**Title** Study on the pasting properties of Chinese chestnut starch in different varieties before and after storage

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**Abstract**

Twelve Chinese chestnut varieties (*Castanea mollissima* Blume) collected from 9 main production areas in China were investigated to find out the relationship between starch pasting properties and the amylose content, and to study the changes of starch pasting properties by Rapid Visco Analyser (RVA, Newport Scientific, Australia) before and after 6 months storage. The results showed that the pasting properties of starch in different varieties before and after storage were different significantly. The peak viscosity, through viscosity, breakdown value and peak time were reduced, while the setback value was increased by 58.5~861 cp after storage. The changes of final viscosity and pasting temperature depended on the varieties: the final viscosity of Xiaoziyouli, Yelicang, Niandiban, SQ022 and Qingzha, and the pasting temperature of Dabanhong, Taili 1, Xiaoziyouli, SQ022 and Liuhezhongshu were increased while others' were reduced. Besides pasting temperature, the variation coefficients of characteristic values of RVA profile in different varieties were reduced after storage, but the differences among varieties were lesser. Amylose contents in different varieties were 17.21~32.78% before storage and increased by 0.18~10.41% after storage. The amylose content has a negative correlation with peak viscosity, through viscosity, final viscosity and breakdown value while has a positive correlation with setback value, pasting temperature and peak time. The starch pasting properties have a close relationship with the amylose content and the differences in varieties were mainly determined by their inherited characteristic.