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(54) **COLLISION CELL HAVING AN AXIAL FIELD**

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(57) **ABSTRACT**

The present invention addresses ways to facilitate the detection and analysis of ion abundance, in particular for analysis of elemental ions, and in particular embodiments for isotope ratio analysis, by use of collision cells that employ an axial drag field, i.e. an axial electric field that exerts a drag force on ions within the cell. By means of the invention, the drag field allows an increase in the transmission in the case of Li from a few % up to almost 100%. The drag field is generated by electric fields and can be switched on and off within microsecond (μs) timescales and thus improves the sensitivity for the lighter elements dramatically. The invention allows use of collision cells for analysis of elemental ions in a simple and fast workflow with high throughput and without compromising transmission.