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Effect of ultrasound and thermal treatment on pectin methylesterase activity in papaya (Carica papaya) juice

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Among the pectic enzymes present in fruits and vegetables, pectin methylesterase (PME) is usually related to the loss of quality and it causes adverse effects on finished products. In this research, the kinetic of ultrasound and thermal treatments are evaluated in the PME activity in papaya juice. The results showed that the ultrasound treatment caused an increase in the catalytic activity up to 52%. After a while, the catalytic activity decreased in 27% indicating that the ultrasound was not effective in the enzymatic inactivation, whereas the thermal treatment inactivated 71% of the PME. However, these results open perspectives to evaluate the effect of ultrasound and enhance the catalytic activity of enzymes of industrial interest.

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