

## **FACIES CONTROL OF CHEMICAL COMPOSITION VARIABILITY OF CAMBRIAN SEDIMENTARY ROCKS IN NORTH EAST BALTIC**

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The geochemical study of Cambrian sedimentary siliciclastic rocks from 48 boreholes and outcrops of North East Baltic was carried out in order to estimate the geochemical parameters variation in the different facies zones of sedimentary basin and during the different phases of sedimentary cycles. The concentrations of 13 trace elements were determined in 700 samples of general types of Cambrian rocks (sandstones, siltstones and clays) from the main stratigraphical units and facies zones of Cambrian basin. The studied sediments were deposited during the different stages of evolution of sedimentary basin in the shallow-water marine conditions and are characterized by the different lithological features and composition. The obtained geochemical data permitted to estimate elements ranges in the Cambrian sequence. The distribution of elements is characterized by contrast differentiation and has the facies control. In the sediments of coastal facies the accumulation of Zr, Cr, Ga and Ba is observed, in the deposits of the deeper facies the concentration of Mn, Cu and Pb is indicated. For the transgressive phases of sedimentary cycles accumulation of elements with higher mobility (Mn, Pb, Cu, Cr and V) in the rocks is typical. The deposits of initial stages are marked by enrichment of Co, Zr and Ti. The variations in the Sr, B concentrations and  $\text{Fe}^{2+}/\text{Fe}^{3+}$  ratio reflect the variability of the main characteristics of the paleoenvironment (salinity, pH). The spatial distribution of chemical elements and their ratios variations were used as the additional information for the paleogeographical reconstructions.