



Zinc incorporation in the miliolid foraminifer *Pseudotriloculina rotunda* under laboratory conditions

Submitted by Luzia Bossé on Tue, 01/31/2017 - 16:59

Titre	Zinc incorporation in the miliolid foraminifer <i>Pseudotriloculina rotunda</i> under laboratory conditions
Type de publication	Article de revue
Auteur	Nardelli, Maria Pia [1], Malferrari, D. [2], Ferretti, A. [3], Bartolini, A. [4], Sabbatini, A. [5], Negri, A. [6]
Pays	Pays-Bas
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2016
Langue	Anglais
Date	Juin 2016
Pagination	42-49
Volume	126
Titre de la revue	Marine Micropaleontology
ISSN	0377-8398
Mots-clés	Culture experiments [7], Foraminifera [8], LA-ICP-MS [9], Miliolid [10], Pollution [11], Zn/Ca [12]
Résumé en anglais	<p>The incorporation rate of Zn into the calcareous tests of <i>Pseudotriloculina rotunda</i> was investigated in culture in order to evaluate the possibility of using Zn/Ca ratios as a pollution proxy. Foraminifera were incubated at zinc concentrations up to 10-fold higher than unpolluted seawater (sea + 10 mg Zn/L) during 70 days. New calcite was investigated under the Environmental Scanning Electron Microscope (ESEM), for potential alteration of test structure. Laser ablation-Inductively Coupled Plasma-Mass spectrometry (LA-ICP-MS) was used to quantify Zn contents. The analyses revealed that test structure is not visibly altered by the presence of zinc. However, significant Zn incorporation is detected by the LA-ICP-MS. The zinc partition coefficient, DZn, decreases at increasing Zn concentrations (from 4.03 ± 0.06 to 0.2 ± 0.01) and the zinc is incorporated into the calcite not necessarily linearly.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua15517 [13]
DOI	10.1016/j.marmicro.2016.06.001 [14]
Lien vers le document	http://www.sciencedirect.com/science/article/pii/S0377839816300445 [15]
Titre abrégé	Marine Micropaleontology

Liens

[1] <http://okina.univ-angers.fr/mariapia.nardelli/publications>

[2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=25934>

- [3] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=25935>
- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=25936>
- [5] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=6265>
- [6] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=6271>
- [7] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=22224>
- [8] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=8106>
- [9] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=8203>
- [10] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=22222>
- [11] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=17406>
- [12] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=22223>
- [13] <http://okina.univ-angers.fr/publications/ua15517>
- [14] <http://dx.doi.org/10.1016/j.marmicro.2016.06.001>
- [15] <http://www.sciencedirect.com/science/article/pii/S0377839816300445>

Publié sur *Okina* (<http://okina.univ-angers.fr>)