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The determination of resveratrol in modified starches-template solid and tablet daily resveratrol supplement

This study was devoted to the application of Laser-Induced Breakdown Spectroscopy (LIBS) to the chemical analysis of trans-resveratrol. LIBS were used to analyze the chemical composition of solid samples. Trans-resveratrol (trans-3,5,4'-trihydroxystilbene, t-RSV) is common found in grape and red wine. T-RSV has significant effects on lipid metabolism, anti-inflammatory, antioxidant, free radical scavenging, anti-allergy and cardiovascular diseases. Besides t-RSV is also an effective cancer preventive medication, can effectively inhibit tumor growth and cancer formation. LIBS have many advantages include *in situ* analysis, multi-element detection and on-site analysis. Furthermore, LIBS required relatively small amount of sample for one measurement. Here RSV contents in Modified Starches-template porous SiO₂ Ceramics (MSC) and tablet daily RSV supplement were analyzed with a power-chip laser LIBS. RSV was composed of C, H and O elements. Carbon lines of C(I) 247.856 nm and C(II) 426.726 nm were selected for the determination of RSV to avoid the potential spectral interference from H and O from the ambient environment. Various parameters such as the incident angle, working distance and the moving speed on the analytical results were studied. The precision, accuracy, detection limit and reproducibility of the proposed method were evaluated. The satisfactory results were obtained with this relatively simple power chip laser LIBS with minimal sample preparation.

Biography

Suh-Jen Jane Tsai has completed her PhD in Chemistry at the Ohio State University, USA (1984). She has joined the Faculty at Department of Applied Chemistry, Providence University, Taiwan in 1985. She had been the Chair of the Department of Applied Chemistry and Dean of the College of Science.

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