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Enzymatic treatment: An efficient way to improve juice extraction and quality of Pakistani Kinnow Mandarin

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The present study was aimed to evaluate the use of carboxymethyl cellulase (CMCase) and pectinase individually and in combination for juice extraction from Kinnow Mandarin (Citrus Reticulata), widely used in Pakistan as basic source of ascorbic acid. The combination of these two enzymes reduced the viscosity of pulp up to 74.79% at concentration of 50 IU of each enzyme/100 g pulp whereas, no significant effect on total soluble solids (TSS) and density was observed. Similarly, the change in pH of pulp and juice was non-significant. Moreover, the enzyme treatment produced more clarified juice with 95.70% clarity as compared to that of control with 78.00%. The final increase in juice yield was 20% with 90% juice recovery. Furthermore, the sensory evaluation of the enzyme treated juice reflected improved taste, flavor and sweetness.

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