WASTWATER TREATMENT OF TEXTILE DYE RED ACTIVE IN PRESENCE OF AUXILIARY AGENTS

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The wastewater from textile industry manifests a polluting character for the environment. Diminishing concentration dyes and other textile auxiliaries in these waters are one of the main problems today. The research was conducted to reduce the concentration of dyes in admixture with auxiliary agents, using different methods, followed by activated carbon absorption method.

One of the most widespread and required class textile dyes is active, therefore for performing this study we chose the color red in this class active and as auxiliary agents: propylene oxide dispersion agent and softening agent dihidroximetilpropionic acid. The primary endpoint was reduction concentration of model solutions with dye concentration 200 mg / l and auxiliaries 60 mg / l, up to allowable levels set by applying various methods of purification. The process of curbing the concentration of dye mixture red active softening agent, and dispersing agent together in the catalytic treatment part depending on the concentration of iron ions and hydrogen peroxide concentration.

As a result of research it has been established that for all coagulation model systems the maximum occurs at the optimum pH = 5.0-5.5 and, respectively, V is better coagulates ($Al_2(SO_4)_3$ = 3 ml.)

It has been found that the coagulation and electrofotocoagulation are effective methods of treatment for RA and dye auxiliary agents, which removes all the aluminum sulfate concentration studied up to the allowable limit.

It has been found that the method of electrofotocoagularea is more effective compared to the treatment by the coagulation method.

It was found that the dye mixture RA and auxiliary oxidizes the best with hydrogen peroxide and catalyzed with titanium dioxide irradiated with UV light at λ = 365. This method is more efficient compared with the method Fenton and other methods of treatment.

It was observed that to achieve good results in reducing the concentration of active dyes and auxiliaries in wastewater, apply methods combining chemical and physico-chemical processing of water. Therefore, touch data with concentrations within acceptable limits and that the expenses are micşorază chemical reagents.