



LABORATÓRIO DE RADIOATIVIDADE NATURAL
UNIVERSIDADE DE COIMBRA

Laboratório de Radioatividade Natural

Departamento de Ciências da Terra
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Test Report

(Estimation of the activity concentration index "I" in building materials)

Company: CINCA - Companhia Industrial de Cerâmica, S.A. Rua Principal, 39 - Apartado 12, 4509-908 Fiães VFR – PORTUGAL

Material: Dry-pressed ceramic tiles of Group BIII (Eb > 10 %) - Annex K

Experimental: High resolution gamma-ray spectrometry. Ge detector with 40% efficiency and resolution ranging between 1.46 keV and 2.12 keV (FWHM), bias at -3000 V, measurement time of 24h. Quantity used: 1690g. Measurement error below 5%.

Date of analysis: 19-12-2016

Results:

Ra-226 (Bq/kg)	Th-232 (Bq/kg)	K-40 (Bq/kg)	I	I*
75.40	39.23	412.22	0.58	0.65

i) Council Directive 2013/59/Euratom of 5 December 2013; ii) Chinese standard – Limits of radionuclides in building materials GB6566.

Conclusion: As "I" is, in both cases, lower than 1, the material can be used without restriction.

Coimbra, 31 December 2016

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