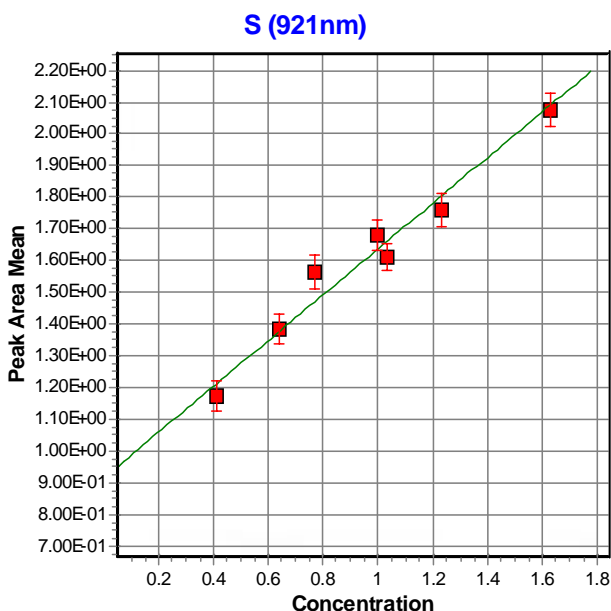
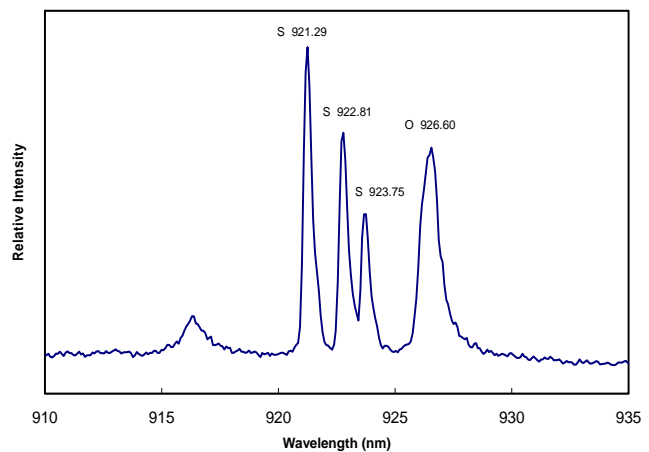


## Spectrolaser Application – Sulphur Analysis

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 enhances the emission of some elements and extends the power of the instrument to the analytical determination of important elements including halogens and sulphur. Furthermore, the sensitivity of the Spectrolaser instruments has recently been extended to 930 nm to capture the strongest S emission lines at 921 - 923nm – shown right.



Sulphur is monitored regularly in a diverse range of industry applications including fuel utilization and in pharmaceutical manufacture.

As an example, sulphur determination in a coal application located in Kalimantan, Indonesia is shown left.

From July 2004, Spectrolaser instruments will be shipped with extended IR capability enabling analytical determination of sulphur using optical emission at 921nm. Buffer gas capability is standard in all Spectrolaser instruments.