

农学—研究报告

山体库贮藏马铃薯淀粉、还原糖含量及淀粉酶活性的变化

张勇^{1,2},高海宁^{1,1},王恩军²,王兴德^{1,1},李红³,李彩霞²

- 1.
2. 河西学院
3. 河西学院生命科学与工程系

摘要:

为探讨甘肃省民乐县山体库贮藏对马铃薯品质的影响。对9个马铃薯品种不同贮藏时期淀粉、还原糖含量以及淀粉酶活性进行分析测定。结果表明:随着贮藏期的延长,大多数品种的淀粉含量表现为升→降→升→降,还原糖含量表现为升→降,淀粉酶活性表现为升→降→升→降;2月份是一个临界贮藏时期,淀粉含量降低到最低(12.68%~22.47%),还原糖含量达到最高点(0.43%~2.41%),淀粉酶活性降低到最低点(0.43~0.87 mg/(g? min))。山体库有利于马铃薯的贮藏;‘青薯6号’和‘同薯23号’适合做菜用型品种,‘大西洋’、‘夏波蒂’和‘LK-99’适合做生产加工型品种,为了保证品质,最佳的加工时间在次年2月之前完成;淀粉酶活性和淀粉含量之间存在负相关,与还原糖之间存在正相关,淀粉含量和还原糖含量之间存在负相关,淀粉含量和还原糖含量之间处于动态平衡状态。

关键词: 淀粉酶活性

Change of Starch, Reducing Sugar and Amylase Activity of potato during Storage in the Caves Warehouse

Abstract:

In order to explore the caves warehouse storage effect of quality of potato in Minle county, Gansu province. We collected nine cultivars of potatoes from the Minle county, Gansu province to evaluate the starch, reducing sugar content and amylase activity which stored at different storage periods. The results indicate that with the storage period developed, the starch content of the most potatoes were showed increase-decrease-increase-decrease, reducing sugar contents were showed increase-decrease, and amylase activity were showed increase-decrease-increase-decrease. During January to February, the lowest temperature in a year, the starch content and amylase activity reached their minimum level (12.68%-22.47%) and (0.43-0.87 mg/(g?min), respectively, but the reducing sugar achieved their maximum level (0.43%-2.41%).The caves warehouse was of benefit to storage of potato. Pearson correlation matrix analysis showed that, reducing sugar content and amylase activity negatively correlated with starch, but amylase activity positively correlated with reducing sugar content. Between the reducing sugar and starch content had a dynamic balance. From the reducing sugar and starch to analyze these two indexes, ‘Qinshu 6’ and ‘Tongshu 23’ were suitable for cooking using, the three varieties of ‘Atlantic’, ‘Shepody’ and ‘LK-99’ were more suitable for production and processing, and processing has to complete before the February of the next year to assure quality

Keywords: amylase activity

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通讯作者: 李彩霞

作者简介:

作者Email: lipeng@hxu.edu.cn

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