Name of Machine	**Inductively Coupled Plasma Mass Spectrometer(ICP-MS)**
Make **Agilent**	Model **ICP-MS 7700 Series (Fig 1)**

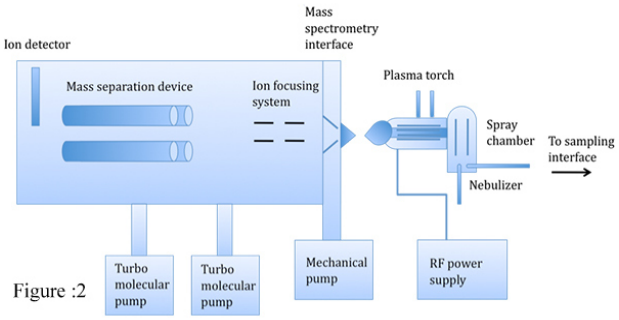

Figure :2

Specification

- **Octopole Reaction System**
  - The 7700 Series incorporates a new, 3rd generation cell, the ORS3, which provides superior interference removal in He mode. This delivers improved performance in He mode.
- **He cell mode as standard:**
  - The combination of theShieldTorch and the octopolebased cell, both unique to the 7700, enables efficient removal of interferences using an inert cell gas (He).
  - He mode is effective for all polyatomic interferences, not just reactive polyatomics.
- **Cell gas control:**
  - The 7700x has a single He cellgas controller.
- **Mass Analyzer**
  - Quadrupole mass spectrometer:The 7700 uses a high frequency (~3 MHz) quadrupole with true hyperbolic rod profile, unique in ICP-MS. A hyperbolic profile quadrupole provides superior ion transmission, resolution and abundance sensitivity at standard settings, thereby eliminating the need for multiple resolution settings to separate adjacent peaks.

Working principle:

This technology couples use of an ICP with MS for elemental analysis by generation of ions. The ICP is involved in generation of a high temperature plasma source at ~10,000 degree Celsius, through which the pre-treated sample is passed. The elements in the sample at such high temperature are ionized and directed further into the MS. The MS then sorts the ions according to their mass/charge ratio followed by directing them to an electron multiplier tube detector. This detector then identifies and quantifies each ion.
Fig. 2

Application

The Agilent 7700 ICP-MS provides unparalleled accuracy in high-matrix samples, redefining cell performance in helium mode with a revolutionary 3rd generation cell design the ORS3. Use of autosampler makes this easier and faster, especially for routine work and large numbers of samples.

User Instruction

- Sample should be crushed and brought in powder form, else extra charges will apply. Only solid samples in powder form with particle size <60µm.
- Minimum quantity of 2gm.
- Users should specify the trace/REE elements to be identified.
- 30 samples will be considered in a single slot.
- Water samples should be filtered and sufficient amount will be required.
- Explosive poisonous samples and sample giving rise to toxic gases/fumes cannot be undertaken for ICP-MS analysis.

Contact Person	
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