



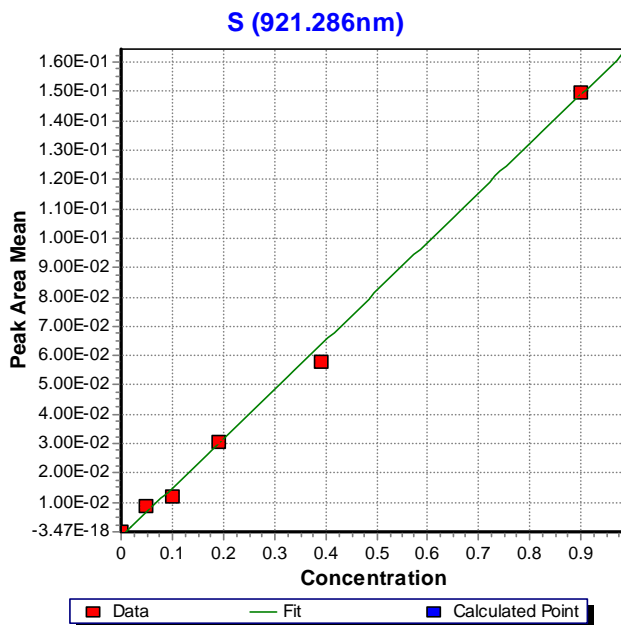
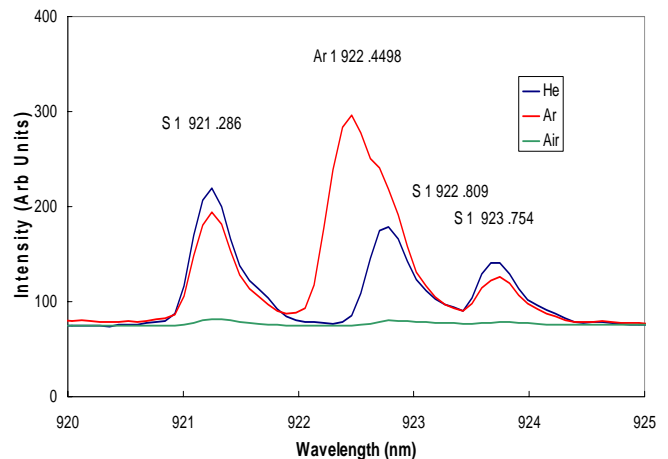
Spectrolaser Application

Sulphur Analysis

The Spectrolaser uses the analytical technique of Laser Induced Breakdown Spectroscopy (LIBS) to accurately determine the elemental analysis of materials.

This technique is particularly useful for the determination of metallic elements in materials, where detection limits are often in the low-ppm range. The instruments are most often used without vacuum or buffer gas, making them a convenient low-cost method of obtaining materials analysis.

However, using buffer gas such as helium or Argon enhances the emission of some elements and extends the power of the instrument to the analytical determination of important elements including halogens (F and Cl) as well as sulphur. Furthermore, in combination with the extended wavelength sensitivity of the Spectrolaser instruments to 950 nm, buffer gas enables the use of the strongest S emission lines at 921 -923nm in the LIBS spectrum, shown right.



Sulphur is monitored regularly in a diverse range of industry applications including fuel utilization and in pharmaceutical manufacture. The use of buffer gas is a convenient way of extending the analytical power of the Spectrolaser to this important element. As an example, sulphur determination in a coal application located in Spain is shown left. Buffer gas capability is standard in all Spectrolaser instruments.