



Vacuum Impregnation to modify physico chemical properties and sensory attributes of apples cv. Granny Smith (1 cm cubes) strawberries (cut in halves) and raspberries

Raw Material	Composition of Vacuum Impregnation Solutions	Process Parameters	Effect
apples cv. Granny Smith (1 cm cubes) strawberries (cut in halves) and raspberries	high methylated pectin solution preparation up to 3% (w/w) and/or CaCl2, up to 6.5% (w/w)	p1 6.6 kPa t1 2 min	limitation of loss in fruit firmness following pasteurization

Flow Chart

Vacuum Impregnation Setup

apples cv. Granny Smith (1 cm cubes) strawberries (cut in halves) and raspberries

Hydrodynamic Mechanism (HDM) Vacuum Chamber at – p1 6.6 kPa Time t1= 2 minutes

high methylated pectin solution preparation up to 3% (w/w) and/or CaCl2, up to 6.5% (w/w)

Deformation Relaxation Phenomenon(DRP) Vacuum Chamber at atmospheric pressure

Result : limitation of loss in fruit firmness following pasteurization



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Result:

Limitation of loss in fruit firmness following pasteurization. The effect of structure strengthening in pasteurized apples, strawberries and raspberries as well as frozen strawberries as a results of vacuum impregnation with a solution containing PME and calcium ions was reported e.g., by Degraeve et al. (2003), Suutarinen et al. (2000) and Van Buggenhout et al. (2006, 2008).