



Spectral properties of marine surfactants for different estuaries of the Southern Baltic

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The sea surface is a layer of transition between the atmosphere and the sea, where there is a variety of biological, physical and chemical processes which contribute to the accumulation and exchange of surfactants, the chemical species concentrated in the surface layer (surface active agents). The main source of marine surfactants are remains of phytoplankton and its degradation products, created by bacterial activity, and as a result of condensation of molecules of low molecular weight to form of surface-active macromolecules. The presence of surfactants in the surface layers can significantly affect the access of solar energy into the sea as well as the processes of interaction of the sea and the atmosphere.

The main objective of the research was to investigate the luminescent properties of surfactants, sampled in different regions of the Southern Baltic, and to find the differences between the values that describe a surface film and a subsurface layer (of 50 cm). The next aim was to identify the surfactants that describe the chosen regions.

The results of spectrophotometric studies show the differences in the intensity of spectral bands, particularly between coastal (estuaries) and the open sea zones. Also, analysis of the spectra shows differences between areas of the Vistula and Łeba (large and small river) estuary waters.