



CHAPTER 1

Conventional to Green Essential Oil Extraction

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Abstract:

There are numerous uses for the Essential oil (EO) that are from herbal origin employed in food, cosmetic as well as medical industries. The current investigation included wide range of traditional methods i.e., solvent extraction, steam and hydro-distillation; hydro diffusion etc. techniques have been described. Green techniques employed in EO like Supercritical Fluid, CO₂ Extraction, Instantaneous Controlled Pressure Drop Technology, Microwave Hydro Diffusion, Solvent-free microwave extraction, Ultrasound-Assisted Extraction, Turbo Distillation have been discussed with special emphasis on examples along with merits and demerits. Economic analysis of different countries all over the world has also been described. USA is leading importer and exporter of EO globally approx. 14-17 percent of global exporters. India is largest manufacturer of basil oil and peppermint oil globally. Modern methods are more advanced over conventional ones owing to less cost, time, energy, solvent as well as extraction time etc. The optimum way for rosemary oil extraction is hydro-distillation whereas oregano oil is efficiently extracted from Supercritical fluid extraction.

Keywords: CO₂ Extraction, Hydro Diffusion, Rosemary oil, Supercritical fluid extraction, Green techniques