

The express-estimation of heavy metal pollution of vegetation cover by use reflection spectra solar radiation.

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Nowadays the environment has been in many places affected by pollution from technogenic sources. Most widespread pollutants in the atmosphere are the gases causing acidic rain and heavy metals originating both from traffic and industrial sources. Transported through the atmosphere into soil and soil cover they may damage vegetation and fauna in wide areas where their concentration exceeds the limit that the nature can tolerate. Toxic heavy metals may also over the time into the soil and thus even low but constant exposure to them may cause damage. Several studies have shown that vegetation, especially some sensitive species, react to the pollution of the environment and thus can serve as indicators of environmental pollution. From beginning to end five years has been studied the reaction vegetation on the pollution of the heavy metals. It has been carried out as in the fields as in the laboratory measurements. We were chosen mosses and oats like indicators, because they have a sensitivity to influence of heavy metal on the reflection spectra. The experiments have been carried out in the Karelia by using photoelectrical spectrometer in visible range (the spectral resolution about 5nm). In the result researches were developed a few new informative parameters for estimation pollution of heavy metals and also "pure curves" of mosses. Primary attention is paid to rapid remote methods to estimate the condition of the environment, because chemical analyses when used in spatial studies require a large number of samples and are thus expensive. By using satellite and airplane based remote methods wide areas can be covered quickly and economically if the measurements can be related to the chemical truth.