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摘要：用微波等离子体炬(MPT)为激发光源，氩气为等离子体工作气体，用气动雾化进样，采用标准加入法研究微波等离子体炬原子发射光谱法(MPT AES)测定芦荟中Fe和Pb的方法。详细考察溶液硝酸浓度、微波前向功率、载气流量、工作气流量、氧屏蔽气流量等实验参数对测定的影响，还考察共存离子对测定的影响。同时，还通过常规消解方法与微波消解方法相比较，得出微波消解-微波等离子体炬原子发射光谱法具有简单、快速、准确、待测元素不受污染等特点。结果表明，微波消解-微波等离子体炬原子发射光谱法可以作为研究芦荟中微量元素的含量的一种行之有效的方法。

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Determination of iron and lead in aloe by microwave digestion-microwave plasma torch atomic emission

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Abstract: Using microwave plasma torch(MPT)as excitation light source,argon as support gas,the sample solution was introduced into a pneumatic nebulization instem by the standard addition method.The determination of Iron and Lead in aloe by microwave plasma torch atomic emission spectrometry(MPT AES)was studied.By observing the experimental conditions (including HNO<sub>3</sub> concentration in the sample solution,microwave forward power,carrier gas folw rate,support gas flow rate and oxygen shield gas flow rate),the effects of concomitant elements on determination of iron and lead emission signal were investigated in detail.Comparing with the conventional method,the microwave digestion is simple,rapid,accurate,and with less possibility to be contaminated by the environment,and of great applied value.The result shows that the determination of microwave digestion MPT AES is effective method to study the trace elements in aloe.

Key words:

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