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Production of Clean Reusable Distillery Waste Water Using Activated Carbon Prepared from Waste Orange Peels

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Abstract : The research details the treatment of distillery waste water by making use of activated carbon prepared from orange peels as an adsorbent. Adsorption was carried out at different conditions to determine the optimum conditions that work best for the removal of color in distillery waste water using orange peel activated carbon. Adsorption was carried out at different conditions by varying contact time, adsorbent dosage, pH, testing for color intensity and Biological Oxygen Demand. A maximum percentage color removal of 88% was obtained at pH 7 at an adsorbent dosage of 1g/20ml. Maximum adsorption capacity was obtained from the Langmuir isotherm at R2=0.98.

Keywords : distillery, waste water, orange peel, activated carbon, adsorption
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