

标准编校

Laser-induced breakdown spectroscopy (LIBS) is an elemental analysis technique that is based on the excitation of atoms located on ~~the~~ ~~sample~~ material's surface; ~~this excitation is induced~~ by focusing a pulsed laser beam ~~on the surface~~. ~~The~~ ~~Material~~ can be ablated in concentrations ranging from ~~ng~~nanograms to ~~μg~~micrograms ~~can be ablated by using~~ this technique, ~~producing~~ ~~generating~~ a microplasma ~~that~~ ~~which~~ can be characterized by ~~several~~ ~~of~~ parameters. After the ~~creation~~ ~~generation~~ of the ~~micro~~plasma, electromagnetic radiation is emitted ~~owing to~~ ~~under~~ several processes, namely, ~~the~~ bremsstrahlung ~~process~~, recombination, and de-excitation of atoms and ions ~~occurring inside~~ ~~in~~ the laser plume [1]. ~~The~~ ~~De~~-excitation of atoms and ions leads to light emission ~~at~~ ~~with~~ ~~a~~ characteristic frequency, which can be used ~~for~~ ~~in~~ both ~~the~~ qualitative and ~~the~~ quantitative determinations.

Comment [A1]: Please specify the parameters you are referring to.

优质编校

Laser-induced breakdown spectroscopy (LIBS) is an elemental analysis technique that ~~is~~ ~~involves~~ focusing a pulsed laser beam onto the surface of a material specimen to ~~based on the excitation of~~ ~~excite~~ atoms located on the ~~sample~~ surface, ~~by focusing a pulse laser beam~~. The focused laser beam ablates ~~the material in~~Material concentrations ranging from ~~ng~~nanograms to ~~μg~~micrograms, ~~can be ablated by this technique producing~~ ~~generating~~ a microplasma ~~plume~~, ~~which~~ ~~that~~ can be characterized by ~~several~~ ~~of~~ parameters. After the ~~plume is generated~~ ~~creation of the plasma~~, electromagnetic radiation is emitted ~~as~~ ~~a result of~~ ~~under~~ several processes, ~~namely~~, ~~the~~ bremsstrahlung ~~process~~, recombination, and de-excitation of atoms and ions ~~occurring~~ inside the laser ~~ablated~~ plume [1]. ~~In particular, the~~ ~~De~~-excitation of atoms and ions leads to ~~light~~ emission ~~of light~~ ~~at~~ ~~with~~ ~~a~~ characteristic frequency, which can be used ~~for~~ ~~in~~ both ~~the~~ qualitative and ~~the~~ quantitative determinations.

Comment [A2]: When units of measurement are not preceded by a numeral, they should be spelled out.

Comment [A3]: Please check my insertion here: I understand that "microplasma" refers to the plume that is known to be generated in LIBS. Further, by making this insertion, the use of "laser plume" in a later sentence becomes less abrupt.

Comment [A4]: To improve clarity, please consider listing some of these parameters.

Comment [A5]: If the three processes given here are the only three processes that result in electromagnetic radiation, then please retain this word. However, if these processes are three out of many other processes, then please revise this part as "for example."

Comment [A6]: Please specify what is being determined here. Do you mean "determinations of trace elements"?