

Influence of Organic and Inorganic Ions on Organolead-Induced Hemolysis of Erythrocytes

Halina Kleszczyńska* and Janusz Sarapuk

Department of Physics and Biophysics, Agricultural University, Norwida 25, 50-375 Wrocław, Poland. Fax: +48-71-205 172. E-mail: halina@azi.ar.wroc.pl

* Author for correspondence and reprint requests

Z. Naturforsch. **56c**, 853–856 (2001); received February 26/March 27, 2001

Organoleads, Erythrocytes, Hemolysis Inhibition

The influence of some inorganic (K^+ , Mg^{2+} , and Al^{3+}) and organic $C_nH_{2n+1}SO_3^-$, $n = 12$ and 14) ions was studied on the hemolysis of erythrocytes (RBC) caused by organolead compounds (tripropyllead – TPL, tributyllead – TBL and triphenyllead – TPhL chlorides). It was found that sulfonate anions increased the hemolytic effect induced by triorganoleads, while inorganic cations protected RBC against the triorganoleads action, especially when the latter were used at small concentrations. This protection was weaker when the concentration of organoleads increased and depended on the kind of ion. The protective efficacy sequence was like that: $Mg^{2+} > Al^{3+} > K^+$. The less hemolytic of the triorganoleads studied was TPL. TBL was slightly more effective than TPhL. The efficacy of the sulfonate ions to increase the triorganolead chloride – induced hemolysis was practically the same for TPL and TBL. A weaker efficacy of $C_{12}H_{25}SO_3^+$ was observed when TPhL was used as RBC membrane modifier.