EUROMET PROJECT
FINAL REPORT

1. Ref. No.: **565**	2. Subject Field: **METCHEM**
3 Type of collaboration: **Comparison**	
4A. Partners: **"VSCHT Praha", "Danish Veterinary and Food Administration", "IRMM", "BNM-LNE", "PTB", "BAM", "Bálint Analitika Budapest", "Institute of Agricultural and Food Biotechnology Warsaw", "National Food Administration Uppsala", "EMPA", "NMi" and "LGC"**	4B: CEC funded? **No** JRC funded? **Yes**
5. Participating countries: **Czech Republic, Denmark, European Commission, France, Germany (2), Hungary,Poland, Sweden, Switzerland, The Netherlands and United Kingdom**	
6. Title: **Cd in rice**	

7. Progress:

The EUROMET project 565 is a regional key comparison in the framework of the CIPM MRA and it is linked to CCQM-K24 and CCQM P29. Taking into account that rice is a very important foodstuff world-wide, since the 2/3 of Earth's population is having rice as a basis of their diet, the aim of the comparison was to establish international comparability of measurements of Cd in rice. The same samples measured by the EUROMET partners were also measured by NMIs in CCQM K24 and CCQM P29. Field laboratories will also measure them in the framework of IMEP-19. In this way an overview of measurement capability from laboratories with different metrological function will be displayed.
The reference value was taken from the CCQM K24 key comparison:
KCRV for Cd amount content: 14.418 ± 0.087 nmol/g (*k*=2)

The EUROMET Project 565 participants' results are given in tables (page 2) and graphically presented (page 3) in this report.

8. Coordinator´s name: **Dr Y. Aregbe**

Address: **Institute for Reference Materials and Measurements**
Retieseweg
B-2440 Geel, Belgium

Telephone: **+32-14-571-673** Telefax: **+32-14-571 865** E-mail: **yetunde.aregbe@irmm.jrc.be**

9. Completion date:	10. Coordinator´s signature:	11. Date:
February 2002		30 April 2002

*) Delete as appropriate

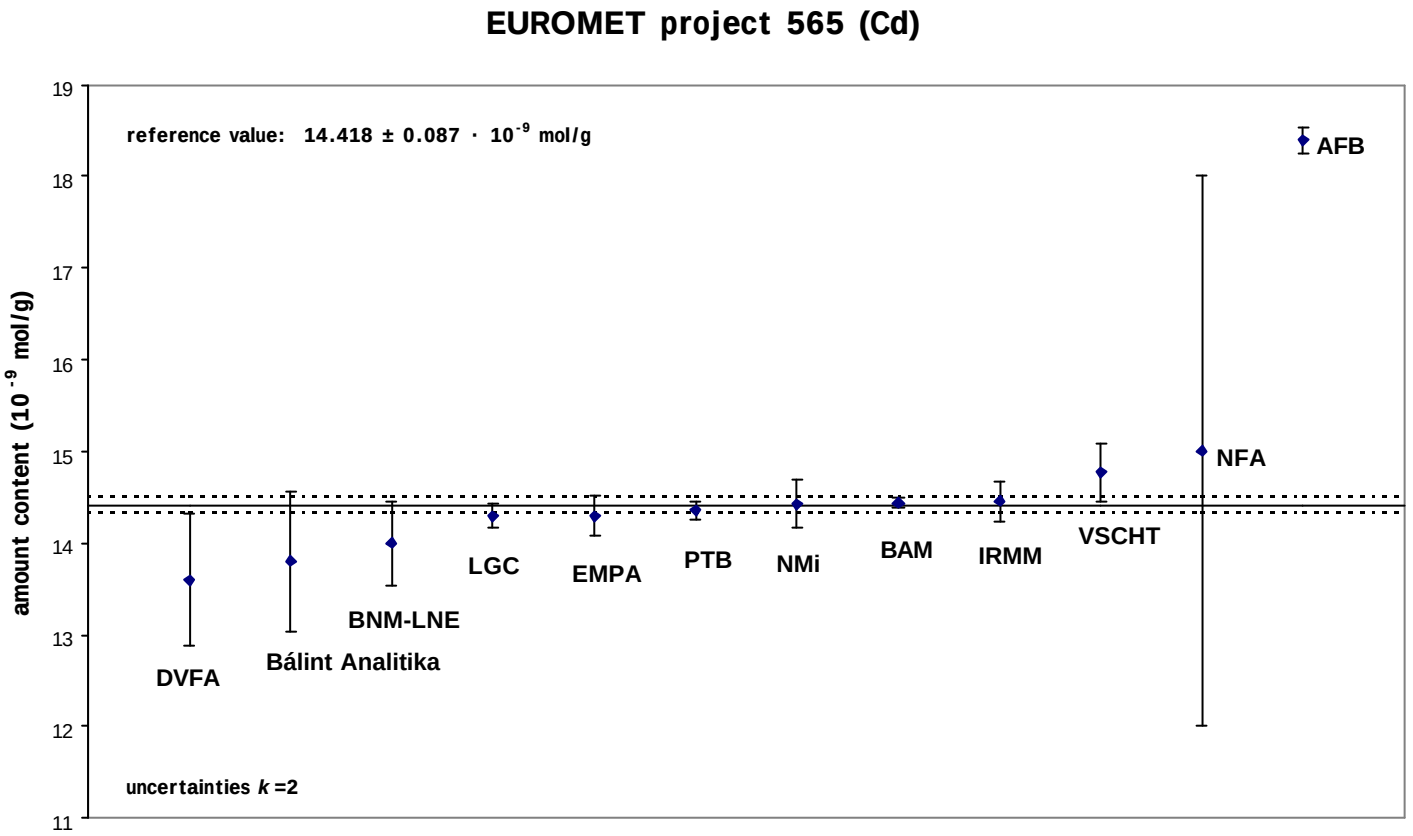
EUROMET project 565
Cd in rice
Participants' results

Results for Cd measurement

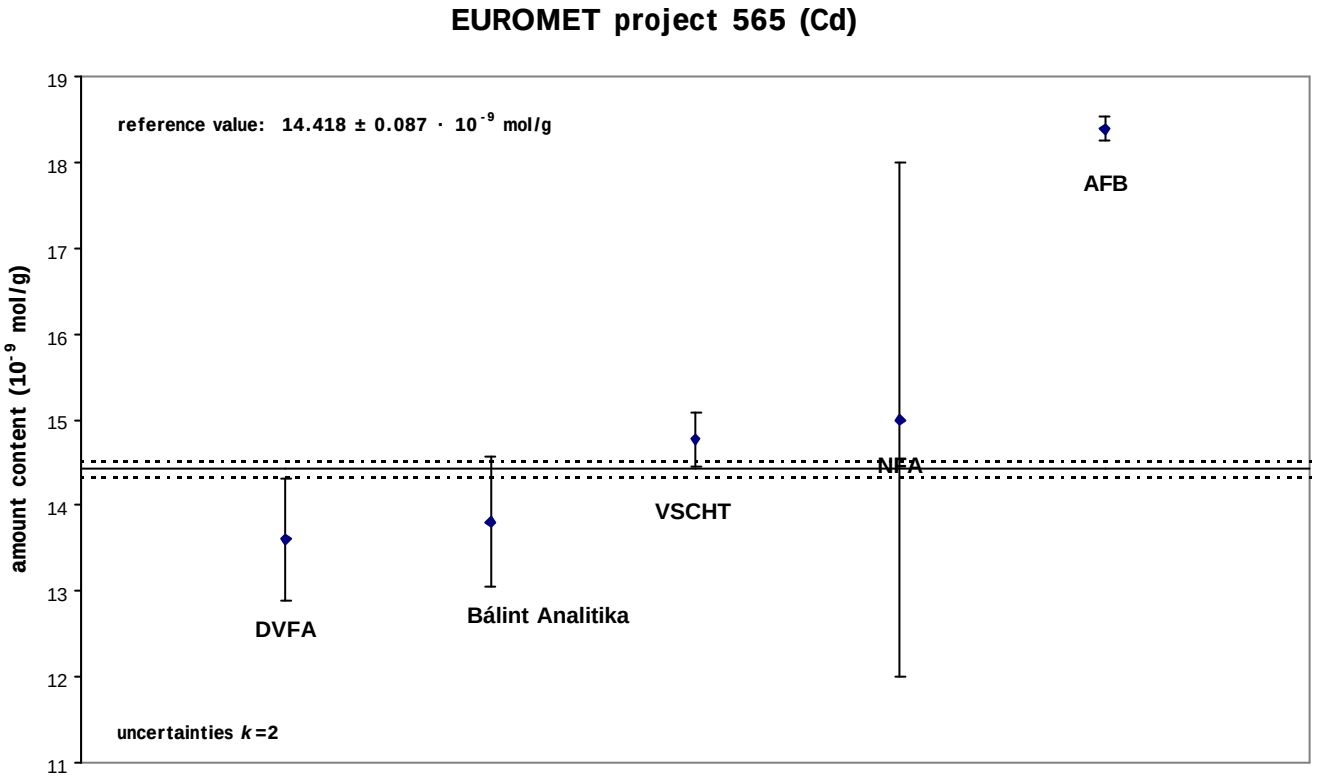
participant	*reported value* $nmol \cdot g^{-1}$	*uncertainty* $nmol \cdot g^{-1}$	*relative uncertainty (%)*
DVFA	13.60	0.72	5.3
Bálint Analitika*	13.80	0.76	5.5
BNM-LNE	14.00	0.46	3.3
LGC	14.30	0.13	0.9
PTB	14.36	0.10	0.7
NMi	14.43	0.26	1.8
BAM	14.440	0.055	0.4
IRMM	14.46	0.22	1.5
VSCHT	14.77	0.31	2.1
NFA*	15	3	20.0
AFB	18.39	0.14	0.8
EMPA	14.3	0.21	1.5

*participant reported value for Cd measurement without exponent, the exponent was added to the value by the EUROMET 565 co-ordinator

EUROMET project 565
Cd in rice
Participants' results graphical display



EUROMET project 565
Cd in rice
Participants results' graphical display, excluding participants in the CCQM comparisons



EUROMET project 565
Cd in rice
Analytical methods and instrumental techniques

participant	*method*	*instrumentation*
DVFA		**ICP-MS**
Bálint Analitika		**ICP-MS**
BNM-LNE	**IDMS**	**ICP-QMS**
LGC	**IDMS**	**ICP-magnetic sector field MS**
PTB	**IDMS**	**ICP-magnetic sector field MS**
NMi	**IDMS**	**ICP-magnetic sector field MS**
BAM	**IDMS**	**Multi collector TIMS**
IRMM	**IDMS**	**ICP-QMS**
VSCHT	**IDMS**	**ICP-MS**
NFA	**AAS**	**GF-AAS**
AFB	**AAS**	**GF-ZAAS**
EMPA	**IDMS**	**Multi collector ICP-MS**

EUROMET project 565
Cd in rice
Participants list

institution / laboratory	origin
DVFA Danish Veterinary and Food Administration	**DENMARK**
Bálint Analitika	**HUNGARY**
BNM-LNE Laboratoire Nationale d'Essais	**FRANCE**
LGC Laboratory of the Government Chemist	**UNITED KINGDOM**
PTB Pfysikalisch Technische Bundesanstalt	**GERMANY**
NMi Nederlands Meetinstituut	**THE NETHERLANDS**
BAM Bundesanstalt für Materialforschung und-prüfung	**GERMANY**
IRMM Institute for Reference Materials and Measurements	**European Commission**
VSCHT VSCHT Praha	**CZECH REPUBLIC**
NFA National Food Administration	**SWEDEN**
AFB Institute of Agricultural and Food Biotechnology	**POLAND**
EMPA EMPA St. Gallen Chemie	**SWITZERLAND**