

ABSTRACT

[0068] The invention relates to a radio frequency ion guide construction for use in mass spectrometry that minimizes contamination by allowing ions rejected by the RF confinement field to fly through and away from the ion guide electrodes and preventing them from hitting the sensitive electric potential defining surfaces of the ion guide electrodes. At the entrance end of the ion guide, each electrode of the plurality of electrodes has a front end that is forked or that contains a recessed feature facing an interior of the ion guide. For an electrode that is forked, the teeth of the forked end may have different shapes or tapers, and a conductive mesh may be used to cover a gap between the teeth. Similarly, for an electrode that has a recessed feature, a conductive mesh may cover the recessed feature.

Figure 4