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## Phosphorus, Sulfur, and Silicon and the Related Elements

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713618290>

### Synthesis and Toxicological Characterization of Poly(oxyethylene)s Functionalized with Quaternary Phosphonium End Groups

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Online publication date: 27 October 2010

**To cite this Article** Popa, Adriana , Trif, Alexandra , Curtui, Valeriu Gh. , Dehelean, Gheorghe , Iliescu, Smaranda and Ilia, Gheorghe(2002) 'Synthesis and Toxicological Characterization of Poly(oxyethylene)s Functionalized with Quaternary Phosphonium End Groups', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 177: 8, 2195 – 2196

**To link to this Article:** DOI: 10.1080/10426500213373

URL: <http://dx.doi.org/10.1080/10426500213373>

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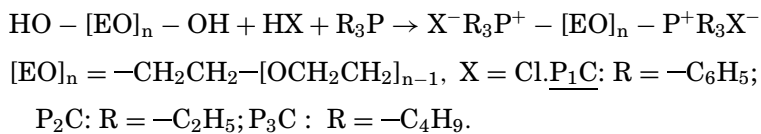


## SYNTHESIS AND TOXICOLOGICAL CHARACTERIZATION OF POLY(OXYETHYLENE)S FUNCTIONALIZED WITH QUATERNARY PHOSPHONIUM END GROUPS

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(Received July 29, 2001; accepted December 25, 2001)

In the present article, we present a new variant of the synthesis of the poly(oxyethylene)s functionalized with quaternary phosphonium end groups by polymer-analogous quaternization reaction.



The products were characterized by IR, UV, <sup>1</sup>H, NMR spectroscopy, thin-layer chromatography.

The acute toxicity was evaluated by the determination of the lethal doses. The main category of the determined LD were the mean lethal dose (LD50) and the maximum lethal dose (LD100).

### EXPERIMENTAL DESIGN

Substance assessed: P<sub>1</sub>C, P<sub>2</sub>C, P<sub>3</sub>C, solution 25%;—animals: white mice;—Way of administration: intraperitoneal; —Number of administration: 1;—Duration of the experiment: 7 days.

According to the toxicity scale of Hodge and Steaner P<sub>1</sub>C, P<sub>2</sub>C, P<sub>3</sub>C can be considered as low toxic compounds. Symptoms: excitation/inhibition, tetanic muscular contractions, severe respiratory insufficiency.

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**TABLE 1** Lethal Doses of P<sub>1</sub>C, P<sub>2</sub>C, and P<sub>3</sub>C Calculated by the Probit Method

Lethal dose	Dose mg/Kg b.w.		
	P <sub>1</sub> C	P <sub>2</sub> C	P <sub>3</sub> C
DL50	2963	2415	3336
DL100	4297	3618	4692

Lung congestion/edema, dramatic lesions in CNS, were observed by macro- and microscopic examination.