



VOLUME 115 JANUARY 2013 ISSN 0265-931X

JOURNAL OF ENVIRONMENTAL RADIOACTIVITY

EDITOR-IN-CHIEF
S.C. SHEPPARD

ASSOCIATE EDITORS
F. BRECHIGNAC, S. HISAMATSU, P. MARTIN,
G. SHAW, J. TWINING, G. VOIGT



International Union
of Radioecology

Affiliated to the International Union of Radioecology

JOURNAL OF ENVIRONMENTAL RADIOACTIVITY

CONTENTS

Volume 115

- 1 Screening heavy metals levels in hair of sanitation workers by X-ray fluorescence analysis
J. MD KHUDZARI, H. WAGIRAN, I. HOSSAIN & N. IBRAHIM
- 6 Artificial neural network application for predicting soil distribution coefficient of nickel
A. FALAMAKI
- 13 Gamma ray attenuation in the soils of Northern Ireland, with special reference to peat
D. BEAMISH
- 28 Bioaccumulation of tritiated water in phytoplankton and trophic transfer of organically bound tritium to the blue mussel,
Mytilus edulis
B.C. JAESCHKE & C. BRADSHAW
- 34 Update and improvement of the global krypton-85 emission inventory
J. AHLSWEDE, S. HEBEL, J.O. ROSS, R. SCHOETTER & M.B. KALINOWSKI
- 43 $^{210}\text{Po}/^{210}\text{Pb}$ dynamics in relation to zooplankton biomass and trophic conditions during an annual cycle in northwestern
Mediterranean coastal waters
J. FÄRBER LORDA, S.W. FOWLER, J.-C. MIQUEL, A. RODRIGUEZ Y BAENA & R.A. JEFFREE
- 53 Map on predicted deposition of Cs-137 in Spanish soils from geostatistical analyses
A. CARO, F. LEGARDA, L. ROMERO, M. HERRANZ, M. BARRERA, F. VALIÑO, R. IDOETA & C. OLONDO
- 60 Radiocesium contaminations of 20 wood species and the corresponding gamma-ray dose rates around the canopies at
5 months after the Fukushima nuclear power plant accident
T. YOSHIHARA, H. MATSUMURA, S.-N. HASHIDA & T. NAGAOKA
- 69 Remote monitoring of emission activity level from NPP using radiofrequencies 1420, 1665, 1667 MHz in real time
G. KOLOTKOV & S. PENIN
- 73 An invitation to contribute to a strategic research agenda in radioecology
T.G. HINTON, J. GARNIER-LAPLACE, H. VANDENHOVE, M. DOWDALL, C. ADAM-GUILLEMIN, F. ALONZO, C. BARNETT,
K. BEAUGELIN-SEILLER, N.A. BERESFORD, C. BRADSHAW, J. BROWN, F. EYROLLE, L. FEVRIER, J.-C. GARIEL, R. GILBIN,
T. HERTEL-AAS, N. HOREMANS, B.J. HOWARD, T. IKÄHEIMONEN, J.C. MORA, D. OUGHTON, A. REAL, B. SALBU,
M. SIMON-CORNU, M. STEINER, L. SWECK & J. VIVES I BATLLÉ
- 83 Soil gas ^{222}Rn concentration in northern Germany and its relationship with geological subsurface structures
N. KÜNZE, M. KOROLEVA & C.-D. REUTHER
- 97 Assessment of soil erosion and deposition rates in a Moroccan agricultural field using fallout ^{137}Cs and $^{210}\text{Pb}_{\text{ex}}$
M. BENMANSOUR, L. MABIT, A. NOUIRA, R. MOUSSADEK, H. BOUKSIRATE, M. DUCHEMIN & A. BENKDAD
- 107 Evaluation of radiological impacts of tenorm in the Tunisian petroleum industry
H. HRICHI, S. BACCOUCHE & J.-E. BELGAIED
- 114 Gamma dose rate measurements in dwellings of Campania region, South Italy
M. QUARTO, M. PUGLIESE & V. ROCA
- 118 Radioecological assessment and remediation planning at the former uranium milling facilities at the Pridnieprovsky Chemical
Plant in Ukraine
T. LAVROVA & O. VOITSEKHOVYCH

Contents continued on inside back cover

Abstracted/indexed in: BIOSIS (Biological Abstracts); BIOBASE/Current Awareness in Biological Sciences; Cambridge Scientific Abstracts/Pollution Abstracts; Agriculture, Biology & Environmental Sciences; Engineering Index; Environment Abstract; Environmental Periodicals Bibliography; EMBASE/Excerpta Medica; Geo Abstracts; Thomson Scientific/GeoSciTech; Science Citation Index; Index Medicus/MEDLINE/Pubmed. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®



Available online at www.sciencedirect.com

ELSEVIER

SciVerse ScienceDirect



0265-931X (201301) 115; 1-W

- 124 Downward migration of radiocaesium in organic soils across a transect in Scotland
C.A. SHAND, K. ROSÉN, K. THORED, R. WENDLER & S. HILLIER
- 134 Pre- and post-Chernobyl accident levels of ^{129}I and ^{137}Cs in the Southern Baltic Sea by brown seaweed *Fucus vesiculosus*
J.M. GÓMEZ-GUZMÁN, E. HOLM, S.M. ENAMORADO-BÁEZ, J.A. ABRIL, A.R. PINTO-GÓMEZ, J.M. LÓPEZ-GUTIÉRREZ &
M. GARCÍA-LEÓN
- 143 Adsorption and desorption of uranium (VI) in aerated zone soil
X. LI, J. WU, J. LIAO, D. ZHANG, J. YANG, Y. FENG, J. ZENG, W. WEN, Y. YANG, J. TANG & N. LIU
- 151 Effect of arbuscular mycorrhizal (AM) fungi on ^{137}Cs uptake by plants grown on different soils
M. VINICHUK, A. MÅRTENSSON, T. ERICSSON & K. ROSÉN
- 157 Life-long accumulation of ^{137}Cs and ^{40}K in the vertebral column of a cow
E. PICHL & H. RABITSCH
- 168 Radiation-induced impacts on the degradation of 2,4-D and the microbial population in soil microcosms
B. NIEDRÉE, H. VEREECKEN & P. BURAUEL
- 175 Ground gamma-ray survey of the Solforata gas discharge area, Alban Hills-Italy: A comparison between field and laboratory measurements
F. DI PAOLO, W. PLASTINO, P.P. POVINEC, F. BELLA, A. BUDANO, M. DE VINCENZI, M. LAUBENSTEIN & F. RUGGIERI
- 183 Carbon-14 transfer into potato plants following a short exposure to an atmospheric $^{14}\text{CO}_2$ emission: observations and model predictions
A. MELINTESCU, D. GALERIU, S. TUCKER, P. KENNEDY, F. SICLET, K. YAMAMOTO & S. UCHIDA
- 192 Maximum reasonable radioxenon releases from medical isotope production facilities and their effect on monitoring nuclear explosions
T.W. BOWYER, R. KEPHART, P.W. ESLINGER, J.I. FRIESE, H.S. MILEY & P.R.J. SAEY
- 201 Selected natural and fallout radionuclides in plant foods around the Kudankulam Nuclear Power Project, India
E.M. ROSS, Y.L. RAJ, S.G. WESLEY & M.P. RAJAN
- 207 Comparative study of different analytical methods for the determination of ^{238}U , ^{234}U , ^{235}U , ^{230}Th and ^{232}Th in NORM samples
(Southern Catalonia)
M. MOLA, M. PALOMO, A. PEÑALVER, F. BORRULL & C. AGUILAR
- 214 Modeling the impact of climate change in Germany with biosphere models for long-term safety assessment of nuclear waste repositories
C. STAUDT, N. SEMIOCHKINA, J.C. KAISER & G. PRÖHL