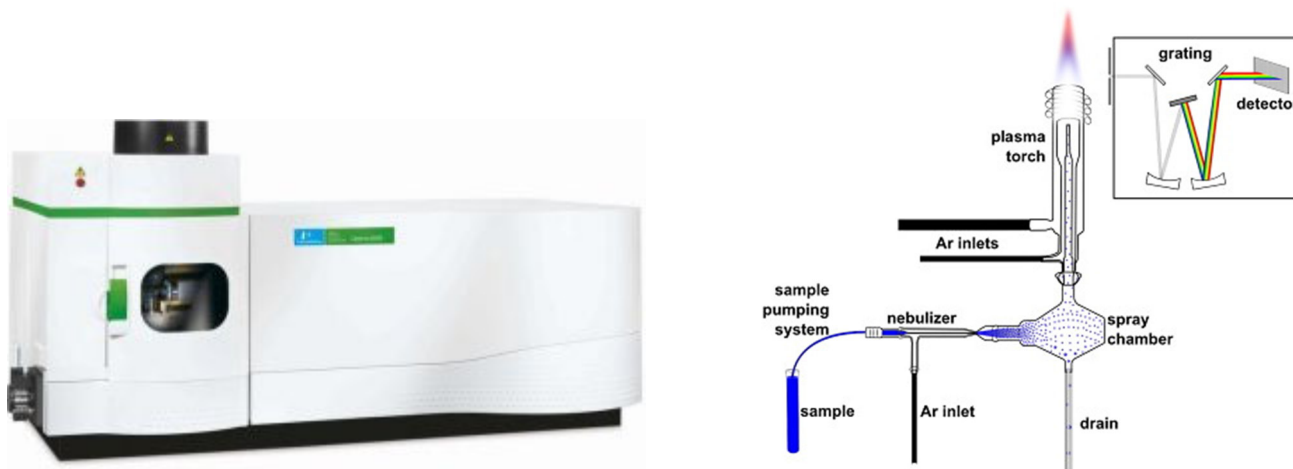


Inductively Coupled Plasma Optical Emission Spectrometer

The PerkinElmer® Optima™ 8300 is a bench-top, dual-view ICP-OES with two solid-state detectors, delivering superior detection limits and true simultaneous measurements. The ICP is an argon plasma maintained by the interaction of a RF field and ionised argon gas. The technique is employed in the determination of most metallic elements such as calcium, sodium, potassium, iron, copper, magnesium, etc.



During the analysis, the sample solution is converted to an aerosol and directed into the central channel of the plasma. The sample is decomposed by intense heat into a cloud of hot gases containing free atoms and ions of the element(s) of interest. The high temperatures cause significant amounts of collisional excitation and ionization of the sample atoms. Once the atoms or ions are in their excited state, they can decay to lower states through thermal or radiative (emission) energy transitions. The intensity of the light emitted at specific wavelengths is measured and used to determine the concentration of the element(s) of interest.

For charging and staff in-charge information, please refer to the [charges for the use of instrument](#).