

Reference Material MOSH/MOAH in rice bran oil

P2604-RMRb



Summary

Reference material P2604-RMRb is validated in method ring test P2604-MRT, 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 of P2604-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 P2604-RMRb consists of 2 x 40 ml of rice bran oil, which contains a contamination with MOSH and MOAH (see table 1). The material is not spiked with MOSH and MOAH.

12 laboratories took part in method ring test P2604-MRT related to the rice bran oil. The assigned values, which are calculated of the results of the participants of P2604-MRT, are summarised in table 1.

The results are evaluated with respect to the comparability criterion ($|z\text{-score}| \leq 2$).

Table 1. Reference material P2604-RMRb - spiked levels and assigned values

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
Total MOSH ($\geq n\text{-C10}$ to $\leq n\text{-C50}$)	unspiked	13.4	12
Total MOAH ($\geq n\text{-C10}$ to $\leq n\text{-C50}$)	unspiked	6.18	12

In P2604-MRT, the labs were instructed to determine total MOSH and total MOAH in accordance with the guidance document of the Joint Research Centre of the European Commission as follows:

“[...]by integrating the chromatogram,

- from the retention time of the beginning of the n-C10 peak;*
- to the retention time of the end of the n-C50 peak;*
- after the trimming of the riding peaks [...] above the hump(s); and*
- after the subtraction of/adjustment for the reagent blank (baseline).*

The obtained “corrected hump” should be an unambiguously identified smooth hump“ (page 15).