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Investigation of interaction of proteins with bioactive nitrogenated heterocyclice compounds at various pH

© **Aleksandr S. Chukhno**,[+] **Irina B. Dmitriyeva**,*
Anastasia N. Bankina, and **Elizaveta Yu. Brilliantova**
Department of Physical and Colloid Chemistry. Saint-Petersburg State Chemical-Pharmaceutical Academy. Professor Popov St., 14. Saint-Petersburg, 197376. Russia.
Phone: +7 (812) 234-11-38. E-mail: alex-chuhno@yandex.ru, amylee2208@mail.ru

*Supervising author; [+]Corresponding author

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Abstract

In this work several nitrogenated heterocyclices were selected for investigation. Proteins were used such as serum albumin, casein, gelatine. Experiments were conducted in aqueous solutions.

Changes in value of isoelectric point were observed in water solutions with nitrogenated heterocyclic compounds, which means that nitrogenated heterocyclic compounds can specifically sorb on the surface of proteins. This is accompanied by the cationic form of nitrogenated heterocyclic compounds moving the isoelectric point into the alkaline area, and the anionic form – doing so into the acidic area. In certain cases, two isoelectric points were detected, one of them in the alkaline area, another in the acidic area. The ability of nitrogenated heterocyclic compounds to react with proteins depends on variation of the isoelectric point. Occurrence of a complex was detected with the help of absorption spectrum.