

VALIDATION OF GC-MS/MS CONFIRMATORY METHOD FOR THE EU OFFICIAL CONTROL OF LEVELS OF PCDD/F AND DL-PCB IN FEED, ANTICIPATING AMENDMENT TO REGULATION (EU) No 278/2012.

Benjamin L'homme¹, Chris Sandy², Georges Scholl¹, Gauthier Epepe¹, Jean-François Focant¹

¹ OBiAChem - University of Liège, Allée du 6 Août, B6c, B-4000 Liège, Belgium

² Agilent Technologies, Wharfedale Road, RG41 5TP Wokingham, United Kingdom

Criteria for sampling and analysis for the official control of levels of dioxins (including polychlorinated dibenzo-*p*-dioxins -PCDDs- and polychlorinated dibenzofurans -PCDFs-), and dioxin-like PCBs (DL-PCBs) in feeding stuff and in certain foodstuffs are described in Commission Regulations (EU) No 278/2012 [1] and 252/2012 [2]. At the time the abstract is written (Feb. 2014), gas chromatography high resolution mass spectrometry (GC-HRMS) is required for the confirmatory analysis of PCDD/Fs and DL-PCBs whereas MS/MS technology can only be used as screening method. However, a new amendment to part B of Annex V to Commission Regulation (EU) No 152/2009, currently amended by Regulation (EU) No 278/2012, has already been voted [3] and shall enter into force on early 2014. This amendment will allow the use of GC-MS/MS systems as confirmatory method in official control of dioxins and dioxin-like PCBs

This work aims to prove that this technology meets requirements and comply with standard criteria established for GC-HRMS. The MS/MS method has been validated for feed material of plant origin (vegetable oil) at the regulation level [4] of 0,75ng WHO-PCDD/F-TEQ/kg and 1,5ng WHO-PCDD/F-PCB-TEQ/kg. Results are also compared with the current routine confirmatory GC-HRMS method. Validation will further be extended to other matrices.

References

[1] Commission Regulation (EC) No 278/2012 of 28 March 2012 amending Regulation (EC) No 152/2009 (OJ L 91, 29.3.2012, p. 8–22)

[2] Commission Regulation (EU) No 252/2012 of 21 March 2012 repealing Regulation (EC) No 1883/2006 (OJ L 84, 23.3.2012, p. 1–22)

[3] SANCO/11950R2/2013 (not published on 29th of January, 2014)

[4] Commission Regulation (EU) No 277/2012 of 28 March 2012

amending Annexes I and II to Directive 2002/32/EC (OJ L 91, 29.3.2012, p. 1–7)