INFLUENCE OF TETRANATRIUM SALTS CO - COMPLEX TETRA (P-SULFOPHENEL) PORFINE ON THE REACTION OF OXIDATION OF ADRENALINE

Tashmatova Robiya Vahobovna

Samarkand State University, UZBEKISTAN

In view of possible practical use of porphirins as biologically active substances, studying their catalytic effects at pH values was represented as important, like physiological.

An oxidation of adrenaline in the alkaline medium at (pH ≥ 8.5) proceeds with the participation of superoxide anion-radical (O2·−). With the reduction of pH the speed of oxidation of adrenaline falls and at pH < 8.5, adrenaline is practically not oxidized. However, if enter a small amount of the catalyst Co-porfin (Co - complex tetra (P-sulfophenel) Porfine) into the system, then the oxidation of adrenaline occurs already at pH=8.0.

In absence of Co-porphirins the products of oxidation of adrenaline is not possible to find out, at least within several hours. At entering of Co-porfirin in concentration of equal to 10⁻⁵-10⁻⁶ M the oxidation goes with the appreciable speed. The process of the formation of oxidation products of adrenaline is followed by the spectra of absorption in visible area. Side by side with the formation of products of oxidation Co-porfin expenditure occurs that it is obvious on reduction of intensity of a strip Sor Co - porfine (λ=429). The analysis of spectra of absorption of oxidation products has shown, that only adrenochrome (ACh) and a product of its oxidation P₁ are formed in these conditions.

The product P₂, which we have found at oxidation of adrenaline in alkaline medium (pH=10), is practically not formed in the current conditions (pH=8.0).