

Semi-preparation and analysis of polyphenol compounds from natural resources using MPLC and HPLC

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Polyphenols are a wide variety of natural compounds that have received increasing interest from researchers and food-related industries for various reasons mainly related to their health benefits. Polyphenols are mainly grouped as flavonoids, phenolic acids, stilbenes and lignans depending on their carbon skeletons. In this study, polyphenolic compounds were analyzed and separated in black chokeberries (*Aronia melanocarpa*), onion skins (*Allium cepa*), wheat sprout (*Triticum aestivum* L.), and cauliflower mushroom (*Sparassis crispa*) by thin layer chromatography (TLC), preparative middle pressure liquid chromatography (preparative-MPLC) and high performance liquid chromatography (HPLC). TLC was performed on silica gel plates, MPLC on silica gel column, and HPLC on C-18 silica column. Target compounds were cyanidin compounds for black chokeberry, quercetin for onion skin, polyphenolics for wheat sprout and glucans for mushrooms. Analysis conditions of TLC and HPLC have been scouted to MPLC semi-preparation of the targeted samples. It would be productive that cooperation of MPLC and HPLC has been done when the target compounds are already known and readily available.