

质构仪质地多面分析(TPA)方法对苹果采后质地变化的检测

Comparison of texture properties of post-harvested apples using texture profile analysis

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中文摘要:

应用质构仪质地多面分析(TPA)试验法,对红富士与嘎拉苹果采后质地进行分析。结果表明,果肉黏着性与硬度、脆度、凝聚性等质地参数值呈负相关;果肉凝聚性与硬度、回复性、咀嚼性参数值有较好的正相关性($R=0.86\sim 0.95$);果肉弹性值与其它参数值相关性较差,而回复性与弹性以及黏着性以外的质地参数值有较好的正相关性($R=0.67\sim 0.95$)。确定脆度、黏着性、凝聚性、回复性、咀嚼性5项参数用于比较红富士与嘎拉苹果采后质地的差别,结果反映了嘎拉较红富士苹果更易出现绵软的质地特性。

英文摘要:

Changes of texture properties of harvested Fuji and Gala apples were monitored and compared by using texture profile analysis with the stable microsystem texture analyzer. The correlation coefficients between those texture parameters were also analyzed. It was found that fruit adhesiveness had negative correlations with hardness, fracturability, cohesiveness and other texture parameters. There were positive correlations between apple texture parameters i.e. cohesiveness is correlated with hardness, resilience and chewiness, respectively ($R=0.86\sim 0.95$). The values of resilience correlated well with the measured parameters excluding springiness and adhesiveness ($R=0.67\sim 0.95$). It was concluded that parameters of fracturability, adhesiveness, cohesiveness, resilience and chewiness could provide basis for reliable evaluation of texture properties of apple fruits. Texture of Gala apples was more likely to become mealy than Fuji apples during post-harvest storage.

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