

INFLUENCE OF BIODEGRADATION ON THE ORGANIC COMPOUNDS COMPOSITION OF PEAT.

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Largest wetland systems are situated on the territory of the Tomsk region. They are characterized by the high content of organic matter (OM), which undergoes transformation as a result of physical, chemical and biological processes. The composition of peat OM is determined by the nature of initial peat-forming plants, their transformation products and bacteria. An experiment in stimulated microbial impact was carried out for estimating the influence of biodegradation on the composition of peat lipids. The composition of the functional groups in the bacterial biomass, initial peat and peat after biodegradation was determined by IR-spectroscopy using the spectrometer NICOLET 5700. The IR spectra of peat and bacteria organic matter are characterized by the presence of absorption bands in ranges: 3400-3200 cm^{-1} , which refers to the stretching vibrations of OH-group of carboxylic acids and various types of hydrogen bonds; 1738-1671 cm^{-1} – characteristic stretching vibrations of the C = O group of carboxylic acids and ketones; 1262 cm^{-1} – stretching vibrations of C-O of carboxylic acids. Group and individual composition of organic compounds in studied samples was determined by gas chromatography-mass-spectrometry.