

# 03

## Processing Technology of Sweet Potato Staple Foods and Snacks

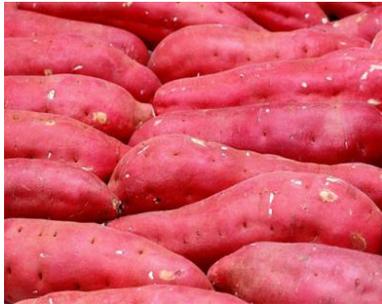


## ➤ Processing technology of sweet potato powder

Sweet potato powder is the dehydrated products used fresh sweet potato as raw material, which contains almost all ingredients of fresh sweet potato except its skin. According to different production process, it can be divided into **sweet potato flakes** and **sweet potato granules**. According to whether it was steamed or not, it can be divided into **raw** and **cooked powder**.



## Sweet potato raw powder



Sweet potato



Washing



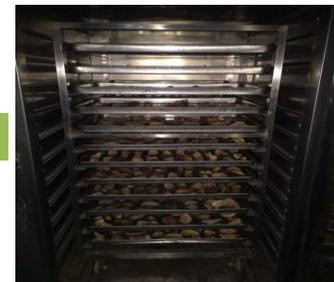
Peeling



Segmentation



Color Protection with ascorbic acid (concentration: 0.9%-1.5%) and citric acid (concentration: 0.2%-0.4%)



Drying  
(50-60 °C, 6-8 h)



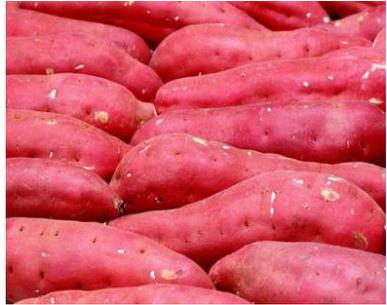
Grinding



Sweet potato raw powder



## Sweet potato flakes



Sweet potato



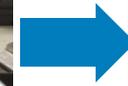
Washing



Peeling



Segmentation



Blanching & cooling



Sweet potato flakes



Drum drying



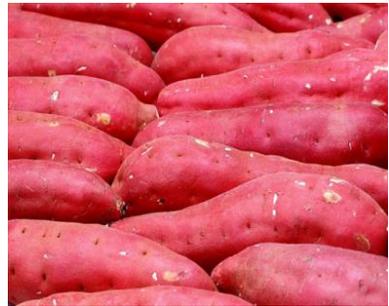
Mashing



Steaming



## Sweet potato granules



Sweet potato



Washing



Peeling



Segmentation



Blanching & cooling



Steaming



Sweet potato granules



Smashing and sieving



Air flow drying



Mashing



Backfilling



## ➤ Processing technology of sweet potato mash and its products



Sweet potato



Washing



Peeling



Segmentation



Steaming



Frozen sweet potato mash



Quick-freezing



Packaging



Sweet potato mash



Mashing



Sweet potato mash products



Shaping, baking



## ➤ Processing technology of sweet potato bread



Sweet potato



Washing



Peeling



Steaming



Mashing



Sweet potato bread



Baking (160-200 °C, 20-30 min)



Fermentation at 30-37 °C for 1.5-2 h



Molding



Mixing with flour, yeast, butter, etc., and making dough  
(mash addition: < 50%)



## ➤ Processing technology of ice baked sweet potato



Sweet potato



Selecting



Washing



Air drying



Ice baked sweet potato



Quick-freezing(-40~-70 °C)



Cooling



Baking (200-230 °C,  
30-45 min)



## ➤ Processing technology of dried sweet potato

Dried sweet potato is a kind of traditional snack foods. According to the processing technology, it was mainly divided into three types, including **preserved**, **crisped** and **recombined**.



## Preserved dried sweet potato



Sweet potato



Washing



Peeling



Segmentation



Steaming



With or without condiments  
e.g. sugars



Air drying or baking  
(50-75 °C, 10-12 h)



Preserved dried sweet potato



## Crisped dried sweet potato



Sweet potato



Washing



Peeling



Segmentation



Blanching



Quick-freezing  
(-40~-70 °C, 0.5-1 h)



Vacuum frying (100-120 °C,  
2-3 min  
or puffing (150-180 °C, 8-10  
min)



Crisped dried sweet potato



## Recombined dried sweet potato



Sweet potato



Washing



Peeling



Segmentation



Steaming



Mashing



Recombined dried sweet potato



Vacuum frying (100-120 °C, 2-3 min), baking (50-75 °C, 10-12 h) or drying (50-75 °C, 10-12 h)



Shaping up with or without condiments, e.g. sugars



## ➤ Processing technology of low-fat sweet potato chips



Sweet potato



Washing



Peeling



Segmentation



Low fat  
sweet potato chips



Frying or vacuum frying



Microwave vacuum  
drying



Vacuum impregnation with  
color protection solution  
and nutrients solution



Ultrasonic  
pretreatment



### ➤ Processing technology of sweet potato beverages



Sweet potato



Washing



Peeling



Segmentation



Blanching



Mixing with sugars, etc.



Centrifugation



Fermentation with *Lactobacillus*



Sterilization



Enzymatic hydrolysis



Homogenization



Sterilization



Canning



Sweet potato beverages



Spray drying



Solid beverages