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Reference Material
MOSH/MOAH in peanut oil

P2604-RMPn

Summary

Reference material P2604-RMPn 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-RMPn consists of 2 x 40 ml of peanut oil, which contains a contamination with MOSH and is spiked with MOAH using a technical white oil (see table 1).

The corresponding unspiked peanut oil is available as blank material P2604-BLPn (1 x 40 ml). The blank material contains about 9.0 mg/kg of total MOSH (assigned value 8.66 mg/kg), while it is free from MOAH (< 1.0 mg/kg, see table 2).

13 laboratories took part in method ring test P2604-MRT related to the peanut oil. The spiked level as well as the assigned values, which are calculated of the results of the participants of P2604-MRT, are summarised in table 1.

The results related to total MOSH are evaluated with respect to the comparability criterion (|z-score| ≤ 2), while the results related to total MOAH are evaluated with respect to the comparability criterion and the trueness criterion (70 to 120 % recovery of the spiked level).

Table 1. Reference material P2604-RMPn - spiked level and assigned values

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
Total MOSH (≥ n-C10 to ≤ n-C50)	unspiked	9.00	13
Total MOAH (≥ n-C10 to ≤ n-C50)	4.1	3.53	13

Table 2. Blank material P2604-BLPn - assigned values

Parameter	Assigned value [mg/kg]	Total number of results
Total MOSH (≥ n-C10 to ≤ n-C50)	8.66	13
Total MOAH (≥ n-C10 to ≤ n-C50)	<1.0	13

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).