

The interaction of hydroxyl radicals with human erythrocyte ghosts in different radical-generating systems

Danuta Ertel, Zofia Szweda-Lewandowska

The interactions of $^{\bullet}\text{OH}$ radicals generated by the Fenton reaction ($\text{Fe(II)} + \text{H}_2\text{O}_2$) and ionizing radiation with erythrocyte ghosts (EG) in the absence and presence of $^{\bullet}\text{OH}$ radical scavengers (Tris and ethanol) were studied. Protection of the physical state of membrane lipids and proteins by Tris in the iron (II) ions H_2O_2 system was found. In the case of ethanol, under the same conditions only a weak protection of EG was observed. In the radiation system both scavengers protected EG from the destruction. The analysis of results suggests that the Fenton reaction with EG proceeded via the “site-specific reaction” mechanism.