Application of deep eutectic solvent in headspace extraction of terpenes from Chamaecyparis obtusa

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A new application of deep eutectic solvent (DES) enriching three terpenes such as α-terpineol, linalool and terpinyl acetate from Chamaecyparis obtuse leaves using headspace microextraction and gas chromatography–flame ionization detection was explored. Under the optimized headspace microextraction conditions, DES could extract completely the five terpenes compounds in the sample powders within 30 min at 100 oC. The amount of α-terpineol, linalool and terpinyl acetate in the samples was 0.38, 0.81 and 0.62 mg/mL, respectively. Compared to liquid-liquid extraction of the targets compounds in samples, the DES based headspace microextraction has fewer operation steps, as well as high-enrichment factors of the targets.