

# Reference Material MOSH/MOAH in paprika (spice)

P2403-RMPa



## Summary

Reference material P2403-RMPa is validated in method ring test P2403-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 P2403-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 P2403-RMPa consists of 50 g of paprika powder (spice), which is spiked with MOSH and MOAH with a process oil and a base oil (see table 1).

The corresponding unspiked paprika powder (spice) is available as blank material P2403-BLPa (50 g). The blank material contains about 7.4 mg/kg of total MOSH, while it might contain trace levels of about 1 mg/kg of total MOAH (see table 2).

15 laboratories took part in method ring test P2403-MRT. The spiked levels as well as the assigned values, which are calculated of the results of the participants of P2403-MRT, are summarised in table 1.

*Table 1. Reference material P2403-RMPa - spiked levels and assigned values*

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
Total MOSH (≥ n-C10 to ≤ n-C50)	14	21.5*	14
Total MOAH (≥ n-C10 to ≤ n-C50)	6.2	6.62	15

\* The assigned value refers to the spiked value plus the level of MOSH in the blank material.

*Table 2. Blank material P2403-BLPa - assigned values*

Parameter	Spiked level [mg/kg]	Assigned value [mg/kg]	Total number of results
Total MOSH (≥ n-C10 to ≤ n-C50)	unspiked	7.42	14
Total MOAH (≥ n-C10 to ≤ n-C50)	unspiked	< 2	-

In P2403-MRT, the labs were instructed to determine total MOSH and total MOAH in accordance with the “Guidance on sampling, analysis and data reporting for the monitoring of mineral oil hydrocarbons in food and food contact materials”, published by 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).*