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Hazardous azo-dyes and aromatic amines from various industrial zones of Punjab province of Pakistan

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Azo-dyes are well-known and most widely used coloring materials around the world for commercial products but due to the harmful effects they can cause such as cancer, mutagenicity, skin irritation, blindness, lacrimation, vertigo, hypertension etc., hence, many of them have been listed banned and are no more used in developed countries, however, due to the lack of enough check and balance and awareness in

developing and underdeveloped countries they are often a part of various commercial products. In this study, 150 commercial samples of different nature from most parts of Punjab province (the biggest province with respect to population) of Pakistan were collected and analyzed (qualitatively and quantitatively) for the presence of their reduction products viz. aromatic amines through GC-MS. Results demonstrated that most samples contained banned and highly dangerous carcinogenic amines such as p-Aminoazobenzene, o-Aminoazotoluene, Benzidine, o-Toluidine etc., and their levels not only failed to compliant with the proposed levels announced by EC 2002/61 but also found to be remarkably higher in various quantifications. Surprisingly, the

highest percentages of amines were found among larger and more populated cities such as Lahore and Faisalabad to be 88% and 80%, respectively what shows the vast use of hazardous azo-dyes, especially in textile industries of Punjab, Pakistan and may conclude an alarming situation towards control and preventive measures towards safety of the consumer from their hazardous effects.

Biography

Tauqeer Ahmad has completed his bachelor's Of Science in Chemistry at the age of 23 from Government College University (G.C.U), Lahore Pakistan. Currently enrolled as a Master of Science (Chemistry) in Dalian University of Technology, China. The Dalian University of Technology is one of the premier learning institutions in Dalian, China, a knowledge-rich zone in Chemistry and having a good experience of ICP-OES, AAS, GC-MS, and HPLC.

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