



APPLICATION OF GREEN CHEMISTRY IN ANALYTICAL SPECTROMETRY

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ABSTRACT:

An important goal of green chemistry is to reduce hazards associated with products and processes that are essential to the world economy and to sustain the high quality of living that we enjoy through chemistry. Green chemistry in the chromatography laboratory was recently reviewed and this aims to save an solvent consumption, alternatives to using acetonitrile in liquid chromatography (LC), and how to assess the "greenness" of analytical methods. Green chemistry minimizes chemical process hazards in many ways, including eliminating traditional solvents or using alternative recyclable solvents such as ionic liquids. This concept is now adopted for monitoring solvent free reactions and analysis of ionic liquids, solids, and catalysts by massspectrometry (MS), without using any solvent. The methods were designed so that they neither use nor produce harmful chemicals, and to produce minimum waste so as to be used in routine analysis without harming the environment. This was achieved by firstly, developing green HPLC methods using green mobile phases and short run times Four mixtures were can be use, namely, Clidinium bromide / Chlordiazepoxide hydrochloride, Phenobarbitone /Pipenzolate bromide, Mebeverine hydrochloride / Sulpiride and Chlorphenoxamine hydrochloride /Caffeine /8-Chlorotheophylline either in their bulk powder or in their dosage forms.

KEYWORDS: Green Chemistry, LC, MS, HPLC

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