

ELECTROSPRAY EMITTERS FOR MASS SPECTROMETRY

ABSTRACT

An electrospray ion source that comprises (a) an emitter capillary having (i) an internal bore for transporting a liquid sample, (ii) an electrode portion for providing a first applied electrical potential and (iii) an emitter tip for emitting charged particles generated from the liquid sample and (b) a counter electrode for providing a second applied electrical potential different from the first applied electrical potential is characterized by (c) a shield electrode disposed at least partially between the counter electrode and the emitter tip of the emitter capillary for providing a third applied electrical potential intermediate to the first and second applied electrical potentials, the shield electrode contoured in the form of a portion of an electrical equipotential surface formed, in the absence of the shield electrode, under application of the first and second applied electrical potentials to the electrode portion of the emitter capillary and to the counter electrode, respectively.

Fig 4a