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INFLUENCE OF COMPOSITIONS OF POLYHEXAMETHYLENEGUANIDINE
HYDROCHLORIDE WITH SURFACTANTS ON GROWTH STIMULATION
OF AGRICULTURAL CROPS

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INTRODUCTION

Deterioration of ecological and epidemiological deterioration, especially the southern regions of Kazakhstan requires the development of new bactericidal materials and modification of known bactericidal materials. Especially actual problem is finding new effective microbicides materials against such common bacteria as well as, also against leaf rust *Puccinia recondita* spring wheat, potatoes phytoviruses resulting in loss of productivity and causing damage to the agro-industrial complex of Kazakhstan. Also, important is to develop new environmentally clean and cheap plant growth stimulants.

Currently, the development processes are important problems of chemical science. In recent years, to science and technology has a new aim, i.e. use of polymers and their compositions and study of their physicochemical properties, also they are important materials with antibacterial properties.

To use the compositions on the base of surfactants in different branches of agriculture requires the study of their properties at different interphase boundaries. In the study of patterns of interaction between surfactant - polymer associates, scientists have proposed to refer these associates to a new group of surfactants. Given the environmental and climatic conditions of our country the establishment of new polymer compositions on the base of surfactants and polymers with bactericidal properties is relevant not only in theory but also has an important role in practical terms. Studies of different properties of compositions, associates and complexes on the base of surfactants and polymers with bactericidal, virucidal and fungicidal properties shape practical interest of researchers.

Production on farms in Kazakhstan today there are a some dangers that come from undesirable microorganisms and weeds. For example, in 2000-2002 winter crops in Central Asia appeared diseases, respectively yields of these crops has decreased by 40-50%. In 2000, 2002 and 2005 in the north of our republic the weather due to moisture in the fields there were various diseases, such as erosion plants, septoria, resulting in productivity of not modified with fungicides crops was decreased to 20-30% [3-5].

Therefore, development of obtaining methods of water-soluble materials and their compositions with surfactants, also study of their surface properties for to use in agricultural industries as bactericides and fungicides is actual problem of colloidal chemistry. One of the most rational ways of modifications of properties of surfactants is their association with water-soluble polymers and surfactants, and they are good materials for prolongation of biological affects, also for decrease of toxicity of materials.