

后生物生产层

生产层不同测定方法对青贮饲料中NDF和ADF含量的影响

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摘要:

为探讨过滤器和不同测定方法对青贮饲料中性洗涤纤维(NDF)和酸性洗涤纤维(ADF)的影响,本试验选取内蒙古地区常见的8种青贮饲料为供试材料,选用ANKOM滤袋、CAU滤袋和P2型玻璃坩埚为热抽滤装置,以传统的范氏法为对照,分别对青贮饲料NDF的测定进行耐高温α-淀粉酶处理,ADF的测定采用连续洗涤法。结果表明,8种青贮饲料的NDF和ADF含量,经ANKOM滤袋和CAU滤袋所测结果均无显著差异;通过P2型玻璃坩埚测定的NDF值普遍高于其他2种滤器测得结果,尤其以TMR青贮饲料最为显著;经P2型玻璃坩埚测得全株玉米(Zea mays)青贮和TMR青贮饲料的ADF含量显著(P<0.05)高于其他2种滤器的测得结果;与对照相比,通过在中性洗涤剂中添加耐高温α-淀粉酶,全株玉米青贮饲料和TMR青贮饲料NDF值显著下降,其他青贮饲料NDF值无显著(P>0.05)变化;连续洗涤法对苜蓿(Medicago stiva)青贮饲料和尖叶胡枝子(Lespedeza hedysaroides)青贮饲料的ADF产生显著(P<0.05)影响,对其他青贮饲料ADF无影响。

关键词: 青贮饲料 中性洗涤纤维 酸性洗涤纤维

Effects of different methods on NDF and ADF of silage

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Abstract:

Taking Van Soest as control, the ANKOM bag, CAU bag, and P2 Glass crucible filters were used to measure NDF and ADF of eight kinds of silages often using in the Inner Mongolia for determine the effect of the different filters and testing methods on neutral detergent fiber (NDF) and acid detergent fiber (ADF) content of silage. NDF was treated by α-amylase heat stable and ADF was measured by continuous washing. This study indicated that NDF and ADF measured by CAU bag and ANKOM bag were not significantly different but they were significantly lower than those measured by P2 Glass crucible (P<0.05), especially NDF in TMR silage and ADF in whole plant corn silage and TMR silage. Compared with control, the NDF of whole plant corn silage and TMR silage significantly decreased by adding high temperature α-amylase (P<0.05) and continuous washing greatly impacted on ADF of alfalfa silage and Lespedeza hedysaroides silage.

Keywords: silage neutral detergent fiber acid detergent fiber

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