Environmental Engineering and Management Journal

February 2012, Vol.11, No. 2, 247-251 http://omicron.ch.tuiasi.ro/EEMJ/



"Gheorghe Asachi" Technical University of Iasi, Romania



MEASUREMENTS OF RADIUM CONTENT IN SOME SPRING WATERS FROM ROMANIA

Robert Csaba Begy^{1*}, Simina Dreve², Alida Timar Gabor¹, Oana Alexandra Rusu¹, Constantin Cosma¹

¹Babeş-Bolyai University, Faculty of Environmental Sciences, 30 Fantanele Street, Cluj-Napoca, Romania ²National Institute for Research and Development of Isotopic and Molecular Technologies, 65–103 Donath Street, 400293 Cluj-Napoca, Romania

Abstract

Measurements of radium concentrations in water are important from the health protection point of view, so simple and reliable analytical methods must be available. In this paper we have determined the radium activity concentration in 24 spring waters which are used as potable water reservoirs. For this purpose we used radon emanation technique and also alpha spectrometry method. This work gives details of sample processing, Lucas cell and the methodology used in the emanation method. In the measured samples the radium concentration ranged from 15 to 2550 mBq/L.

Key words: alpha spectrometry, Lucas cell, Radium determination, radon emanation

Received: September, 2011; Revised final: January, 2012; Accepted: February, 2012

^{*} Author to whom all correspondence should be addressed: e-mail: robert.begy@ubbcluj.ro