



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL  
JOINT RESEARCH CENTRE  
Institute for Reference Materials and Measurements  
Food Safety and Quality Unit

Geel, 16 October 2006

**Subject: Validation of a method for the determination of a mixture of authorised and non-authorised sweeteners in food using HPLC-ELSD**

Dear Madam / Dear Sir,

The Institute for Reference Materials and Measurements (IRMM) of the European Commission's Directorate-General Joint Research Centre (EC-JRC) is in the process of validating a method for the determination of a mixture of authorised and non-authorised sweeteners in various food matrices. The need for multiple analyte methods has been growing since the initial EC legislation (Council Directive 89/107/EEC, as amended by Directive 94/34/EC) and following specialised directives on sweeteners, Directive 94/35/EC, as amended by Directives 96/83/EC and 2003/115/EC, have been published. The IRMM activity is in direct response to the amendments made on initial EC legislation leading to an increased number of authorised sweeteners found on the market in all 25 EU Member States.

IRMM has developed a multi-analyte method for the determination of both authorised (sucralose, acesulfame K, aspartame, sodium cyclamate, sodium saccharin, neohesperidine DC) as well as non-authorised sweeteners (neotame, alitame, dulcin) in beverages, tinned fruits, yoghurt using high performance liquid chromatography in combination with an evaporative light scattering detector (HPLC-ELSD).

Currently, we are soliciting potential collaborators for enrolling in an international collaborative study to test the proposed **HPLC-ELSD** method for its fitness-for-purpose.

In principle, the **HPLC-ELSD** method requires:

- HPLC-ELSD system equipped with at least a binary gradient pump
- LC column: Machery-Nagel, NUCLEODUR® C18 Pyramid 5µ, 250 mm x 3 mm
- SPE equipment for sample clean-up

The general lay-out of the proposed collaborative study is as follows:

- Analyses of
  - o 16 samples i.e. two food matrices (beverage, yoghurt) spiked with 8 sweeteners differing in their concentration level
  - o 4 blank samples
- Calibration curves have to be prepared using a standard solution provided by the IRMM
- An electronic spreadsheet will be distributed by the IRMM for data processing.
- IRMM will collate the results for statistical treatment:

We foresee to distribute the samples **the second week of January 2007**. The analyses shall be carried out within three weeks and the results returned by **first week of February 2007**. You will be kept informed of the final schedule.

If you are interested in participating, please confirm by returning the attached registration form by fax/e-mail at your earliest convenience, but not later than **30 November 2006**. If you might know another laboratory having an interest in joining this collaborative trial please feel free to forward this invitation letter. If you have any additional questions please do not hesitate to contact Manuela Buchgraber (jrc-irmm-sweeteners@ec.europa.eu).

We sincerely hope that you will actively support our intentions and would appreciate your participation in this community effort. The outcome should benefit the European industry, food authorities as well as the consumer.

Yours sincerely,

(signed)

Manuela Buchgraber (*Study Co-ordinator*)

Franz Ulberth (*Science Co-ordinator of Food Safety and Quality Unit*)