

Soursop pectinesterases: thermostability and effect on cloud stability of soursop juice

ABSTRACT

The thermostability of two forms of purified pectinesterase from soursop fruit were studied. The heat stability data showed that PE I is more heat stable than PE II at pH 7.5. The D and Z values were evaluated in the range 45-75°C. The D values at 65°C were approximately 5.8 min and 3.3 min for PE I and PE II respectively. The changes in temperature required to increase the inactivation rate tenfold (Z value) were calculated at 8.5 and 8.6°C for PE I, PE II respectively. Both enzymes also tested positive for their ability to destabilise soursop juice cloud at 5 and 30°C. Cloud destabilisation by PE I occurred the fastest (large decrease in A_{660 nm}) in the natural juice at 30°C.

Keyword: Purified soursop pectinesterase; Soursop juice; Cloud stability