STUDY OF ANTIOXIDANT ACTIVITY OF ORGANIC DI- AND TRISULFIDES

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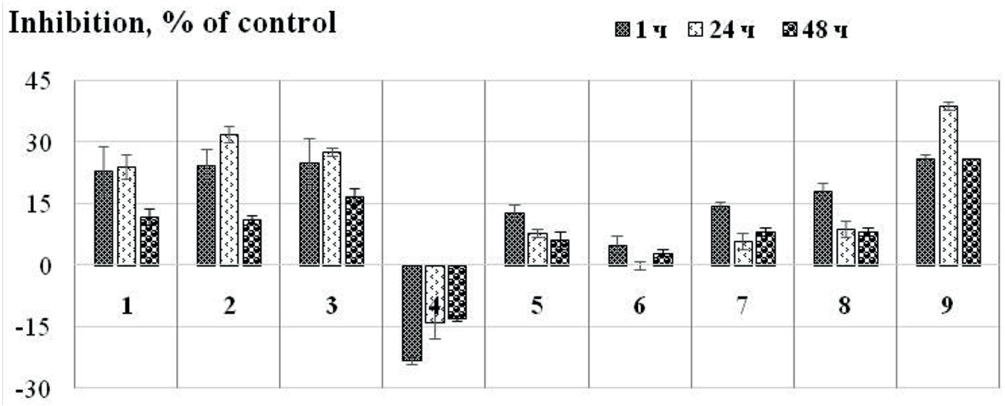
Currently, works on testing of organosulfur compounds as potential anti-inflammatory, anti-tumor, cardioprotective agents and antioxidants are actively carried out. The anti-/prooxidant activity of organic disulfides (R=All **(1)**, Bu **(2)**, tert-Bu **(3)**, Ph **(4)**, Bn **(5)**, bis(2-methoxyphenyl)- **(6)**) and trisulfides (R=cyclohexyl **(7)**, R=Me, R`=Pr **(8)**) was studied in comparison with butylated hydroxytoluene BHT **(9)** at a concentration of 2 mM. The study was carried out by determining the carbonyl products forming colored complexes with thiobarbituric acid (TBARS) in the model system of long-term peroxide oxidation of lipids of liver homogenate of Russian sturgeon (48 h)[1].



It was found that the level of accumulation of TBARS in the presence of compound 6 does not differ from the control. Diphenyldisulfide **(4)** is pro-oxidant at all stages, increasing TBARS levels by 15-20%. Other compounds exhibit inhibitory activity, which allows us to consider them as antioxidants.

References
1. Stroev E. A., Makarova V. G., Matveeva I. V. Workshop on biological chemistry. M.: Medical news Agency, 2012. P. 351.

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