



Výzkumný ústav stavebních hmot

**Výzkumný ústav stavebních hmot, a. s.**

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## Laboratory of radionuclides

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### Report

measurement and evaluation of natural radionuclide contents in building materials

**No. 418/2009**

**Test specification:** Systematic measurement and evaluation of natural radionuclide contents in building materials in accordance with Act No. 18/1997 Coll. as subsequently amended in Section 6, Subsection 6. The procedure is further defined by Decree No. 307/2002 Coll. as subsequently amended (below as Decree) in Section 96, Appendix No. 10, Fig No. 1, 2, 3.

**Methodology:** gamma spectrometry

**Measured by:** Laboratory of radionuclides, Mrs. Poloučková

**Date of testing:** 8.12.2009

**Measuring instrument:** spectrometer InSpector, GC3018 P-Type Coaxial Ge Detector by CANBERRA

**Calibration:** standards RM CBSS, ČMI IIZ Praha, date of verifying: 17.6.2008, valid until 31.12.2010

**Sample No.:** 8309

**Tested material:** Q-THERM thermoinsulating backfilling, for inner thermal insulation of buildings

**Date of sampling:** 4.11.2009

**Place of sampling:** Bc. Karel Trčálek Vsetín, p. Trčálek

**Client:** Bc. Karel Trčálek, Dolní Jasenka 751, 755 01 Vsetín

#### Measurement results:

<sup>40</sup> K	<sup>226</sup> Ra	<i>u</i>	<sup>228</sup> Th
specific activity Bq/kg	specific activity Bq/kg		specific activity Bq/kg
<150	33	±3	<10

*u* combined extended uncertainty calculated using extension coefficient 2, which corresponds to 95 % reliability interval

Index of specific activity (Decree §3 Letter h): **I = 0,11 ± 0,01**

#### Evaluation:

Index of specific activity does **not exceed** guidance value  $I = 1$  set in the Decree Appendix No. 10, Table No. 2 for the other building material that is used for the construction of residential areas. Specific activity of <sup>226</sup>Ra does **not exceed** limit value 300 Bq/kg set in the Decree Appendix No. 10, Table No. 1.

Person in charge:

Mgr. Vilma Poloučková, Ph.D.

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