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A Review Paper on Benzidine

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Abstract: *Benzidine is a manufactured chemical that does not occur naturally. It is a crystalline solid. It will evaporate slowly from water and soil. In the environment, benzidine is found in either its "free" state (as an organic base), or as a salt (for example benzidine dihydrochloride or benzidine sulfate). In air, benzidine is found attacked to suspended particles or as a vapor. It is a di-acid base and forms salts with the mineral acids. It is readily brominated and nitrated; when the nitration is carried out in presence of sulphuric acid, the nitro groups take up the meta-position with regard to the amino groups. Benzidine is stable, combustible and incompatible with strong oxidizing agents. Benzidine-based dyes are relatively stable in air and in solution at ambient temperatures but degrade in aqueous solution at high temperatures, particularly in presence of iron. Benzidine is a manufactured chemical that does not occur naturally in the environment. Benzidine and its breakdown products can be detected in urine but only within about two weeks after exposure. Benzidine is an important product in the dye industry and is a common constituent of several hair dyes, despite its well-known carcinogenic effects particularly with regard to bladder tumors. Benzidine and its derivative are widely used in the manufacture of dyestuffs and are common constituents of pigments, hair-dyes, inks, polymers and rubber compounding. Benzidine is widely used for the analysis of sulphate and for detection of hydrogen cyanide and phenol in atmosphere.*

Keywords: Benzidine, Environment, Dye, Atmosphere, Carcinogenic

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