TEST OF SORPTION FILTERS ON THE BASE OF GRANULAR ACTIVATED CARBON FOR DRINKING WATER CLEANING

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The contribution presents model tests of sorption efficiency and elimination of organic substances, especially pesticides from five different exposed granular activated carbon (GAC). Results can contribute to the understanding of suitable filter lines for the realized investment project GAC filtration. It provides the purification of treated water at the Želivka Drinking Water Treatment Plant. There were realised sorption efficiency tests in a column arrangement for selected 15 polar substances. The presence of this substances was proven in the Želivka river basin and in the Švihov water reservoir. High sorption efficiency was reached exceeding 99% was found in our tests for most of the test substances. Part of the project was to verify the possibility of using the technology of catalytic destruction of CDC (Catalytic Destruction using Copper) for GAC regeneration (reactivation). Destructive efficiency (as DRE) of CDC technologies was investigated in a laboratory reactor, for most substances high elimination values above 99% were achieved.