

## **CONTROLLING THE TEXTURE OF PROCESSED SWEET POTATO PRODUCTS**

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### **Abstract**

In the USA, the inability to control the textural properties of processed sweet potato (SP) food products has severely limited commercial product development. Textural properties depend on the cultivar and on the post-harvest handling of the roots. We focused our research on controlling the texture of sliced and restructured products. For sliced products, vacuum infiltration of trisodium phosphate solutions, with subsequent neutralization and cooking, increased firmness retention. Restructuring SP purées is another way to control textural properties. Using alginate- and cellulose-based, gel-forming agents, we were able to restructure SP purée into a high  $\beta$ -carotene convenience product that had desirable textural and flavour characteristics and required minimal home preparation. Experimental mixtures containing SP purée and various gel-forming agents were extruded into sausage casings, frozen, and subsequently heated in either a microwave or conventional oven. Instrumental texture profiles, rheological analysis, and sensory acceptability tests were run. Product quality varied with gelling agent and concentration. We discuss the relationships between chemical, physical, and sensory properties of sliced and restructured products.

**Note: This manuscript was incomplete (copies of the figures were mislaid)**