

**Title** Freezing of strawberries by immersion in CaCl<sub>2</sub> solutions  
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**Citation** Food Chemistry, Volume 123, Issue 2, 15 November 2010, Pages 243-248  
**Keywords** Calcium; Immersion freezing; Pectin methylesterase; Strawberries

#### **Abstract**

The present investigation studied the freezing of strawberries by immersion in CaCl<sub>2</sub> solutions, analysing drip loss, pectin content and the degree of esterification of the pectins, total and cell-wall bonded calcium contents, the ratio bonded calcium/total calcium, and textural parameters. In addition, the effect of immersion in pectin methylesterase (PME) solutions prior to immersion freezing (IF) was analysed. The firmness of thawed fruit decreased by approximately 74% with respect to fresh strawberries, and neither IF-CA (freezing by immersion in CaCl<sub>2</sub> solution) nor PME-IF-CA (immersion in PME solution + freezing by immersion in CaCl<sub>2</sub> solution) provided significant benefit in maintaining firmness when compared to slow freezing (SF). However, IF provided a significant benefit in reducing drip loss of thawed strawberries when compared to SF, but pre-treatment with PME did not provide any additional benefit.