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Validated Reference Material MOSH/MOAH in sunflower oil

P2016-RMSu

- Summary -

Please note:
Reference material P2016-RMSu is a validated control material and not a certified reference material. The reference material consists of 2 x 40 ml of sunflower oil, which is spiked with the lubricant oil Shell Gadus as well as with a technical creeping oil (see table 1). Shell Gadus contains MOSH and MOAH, while the technical creeping oil contains MOSH and is free from MOAH. The corresponding unspiked sunflower oil is available as blank material P2016-BLSu (2 x 40 ml). The blank material contains total MOSH at a level of about 1 mg/kg, while total MOAH is < 1 mg/kg.

The reference material is validated in method ring test P2016-MRT with 12 laboratories. The spiked levels as well as the assigned values, which are calculated of the results of the participants of the method ring test P2016-MRT, are summarised in table 1. The level of MOSH in the blank material is not considered during calculation of the assigned value.

Table 1. 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)	24.5	23.4	12
Total MOAH (≥ n-C10 to ≤ n-C50)	2.9	2.84	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).