

Sulphoacetic aldehyde - a new chemiluminescence enhancer

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It was shown that sulphoacetic aldehyde is the main product of the oxidative deamination of taurine monochloramine in the presence of H_2O_2 . As it was confirmed by the HPLC method, in the alkaline solutions, taurine monochloramine deamination leads to the sulphoacetic aldehyde accumulation in the assay buffer. Our studies reveals that this product itself acts as a chemiluminescence (CL) enhancer in the both ABEI/taurine monochloramine/ H_2O_2 and ABEI/ H_2O_2 systems. Additionally it was shown that sulphoacetic aldehyde is an effective enhancer in the mM range of concentrations and its action is synergistic with *p*-iodophenol (PIP), a widely used phenolic enhancer. The proposed CL system improves the sensitivity of ABEI labeled antibodies (IgG) CL assays in microplate luminometers.