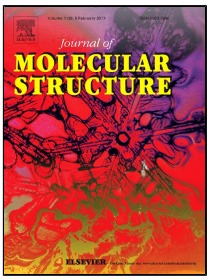
Accepted Manuscript



FTIR spectroscopic studies of selenite reduction by cells of the rhizobacterium *Azospirillum brasilense* Sp7 and the formation of selenium nanoparticles

Alexander A. Kamnev, Polina V. Mamchenkova, Yulia A. Dyatlova, Anna V. Tugarova

PII:	S0022-2860(16)31293-5
DOI:	10.1016/j.molstruc.2016.12.003
Reference:	MOLSTR 23201
To appear in:	*Journal of Molecular Structure*
Received Date:	06 September 2016
Revised Date:	28 November 2016
Accepted Date:	02 December 2016

Please cite this article as: Alexander A. Kamnev, Polina V. Mamchenkova, Yulia A. Dyatlova, Anna V. Tugarova, FTIR spectroscopic studies of selenite reduction by cells of the rhizobacterium *Azospirillum brasilense* Sp7 and the formation of selenium nanoparticles, *Journal of Molecular Structure* (2016), doi: 10.1016/j.molstruc.2016.12.003

HIGHLIGHTS

Se nanoparticles were formed via selenite reduction by *Azospirillum brasilense* Sp7.

18-h culture was used to obtain extracellular nanospheres (50–100 nm) from selenite.

FTIR spectroscopy and TEM were used to characterise biomasses and Se nanoparticles.

Metabolic differences were detected in control and selenite-treated cells after 24 h.

Isolated Se nanoparticles were shown to be capped by various biomacromolecules.