

Reference Material

Organic and inorganic contaminants in waste wood

P2539-RMWw



Summary

Reference material P2539-RMWw is validated in the ring test P2539-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 P2539-RMWw consists of 50 g of waste wood, which contains organic and inorganic contaminants. General parameters like moisture content, ash content, gross calorific value and net calorific value are included in the specification as well (see table 1).

The reference material is validated in ring test P2539-RT with 14 laboratories (table 1). Spiked parameters are PCBs (28, 101, 138, 153, and 180), Hg, and F. Accepted ranges with respect to the comparability ($|z\text{-score}| \leq 2$) and the trueness (70 to 120 % recovery of the spiked level) are specified for the spiked parameters. Accepted ranges with respect to the comparability criterion are specified for all other parameters.

Table 1. Spiked levels and assigned values

Parameter	Unit	Spiked level	Assigned value	Total number of results
PCB 28	mg/kg DM	0.13	0.119	12
PCB 101	mg/kg DM	0.46	0.408	12
PCB 138	mg/kg DM	0.74	0.755	12
PCB 153	mg/kg DM	0.67	0.707	12
PCB 180	mg/kg DM	0.31	0.352	12
Sum of PCBs	mg/kg DM	2.3	2.34	12
PCP	mg/kg DM	-	0.902	12
As	mg/kg DM	-	3.02	11
Cd	mg/kg DM	-	0.414	11
Cr	mg/kg DM	-	50.0	11
Cu	mg/kg DM	-	22.5	11
Pb	mg/kg DM	-	21.0	11
Hg	mg/kg DM	0.39*	0.403	12
F	mg/kg DM	75	79.0	11
Cl	mg/kg DM	-	689	11
Moisture content	% w/w	-	5.92	13
Ash content	% w/w	-	2.79	8
Gross calorific value	MJ/kg	-	18.3	7
Net calorific value	MJ/kg	-	16.7	7

* Target value (spiked level 0.32 mg/kg DM + 0.070 mg/kg DM contamination of the blank material).