Decolourization of Congo red solution by activated carbon

Vaibhav Aggarwal, Ayush Sharma, Shweta Kulshreshtha\*

Amity Institute of Biotechnology, Amity University Rajasthan, Jaipur.

Email:- vaibhavaggarwal545@gmail.com, sharmayush929@gmail.com, shweta.kul18@gmail.com

Corresponding author: shweta.kul18@gmail.com

**Abstract:**

Jowar straw as agricultural waste was locally collected from Jaipur, Rajasthan (India) was used for the preparation of activated carbon. This prepared activated carbon was ground in fine powder. This fine powder was used for the decolorization of dye containing effluents. The fine powder of activated carbon was sonicated for 20-25 min in sonicator. Both sonicated and unsonicated activated carbon were used for the decolourization of congo red solution. Dye solution was mixed with activated carbon sample and kept for decolourization. Sample was withdrawal after 1 min and Change in colour was recorded with respect to time. The decolorization rate of dye depends on adsorbent time, adsorbent dosage, and pH value. Results showed that both sonicated and unsonicated activated carbon can decolourize the dye efficiently. However, Sonicated activated carbon was found to be more effective than unsonicated sample. In the future, this activated carbon can be used for removing the dyes from industrial effluents.