

Abstract

One of the major global environmental problems is the pollution by priority micropollutants. These are substances that can have a negative impact on the environment and human health even at relatively low concentrations. Their identification and subsequent regulation on an international level is essential for prevention of the negative effects of these substances. This thesis focused on the assessment of relevance of the proposal of Water Framework Directive in relation to pharmaceuticals and related substances in the context of the situation in the Czech Republic. The analysed input data comprised of results of data monitoring from the Vltava River Basin and information on the distribution of pharmaceuticals from the State Institute for Drug Control between years 2016 and 2022. The data was collected from two sampling points that are situated right before the confluence with the Elbe River. The average of the concentrations above the limit of quantification (LOQ) and without outliers was considered, thus creating a model considering the maximum contamination load. On the basis of this model and information about individual substances, the relevance of the draft WFD for the Czech Republic was assessed.

The result of the monitoring showed that during the monitoring period, none of the NECs of the monitored substances were exceeded, however, in the context of the Czech Republic, gabapentin (GBP) should be added to the list of monitored substances.

Key words: Azithromycin, carbamazepine, clarithromycin, diclofenac