A Polyvinylpolypyrrolidone (PVPP)-Assisted Folin?Ciocalteu Assay to Assess Total Phenol Content of Commercial Beverages

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 The use of a Folin?Ciocalteu (FC) assay to assess total phenolics in certain foods may be limited by the inability of this assay to discriminate between phenolics and non-phenolic reducing compounds. In the present study, we have mentioned the usefulness of an insoluble water-synthetic polymer, polyvinylpolypyrrolidone (PVPP), to separate phenolics and non-phenolic reducing compounds (i.e., sugars, ascorbic acid, and sulfite) from their original food matrix. After employing three consecutive cycles adding PVPP, all polyphenols tested (including phenolic and cinnamic acids) showed an adsorption percentage (AP) to PVPP higher than 90 %. When tested in various beverages, the PVPP-based pretreatment affected in different ways the FC index, depending on the food matrix. A low AP was evidenced in the case of orange juice, most probably related to the high content of ascorbic acid in such samples. In contrast, a high adsorption to PVPP was obs