

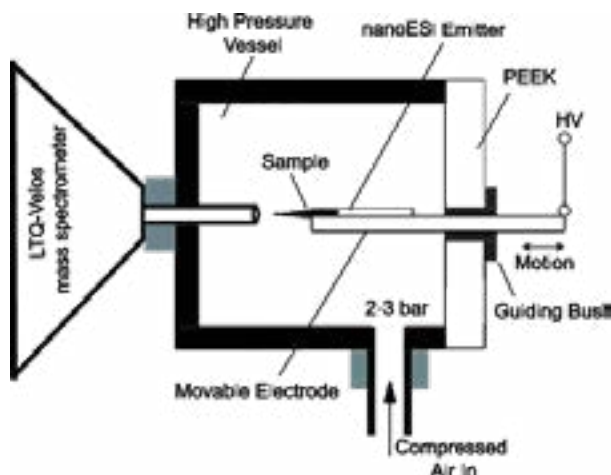
ANALYTICAL CHARACTERISTICS OF NANO-ELECTROSPRAY OPERATED UNDER SUPER-ATMOSPHERIC PRESSURE

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High-pressure nanoelectrospray ionization (nanoESI) source is a recently developed technique in which the electrospray ionization is generated inside an enclosed chamber with gas pressure higher than the atmospheric pressure. In this paper, the performance of nanoESI under different gas pressures, emitter position, ion inlet temperature, additive for desalination are presented. Under a pressure of 2 bars, the nanoESI is almost eased from the electrical discharge problem, and that offers a wider tuning window for the emitter potential to produces a higher and more stable ion signal. With optimized ion inlet temperature, the high-pressure operation facilitates the generation of ion species of higher charge-state from the highly aqueous solution, and produced less sodium adducts. A preparation method for the high-throughput analysis of raw biological samples using disposable plastic nanoESI emitter could be described.



High pressure nESI ion source

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