

ABSTRACT

In present time environment is considerably contaminated by various diversified pollutants mainly because of human activity. Part of this dissertation deals with problem of contaminants spreading into environment. Further more it summarizes particular options of xenobiotics removal from waste and subterraneous waters and it mostly focuses on new innovative methods decontamination methods of polluted areas based on vegetative biotechnologies.

This study comprises knowledge about plants abilities and usage by transformation and degradation of nonsteroid analgesics, which belong to most common and mass used drugs. Goal of dissertation was to observe fate and transport in present time used nonsteroid analgesics and phytoextraction efficiency evaluation of such a substances from liquid nutrient medium with sunflower and corn.

For determination of chosen nonsteroid analgesics (piroxicam, nimesulid, ketoprofen and paracetamol) was developed and optimized analytical procedure which consisted of extraction and determination by HPLC-MS method.

Results indicate that studied nonsteroid analgesics are very good extracted by plants. Biggest phyto remediation potential was proved for ketoprofen, which was consumed by plants more than other nonsteroid analgesics.