

Title Relationship of acid phosphatase activity and Brix/acid ratio in cherries  
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### **Abstract**

This research was undertaken to determine the relationship of acid phosphatase and Brix/acid ratio in cherries. High-acid cultivars of cherries (Karneol, Northstar, Kroeker, Danube, Montmorency, Oblinska, and Topas) exhibited low Brix/acid ratios while low-acid cultivars of cherries (Balatron, Sweetheart, Hedelfingen, and Hudson) had high Brix/acid ratios. The values of correlation coefficient ( $r^2$ ) for acid phosphatase and Brix/acid ratio in different cultivars grown in 2003 and 2004 were 0.88 and 0.84, respectively. An inverse relationship appeared to exist between the acid phosphatase activity and the acidity in cherries, and the  $r^2$  values for 2003 and 2004 crops were 0.97 and 0.81, respectively. The plot of acid phosphatase vs. Brix in cherries showed a positive slope, and the  $r^2$  values for 2003 and 2004 crops were 0.89 and 0.88, respectively. The results of this study indicate that acid phosphatase could serve as a marker for breeding new fruit cultivars with a desirable Brix/acid ratio.