquinone	0.072	0.0668	7
Biphenyl	0.034	-	6
Chlorate	0.089	0.0894	9
Perchlorate	0.13	0.138	9
Nicotine	0.12	0.119	8
Glyphosate	0.045	-	6
AMPA	0.083	-	6
Diquat	0.11	-	3
Paraquat	0.074	-	3
Matrine	0.088	-	4
Oxymatrine	0.067	-	4
Ethylene oxide (sum)	0.14*	-	5

* Calculated of the spiked level of 2-chloroethanol of 0.26 mg/kg