

重金属检测

饲料中铅测定方法的探讨

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摘要:

试验比较了GB/T13080-2004中的两种前处理方法(混合酸消解法和干灰化法)对铅测定结果的影响以及同一前处理条件下,采用火焰扣背景(氘灯)和火焰不扣背景对铅测定的差异;进一步探讨了在混合酸消解法处理下,当试液钙浓度在240 μg/mL~4 800 μg/mL范围内对铅测定结果的影响。结果表明:在铅含量较低的样品中,氘灯扣背景比不扣背景的测定值小,而且差异较大。在铅含量较高的样品中,两者的结果差异小。但从回收率的结果上来看,两者较为接近;前处理方法的比较结果显示,混合酸消解法处理的样品的回收率和精确度要比干灰化法高。同时实验显示试样钙浓度在240~4 800 μg/mL范围内对铅测定结果无显著影响。

关键词: 铅;扣背景;混合酸消解

Discussion on Determination Method of Lead in Feed

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Abstract:

The experiment compared the effects of two lead determination methods in GB/T13080-2004, and the differences between the results determined by the flame atomic absorption using deuterium lamp deducting background and non-deducting background; when the mixed acid is used to digest the samples, further discussion is made about whether the calcium concentration(its range is from 240 μg/mL to 4 800 μg/mL) in tested solution can influence lead determination results. The results showed that: for the samples which has lower lead content, the results determined by the method using deduction background is lower than non-deduction background, they are significantly different from each other; for the samples which has higher lead content, the difference is not significant. However, the recoveries of these two methods are similar. The comparison result about preparation method shows that the recovery and accuracy of the method using mixed acid digestion is higher than the dry ash method. The experiments also showed that the calcium concentration has no significant effect on the lead detection calcium, when its concentration range from 240 μg/mL to 4 800 μg/mL.

Keywords: lead deducting background mixed acid digestion

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