

Reference Material  
MOSH/MOAH in rice flour  
LC-GC-FID and GCxGC-FID

P2503-RMRi



Summary

Reference material P2503-RMRi is validated in method ring test P2503-MRT, 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 of P2503-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.

Reference material P2503-RMRi consists of 60 g of rice flour, which is spiked with a technical white oil and a crude oil (see table 1).

The corresponding unspiked rice flour is available as blank material P2503-BLRi (60 g). The blank material contains about 2.1 mg/kg of total MOSH, while it is free from MOAH (< 0.3 mg/kg, see table 2).

12 laboratories took part in method ring test P2503-MRT, 9 for the analysis of the material by GCxGC-FID, and 12 for the analysis of the material by LC-GC-FID. The spiked levels as well as the assigned values, which are calculated of the results of the participants of P2503-MRT, are summarised in table 1.

The results are evaluated with respect to the comparability criterion ( $|z\text{-score}| \leq 2$ ) and the trueness criterion (70 to 120 % recovery of the spiked level). The results related to the blank material are subtracted from the results related to the test material for evaluation of the trueness of results related to total MOSH. We recommend to order the blank material and the test material.

*Table 1. Reference material P2503-RMRi - spiked levels and assigned values*

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
MDAF	2.4	2.52	9
TPAF	3.4	3.04	9
Total MOAH (GCxGC-FID)	5.8	5.01	9
Total MOAH (LC-GC-FID)	5.8	5.67	12
Total MOSH (LC-GC-FID)	3.6	4.96*	12

\* The assigned value corresponds to the level of MOSH in the blank material (assigned value 2.1 mg/kg) plus the spiked level of 3.6 mg/kg.

*Table 2. Blank material P2503-BLRi - assigned values*

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
MDAF	unspiked	<0.3	-
TPAF	unspiked	<0.3	-
Total MOAH (GCxGC-FID)	unspiked	<0.3	-
Total MOAH (LC-GC-FID)	unspiked	<0.3	-
Total MOSH (LC-GC-FID)	unspiked	2.13	12