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Anomalous manifestations of river Cl⁻ runoff in the North Of The East European Plain

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Abstract

The article assesses the abnormal manifestations of runoff concerning one of the most active aquatic migrants - chloride ion - from the basin geosystems of East European Plain north. The methodology used in this study is based on the evaluation of annual value deviations runoff of chloride ions from the standard. Thus, the annual values of the ion runoff in the range of 0-15% and 85-100% provision were referred to abnormal performances, for which anomaly ratio (AR) was calculated. It was revealed that the runoff of chloride ions has the greatest anomaly and variability in the basin geosystems of middle taiga subzone (CA = 24.2%) of high plains (CA = 28.0%), composed of mixed, easily soluble chemo- and organogenic sediments (CA = 25.4%) due to the greater development and cavernous porosity of these river basins, predetermining their openness to the outside (atmogenic, anthropogenic) factors. The smallest abnormality and variability is typical for the river basins of lowlands (CA = 20.8%), composed of weakly permeable loamy rocks (CA = 18.6%) due to the prevalence of a surface runoff over an underground drain - one of the key sources (along with anthropogenic one) of analyte ions.

Keywords

Anomaly, Basin, River flow, The East European Plain, The runoff of chloride ions