

Reference Material MOSH/MOAH in chocolate bread spread P2205-RMCs



- Summary -

Please note:

Reference material P2205-RMCs is a validated control material and not a certified reference material. The reference material is validated in method ring test P2205-MRT with 11 laboratories. The method ring test 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 of P2205-MRT 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.

The reference material P2205-RMCs consists of 50 g of chocolate bread spread, which is spiked with a technical white oil and a lubricant oil. 11 laboratories took part in the method ring test P2205-MRT. The spiked level as well as the assigned values, which are calculated of the results of the participants of the method ring test P2205-MRT, are summarised in table 1.

The corresponding unspiked chocolate bread spread is available as blank material P2205-BLCs (50 g). The blank material contains total MOSH at a level of about 5 mg/kg, while total MOAH is < 0.5 mg/kg (see table 2).

Table 1. Reference material P2205-RMCs - spiked levels and assigned values

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
Total MOSH (total hump) (\geq n-C10 to \leq n-C50)	6.3	12.1*	11
Total MOAH (total hump) (\geq n-C10 to \leq n-C50)	4.4	3.73	10

* The assigned value corresponds to total MOSH in the blank material plus the spiked level.

Table 2. Blank material P2205-BLCs - assigned values

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
Total MOSH (total hump) (\geq n-C10 to \leq n-C50)	unspiked	5.15	11
Total MOAH (total hump) (\geq n-C10 to \leq n-C50)	unspiked	< 0.5	11

Total MOSH and total MOAH are determined according to the guidance document of JRC:

“[...] by integration of the whole signal interval in the chromatogram, starting at the retention time of the peak start of n-C10 and ending at the retention time of the peak end of n-C50 after the elimination of the identified sharp peaks above the hump and if possible, elimination of POH and/or POA signals.”

(Bratinova S, Hoekstra E. Guidance on sampling, analysis and data reporting for the monitoring of mineral oil hydrocarbons in food and food contact materials. Luxembourg: Publications Office of the European Union; 2019, Page 16).