

**DYE AND CHARACTERISTICS OF ADSORBENTS****YASHVEER SINGH<sup>1</sup>**

Department of Chemistry, K.N. P.G. College, Bhadohi, U.P., India

**ABSTRACT**

The last century most of the dye were derived from plants or animals sources. Such as indigo, tyrisin, purple sligrin, log words etc. Dyes are large important group of industrial chemicals and used ancient time for coloration and printing fabrics in mostly used in textile and dyes is use include many different compound and their environmental behavior is largely unknown most dyes and pigments are considered either inert or nontoxic although some are not totally innocuous.

**KEYWORDS:** Dyes, Methylene Blue, OCR

The Methylene blue and Omega Chrome Red ME (OCR) dyes are used which are frequently used for the coloration of the different types of fibres and wool in the many industries. Methylene blue is the thiazine dye which is characterized by the presence of the Nitrogen and Sulphur are bonded to carbon of two separate benzenoid species each by single and double bonds.

It is obtained by the oxidation of P – aminodimaethylaniline with the acid dichromate in the presence of Na<sub>2</sub> S<sub>2</sub>O<sub>3</sub> to give 4- (dimethylamino) Aniline-2 –thioslphonic acid. The product thus obtained to condensed with dimethyl aniline to form indomine which is then oxidized by dichromate and copper sulphate to yield the desired methlene blue.

Methylene blue a thiazine dye is frequently used for the colicoprinting and in the pharmaceutical industries for the pigmentation of the medicines. It is also used as an indicator in the laboratory. The zinc double chloride salt of the Methylene blue is used for the dyeing of tanning mordanted cotton.

The dye has only sodium sulphonyl group and hence it will be like a mono-anconic dye in aqueous medium. The dye Omega chrome Red Me (OCR) used as a colouring material in carpet industries in our country. During the course of drying and washing process their finding way to water from carpet industries.

Various methods were employed in the past as mentioned above for the treatment of water and wastewater. The adsorption technique is considered an advance one and less expensive and can be used and handled easily.

Rice husk ash collected from rice which is most important food grain of the people of India. The crop rice is cultivated mostly in the eastern part of India Bihar, U.P. and rest of it's production occurs in the southern division. The outer covering of rice is known as the rice husk. The rice husk in India is mostly used for the preparation of Hardboard in industries of the fuels etc and the rest of the husk is thrown useless but this rice husk is of immense importance in the field of water pollution control by the adsorption method in which it is used as an absorbent.

**REFERENCES**

- Agrawal I.C., Shukla N.P. and Dixit, 1992. Advance in chem. Biochemical Eng IT BHU Varanasi, India.
- Bansal T.K. and Sharma H.R., 1992. Ind. J. Environ. Protect, **12**: 198.
- Bhargav R., Mathur R. and Khanna P., 1974. Ind. J Environ., **16**(2): 109.
- Gupta G.S., Presad G. and Singh V.N., 1988. Environ. Tech. Leet, **153**.
- Hao O.J. and Huang C.P., 1964. J. Environ. Eng. Asce., **112**(6): 1054.
- Hingstron, F.J. AT Kinson R.J. Nature 215 1459 (1967)
- Jain K.K., Singh V.N. and Prasad G., 1982. Proe. 7<sup>th</sup> Insl. clag Congress Italy, **137**.
- James R.O. and Healy T.W., 1972. J. Colloid interface Sci., **40**: 53.
- Lebeak J. and Wardas W., 1996. Cellulose Chem. Technol., **30**:213-221.

<sup>1</sup>Corresponding author