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Reference Material
Polar pesticides and contaminants in black tea

P2615-RMBt

Summary

Reference material P2615-RMBt is validated in the ring test P2615-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 P2615-RMBt consists of 120 g of milled black tea. The reference material contains incurred residues of nicotine and 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 black tea (120 g) is available as blank material P2615-BLBt. The blank material contains incurred residues of anthraquinone at trace levels < 0.01 mg/kg, as well as nicotine and trimesium (not specified), while it is free from incurred residues of all other spiked parameters.

The reference material is validated in ring test P2615-RT with 11 laboratories. The spiked levels as well as the assigned values, which are calculated of the results of the participants of the ring test P2615-RT, are summarised in table 1. Assigned values of AMPA, diquat, paraquat, matrine, oxymatrine, ethylene oxide, and bromide are not available due to limited number of data reported in P2615-RT. The spiked levels and the trueness criterion (70 to 120 % recovery of the spiked level) 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	0.036	0.0400	9
Biphenyl	0.059	0.0599	9
Chlorate	0.042	0.0432	8
Perchlorate	0.065	0.0644	8
Nicotine	incurred	0.212	9
Glyphosate	0.093	0.0914	7
AMPA	0.044	-	7
Trimesium	incurred	-	5
Diquat	0.088	-	4
Paraquat	0.057	-	4
Matrine	0.053	-	6
Oxymatrine	0.076	-	6
Ethylene oxide (sum)	0.099*	-	4
Inorganic bromide	85	-	2

* Calculated of the spiked level of 2-chloroethanol of 0.18 mg/kg