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Osmotic dehydration of mango: Effect of vacuum impregnation, high pressure, pectin methylesterase and ripeness on quality

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1 **Osmotic Dehydration of Mango: Effect of Vacuum Impregnation, High Pressure,**
2 **Pectin Methylesterase and Ripeness on Quality**

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13
14 **Abstract**

15 The effects of pretreatment with vacuum impregnation (VI) and high pressure (HP)
16 and adding pectin methylesterase (PME) with calcium on the quality of osmotic
17 dehydrated mango of different ripeness were investigated. Unripe and ripe 'Kent'
18 mango cubes were osmotic dehydrated (OD at 50 °C in 60 °Brix sucrose solution
19 containing 2 g calcium lactate/100 g and 0 or 0.48 mL PME/100 g), preceded either
20 by VI (OD-VI) or HP (OD-HP). Use of unripe mango in OD showed two to five-fold
21 higher soluble solid gain (SSG) compared to ripe mango for all treatments. Unripe
22 mango pretreated with OD-VI showed the lowest water loss (WL) and the highest
23 SSG. OD-HP had a similar but less pronounced effect as OD-VI on WL and SSG.
24 Hue (h^*) were generally preserved and color intensity (C^*) were maintained or only
25 slightly increased in both ripeness in all treatments. Lightness (L^*) was greatly

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