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Abstract Title:

UNVEILING BIOACTIVE PHENOLICS: IDENTIFYING KEY MEDICINAL COMPOUNDS IN HERBAL TEA SAMPLES

Abstract Body:

For millennia, tea has been esteemed for its purported medicinal properties, leading to extensive investigation into its chemical components to substantiate these traditional claims. This study seeks to establish a rigorous methodology for evaluating the medicinal attributes of tea by analyzing its chemical composition. Utilizing Liquid Chromatography-Mass Spectrometry (LC-MS), the research examines a range of phenolic acids found in herbal teas. The analytical procedure involved the use of a C18 LC column coupled with a gradient elution method, employing 0.1% formic acid in water and methanol as the mobile phase. This setup ensured precise separation and identification of the phenolic acids. Nine distinct phenolic acids were analyzed individually and in combination, with their retention times recorded. Subsequently, these results were compared to those obtained from ten Sri Lankan raw herbal teas, focusing on peak similarities at a wavelength of 270 nm to identify commonalities. Through this analysis we were able to identify eight out of the nine phenolic acids across all of the tea samples. As well as observing various unidentified peaks throughout the sample. Through this study we expect to identify more medicinal compounds in tea so that a person suffering from a chronic illness could use this as a form of treatment.