11 Granit str., Petah Tikva, Qiryat Arie, 49514 Israel
www.laser-distance-spectrometry.com
info@laser-distance-spectrometry.com
Tel : +972(3)927 74 75
Fax : +972(3)927 75 34

Report
Study of Copper Bearing Ores with C, Chile

Incoming samples

The 5 received samples contain heterogynous powder and small granolas.
They were sent to analytical laboratory of Israel Geological Institute (Jerusalem) in order to conduct analysis. Major metals were measured using ICP-AES instrument Carbon content was analyzed by TIC instrument.
After that, LIBS (laser induced breakdown spectroscopy) experiments were conducted.

The customer's task:
Analysis of: Si, Ca, Al, Mg and Carbon.

Typical copper ore UV and deep UV spectra.

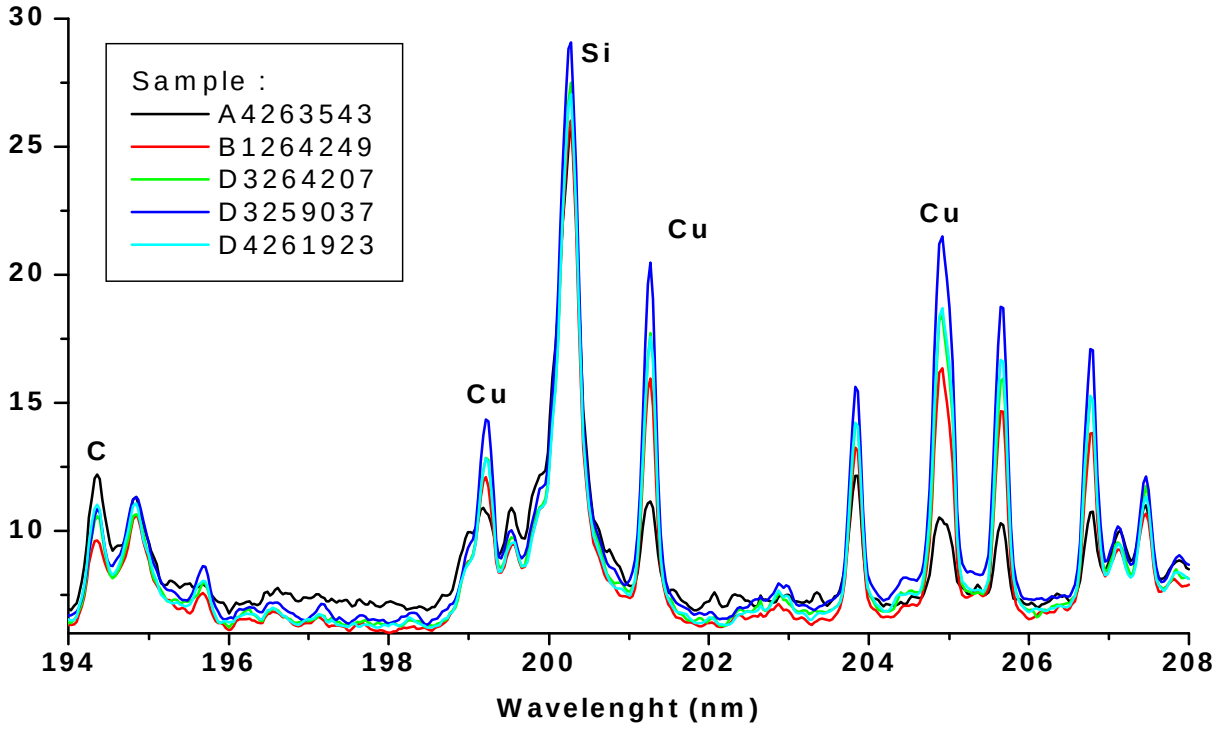


Figure1: according to DUV spectrum Carbon (C), Copper (Cu) and Silicone (Si) lines can be clearly detected.

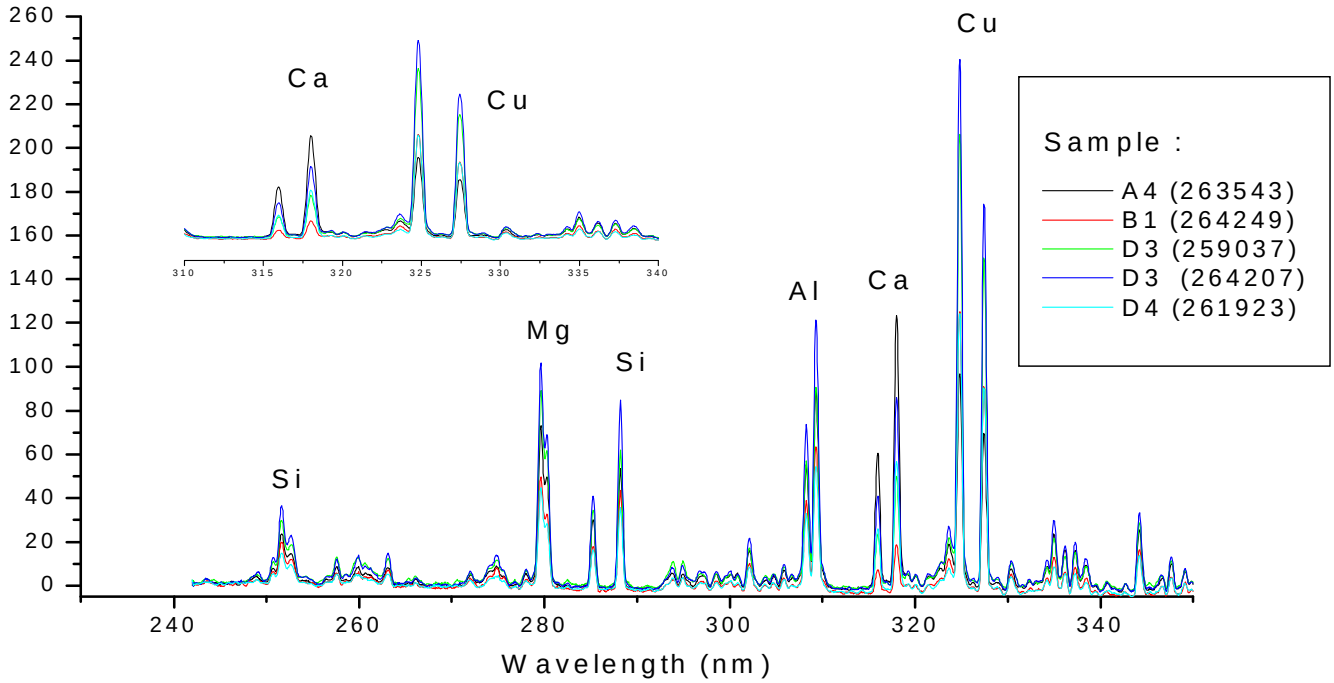
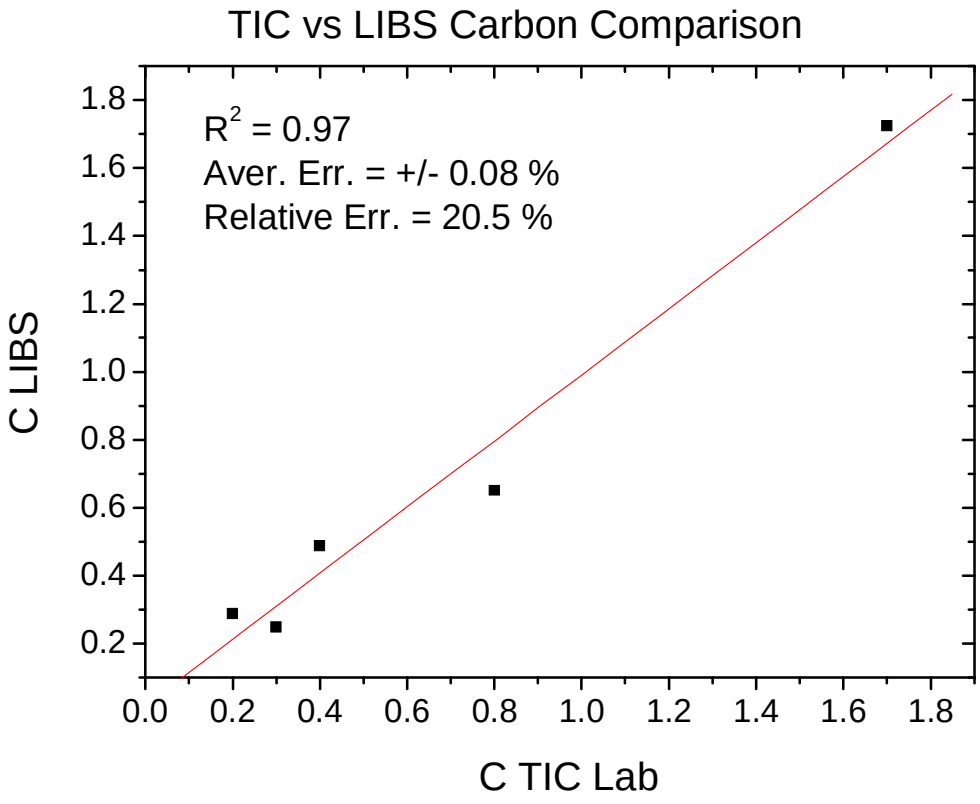
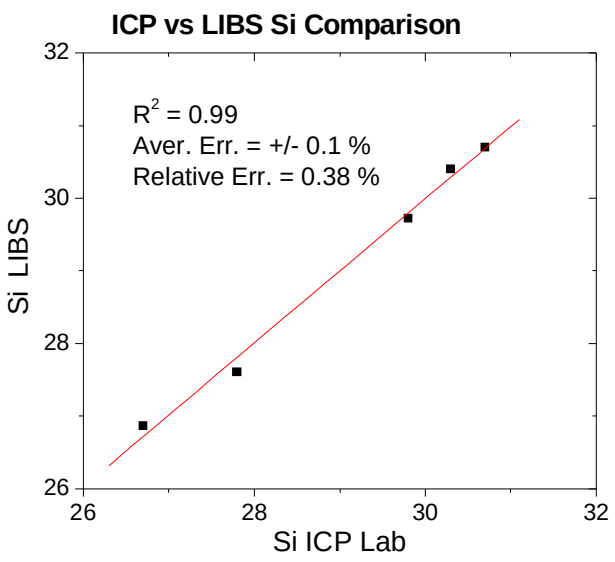


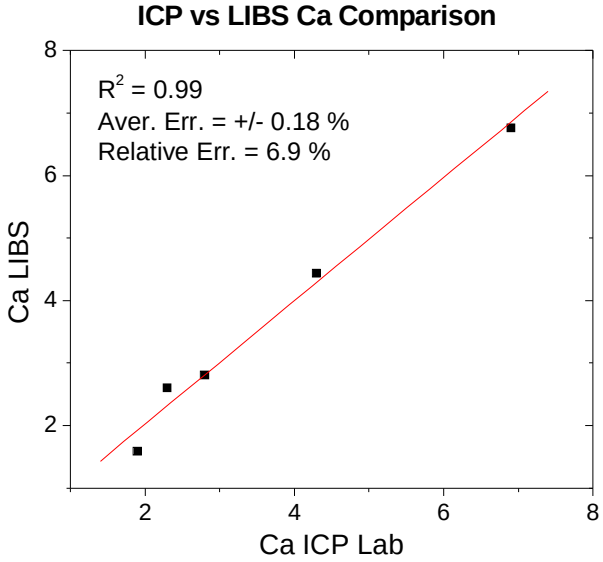
Figure2: according to UV spectrum Calcium (Ca), Aluminum (Al, Magnesium (Mg) Copper (Cu) and Silicone (Si) lines can be clearly detected.

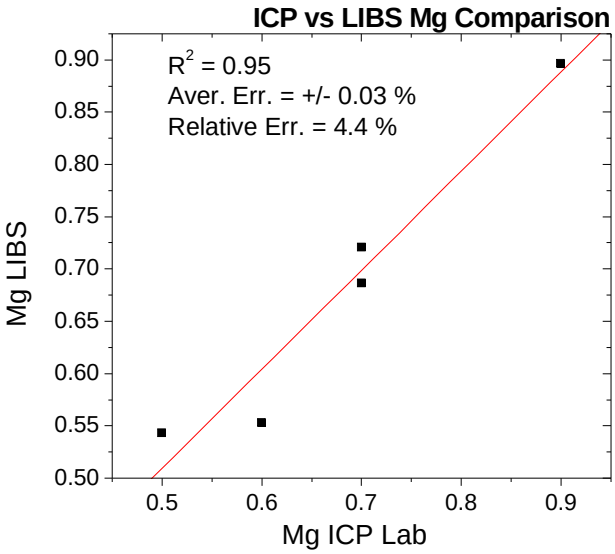
The results

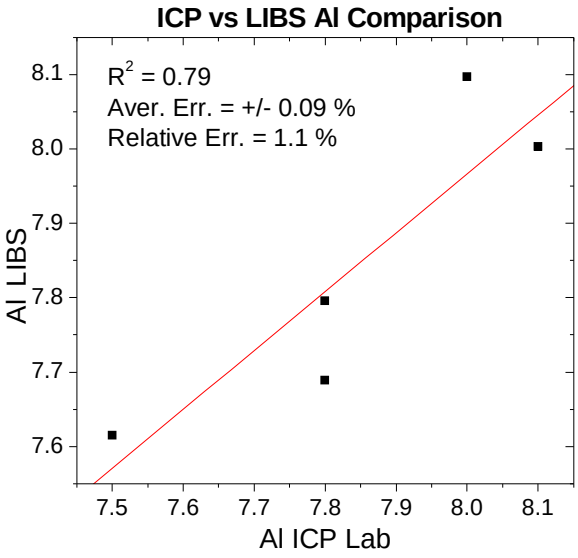
According to LIBS analyzes comparison good correlation between LIBS system and laboratory (ICP and TIC) analysis is received.











Conclusions:

All the required materials are possible to analyze by continuous on-line LIBS system.
High precision and good correlation are received for all analyzed ele