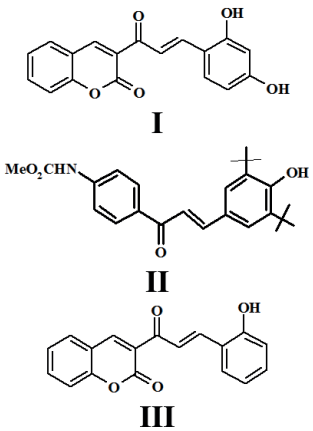
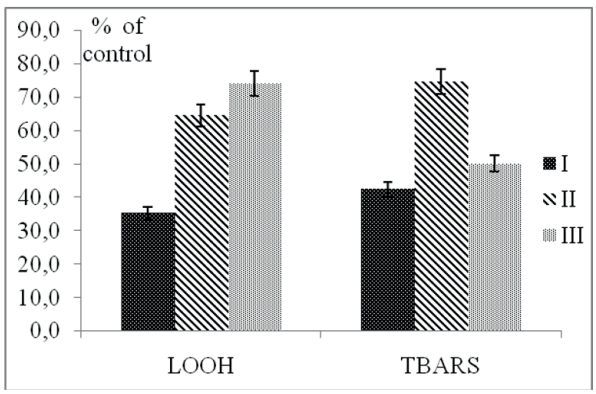
STUDY OF INHIBITIVE ACTIVITY OF NEW PHENOL DERIVATIVES

Polovinkina M.A.[1], Osipova V.P.[2], Velikorodov A.V.[3], Berberova N.T.[1]

[1]Astrakhan State Technical University, 414025, Russia, Astrakhan, st. Tatishcheva 16
[2] Federal Research Centre the SSC of the RAS, 344006, Russia, Rostov-on-Don, st. Chehova, 41
[3]Astrakhan State University, 414056, Russia, Astrakhan, st. Tatishcheva, 20a
E-mail: polovinkina.ast@gmail.com

The inhibitory activity of compounds **I-III** in the model system of oleic acid oxidation by oxygen was studied (t=65°C, 5 hours, C=1 mM). The level of accumulation of hydroperoxides (LOOH) and carbonyl compounds, giving colored complexes with thiobarbituric acid (TBARS), was determined (fig). It was found that in the case of compounds**I-III**, the level of LOOH and TBARS accumulation decreased in 1.5-2.5 times. It was established that compound **I**, containing 2 hydroxyl groups in the benzene ring, exhibited the highest efficiency of the antioxidant action.





The obtained results show that new heterocyclic derivatives of phenol **I-III** exhibit inhibitory activity in this model oxidation system, which allows considering them as potential antioxidants.

This work was supported by the Russian Foundation for Basic Research (grant №19-03-00006).