Institute for Reference Materials and Measurements

ERM European Reference Materials

CERTIFICATE OF ANALYSIS

ERM®- BC515

DRIED CARROT		
Dietary fibre according to	Mass fraction	
	Certified value [1] g/kg	Uncertainty [2] g/kg
AOAC 1990 **985.29** [1]	311	6
Englyst (by GC) [2]	271	6
Uppsala **994.13** [3]	298	11
AOAC 1992 MES-TRIS **991.43** [4]	295(*)	4
Englyst (by Colorimetry) [2]	252	12

1) The certified value is the unweighted mean of the means of the accepted sets of results. (*)In this one case the value is calculated as the mean of all pooled observations. The values are expressed on dry mass basis. The certified values are traceable to the specific method of analysis.

2) U The certified uncertainty is the half-width of the 95 % confidence interval of the mean defined in 1). *k*-factors were chosen according to the t-distribution depending of the number of accepted sets of results and ranged from 2.4 to 3.2.

This certificate is valid until 02/2008; this validity may be extended as further evidence of stability becomes available.
The minimum sample intake is 1 g for the AOAC procedures and 0.3 g for the Englyst and Uppsala procedures.

NOTE

European Reference Material ERM®- BC515 was originally certified as BCR-515. It was produced and certified under the responsibility of the IRMM according to the principles laid down in the technical guidelines of the European Reference Materials® co-operation agreement between BAM-IRMM-LGC. Information on these guidelines is available on the Internet (http://www.erm-crm.org).

Accepted as an ERM®, Geel, April 2004

Signed: 

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DESCRIPTION OF THE SAMPLE

The material consists of dry powdered carrot. It is supplied in units of approximately 25 g in food grade glass bottles with flexible stoppers and tamperproof screw tops which have been sealed under vacuum.

ANALYTICAL METHOD USED FOR CERTIFICATION

Five methods of dietary fibre analysis were used, and the certified values are specific to the specific methods which were used. Some of the methods have changed so it is essential to use the versions referred to in the certification report (see Section 7.2.3. and Annex C).

References to methods:

[1] AOAC Official Methods of Analysis (1990), Total Dietary Fibre in Foods, Enzymatic-Gravimetric method 15th edition, **985.29**, 1105

[2] ENGLYST, H.N., Quigley, M.E., Hudson, G.J., Analyst, 1994, 119, 1497.

[3] Theander, O., Åman. P., Westerlund, E., Andersson, R., and Pettersson D., J. AOAC Int, 1995, 78, 1030.

[4] Lee, S.C., Prosky, L. and De Vries, J.W., J. AOAC Int, 1992, 75, 395

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SAFETY INFORMATION

Not applicable

INSTRUCTIONS FOR USE

The materials are very dry, less than 1.5 g moisture/100 g sample. It is **essential** to weigh the sample for moisture at the same time as weighing the sample for dietary fibre analysis as the moisture content can change rapidly.

The certified values are expressed on a dry mass basis. A dry mass correction must be made on a separate sample of the contents of the bottle at the same time as the analytical portion is taken. The user should follow the procedures given in Section 11.4 of the certification report for the dry mass correction. For this material it is essential to use the vacuum oven method (70 °C ± 2 °C for at least 16 hours).

The reference material can only be used to check the performance of the specific methods for which the materials have been certified and for the quality control of analytical measurements for nutritional labelling by these specific methods. In assessing the performance of a method, the user should refer to Section 11 of the main certification report “Instructions for the use of CRMs 514 to 518”.

STORAGE

Unopened bottles must be stored at -18 °C.

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NOTE

A detailed technical report is available on www.erm-crm.org. A paper copy can be obtained from IRMM on explicit request.

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