

Green solvents selection for high voltage electrical discharge extraction of bioactive compounds from *S. officinalis* : A Review Article- Anet Režek Jambrak, University of Zagreb, Croatia

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In the course of the most recent decades, positive changes in explanatory science have been made, chopping down the utilization of harmful synthetic substances and diminishing their effect on the earth because of Green Analytical Chemistry patterns. Likewise, the advancement of imaginative supportable green extraction procedures have gotten additionally intriguing because of the cleaner, greener, and more secure nature of these procedures and simpler use. In this way, current extraction methods have been presented and are being applied increasingly more for extraction of different materials and mixes. A portion of these procedures are: supercritical liquid extraction (SFE), subcritical water extraction (SWE), superheated water extraction or pressurized high temp water extraction (PHWE), microwave-helped extraction (MAE), ultrasound-helped extraction (UAE), quickened dissolvable extraction (ASE). The utilization of "green" solvents is driven by patterns that are centered around discovering arrangements that limit the utilization of solvents or discover options. Utilizing the previously mentioned solvents is coordinated towards heightening the procedure of extraction and financially savvy creation of top notch extricates. The focal point of the investigation was to utilize regular and bio-determined solvents in applications. Our objective was to create, execute and advance the usage of more secure, greener advances and supportable mechanical solvents. The center was to choose best solvents among water and bio dissolvable (polar, non-polar, protic and aprotic), including terpene, vegetable oil, MeTHF, NADES (characteristic eutectic dissolvable) and Switchable Solvents (Variable dissolvable) to remove bioactive mixes from sage (*S. officinalis*). Model prescient instruments (Hansen, COSMO-RS) was utilized to foresee the properties and conduct of the cooperation of dissolvable solute, and to anticipate the most positive exhibition of these solvents for focused mixes. The extractions of 1g of test in 50mL of

solvents (water and ethanol) were accomplished by high voltage electrical release gadget (IMP-SSPG-1200, Impel gathering, Zagreb, Croatia). Extraction were made utilizing scope of voltage from 15kV-25kV, at 100Hz recurrence, during 3 and 9 min treatment time, utilizing Argon as working gas. In this examination bioactive mixes (α -thujone and camphor) from sage leaf (*S. officinalis*) were picked for COSMORS and HANSEN computations for the determination of green solvents for high voltage electrical release plasma extractions. The best solvents for extraction anticipated by COSMO-RS are ethanol, ethylacetat, methylacetat, CPME, DMC, MeTHF.