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Green Extraction of Green Coffee Beens

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Abstract: The design of green, efficient and sustainable extraction methods has been a hot research over the last decade. Several technologies are available and the best method to use depends on the desired chemical and organoleptic characteristics of the final product, its commercial value and annual production size. We here present three green techniques for the production of high-quality oils, flavours and phyto complexes which are based our own experience and are applicable to any reasonable production scale. These continuous or semi continuous methods are: cold extraction with modern screw-presses, microwave-assisted distillation and gravity hydrodiffusion and a new flow-process under very highpower density ultrasound.

Recent developments in extraction methods, such as microwave, ultrasound and pulsed electric field and enzyme-assisted extractions are the focus of this study. Applying theses advanced methods, researchers have recovered polyphenols from fruit, leaves, roots, vegetables etc. Theoriesbehind different techniques and their applications are siscussed here

Keywords: Solventless extraction, mechanical expression, microwave-assisted distillation, microwave-assisted hydro diffusion high-intensity Ultrasound flow extraction







