



GREEN ANALYTICAL CHEMISTRY: A NEW PRACTICE

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ABSTRACT:

Green Chemistry is utilization of a set of principles that reduces or eliminates the use or generation of hazardous substances in design, manufacture and application of chemical products. Green chemistry is about Waste minimization at source, Use of catalysts in place of reagents, Using non-toxic reagents, Use of renewable resources, Improved atom efficiency, Use of solvent free or recyclable environmentally benign solvent systems. The introduction of the dimension of green chemistry into the assessment of analytical methods should be a natural development trend in chemistry and should coincide with its general policy. Some of the principles of green chemistry, such as, prevention of waste generation; safer solvents and auxiliaries; design for energy efficiency; safer chemistry to minimize the potential of chemical accidents; development of instrumental methods are directly related to analytical chemistry. Investigation of Green Analytical Chemistry methodologies encompasses a number of strategies to minimize or to eliminate the use of toxic substances and generation of wastes. The main focus has been development of new routes to minimize the amounts of side products and to replace toxic solvents. Nowadays, it is clear that all scientists trust in green analytical chemistry. The next step is that teachers could incorporate the green principles, priorities and strategies of green analytical chemistry in their university activities and also that method users and policy makers could integrate these practices in their everyday work. A change in public opinion about analytical chemistry with the health of our planet will be the reward for all these efforts.

KEY WORDS: Green Chemistry, Waste minimization, Non toxic reagents.

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