Fluid Filtration

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Many people in today’s society refuse to drink tap water due to the components in it. In order to battle this, water filters are used to clean the water. The commercial filters claim their products help turn the water cleaner and safer to ingest. Many filters used to clean tap water are useful due to their filling material, known as activated carbon. Activated carbon is a known adsorber and is used for many different purposes, such as high level spillages, due to its porous properties. The purpose of this study was to identify which form of activated carbon was most effective in filtering out contaminants in tap water. By testing different concentrations of food dye against activated carbon, the most effective form of activated carbon was able to be identified. Each trial consisted of three forms of activated carbon being tested against different concentrations of food dye mixed with water. At the end of each trial, the water color was rated by using a scale from 0-10 (the higher the number, the more concentrated it ended up). Each trial was tested three times in total to form an average number for each carbon form. By the end of the experiment, all activated carbon forms were found to be effective contaminant reducers. However, it was found that the powdered form was the most effective form due to the larger surface area of the carbon and its porous properties were able to most effectively remove unwanted contaminants.

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