Monitoring of hazardous compounds in tributary effluents

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Monitoring of residual pesticides and endocrine disrupting compounds in tributary effluents running into the source water was quarterly conducted to select additional regulatory compounds for protection of human health from drinking water. Sampling the contaminated tributary effluents enabled to remove stepwise extraction and concentration processes of the voluminous river water and save sample handling time, chemicals, and labour work. The detected compounds ranged ppb level and most of the target was not detected in all samples. Calculating volume of the tributary effluents to the River Han and the detected levels of the pesticides, contribution of the contaminants from the tributaries to the source water was negligible. However regular and reinforced monitoring of the detected compounds in finished and raw water has been conducted to ensure source and finished drinking water quality. This methodology suggests a new strategy for the selection of monitoring compounds in raw waters protect source water quality and regulate contaminants for local water authorities according to their industrial, geological and economic environment. Further studies on the widely used pesticides around the watershed including the tributaries have been performed to select prospect compounds to be monitored and regulated in source and finished drinking water.

Keywords monitoring, tributary effluents, residual pesticides