

Testing methods for Lipcare products: Determination of MOSH and MOAH

Due to a recent recommendation issued by the German Federal Institute of Risk Assessment, state-of-the-art technology should be used to reduce the MOAH content in cosmetic products. This article shows the challenges of this assessment and the advantages of a two-dimensional gas chromatography technology.

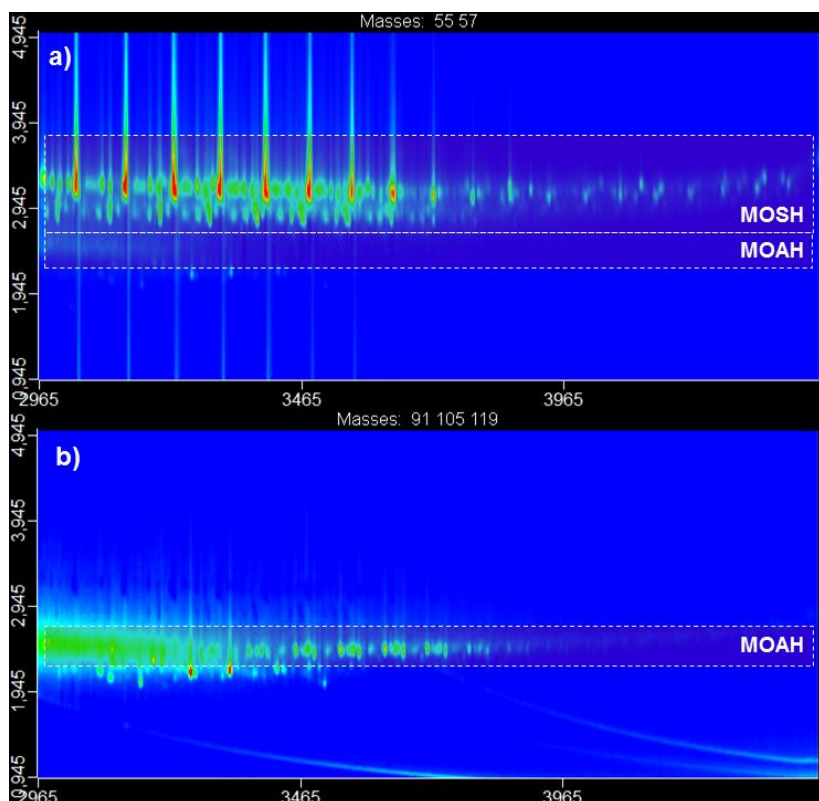


Figure 2

Figure 2:

MOSH and MOAH fraction at an elution temperature range of 250 – 360 °C;

selected ions (m/z 55, 57) indicate aliphatic hydrocarbons (a);

selected ions m/z 91, 105 and 119 indicate Phenyl alkanes (b)

Literature References

- [1] A.V. Rawlings et al. (2012), International Journal of Cosmetic Science, 34, 511-518
- [2] European Food Safety Authority (EFSA) (2012), Scientific Opinion on Mineral Oil Hydrocarbons in Food, EFSA Journal 2012,10(6):2704
- [3] Stiftung Warentest (2015), mineral oil in cosmetics, test 06/2015, 28-32
- [4] M. Biedermann et al. (2015), Science of the total Environment, 506-507, 644-655
- [5] N. Contin et al. (2008), Food and Chemical Toxicology, 46, 2, 544-552
- [6] Kantonales Labor Basel Stadt (2014),
<http://www.gesundheitsschutz.bs.ch/dms/gesundheitschutz/download/konsum-umwelt/berichte/berichte-2014/Lippenstift-Paraffine2014/Lippenstift%20Paraffine%202014.pdf>
- [7] Bundesinstitut für Risikobewertung (BfR) (2015), risk assessment No. 014/2015 (May 26 2015)
- [8] K. Grob et al. (1995), Journal of Chromatography A, 703, 1-2, 265-276
- [9] M. Biedermann et al. (2009), Journal of Agriculture and Food Chemistry, 57, 8711-8721