

#104-21-Mendoza

Technology

Food Technology

### High Quality Dried Peaches Through Osmosis and Convection Technology



Mendoza-San Juan

Daniela Dubbini

dubbini.daniela@inta.gob.ar

Delia Paola Urfalino urfalino.delia@inta.gob.ar Delia Paola Urfalino

urfalino.delia@inta.gob.ar

Jesica Worlock

worlock.jesica@inta.gob.ar

#Prunus persica #combined dehydrated #solutions #sacarosa # sodium metabisulphite  
#sulphur dioxide #residual #dehydrated fruit #added value #peach #convection #varieties  
#osmosis #yield

<https://www.argentina.gob.ar/inta/tecnologias/durazno-deshidratado-de-mejor-calidad-mediante-tecnologia-de-osmosis-y-conveccion>

The province of Mendoza features the largest planted area and industrial peach production operation in Argentina. Peaches are mostly used to produce preserves, puree concentrate and dried peaches. Dried fruit is a traditional activity in the region and adds greater value to the product.

Introducing a novel technique that combines osmotic dehydration and convective drying to deliver high quality peaches. This combined method enables to reduce darkening, increases volatile aroma retention, reinforces the sweet taste and increases yield (more weight and volume). It delivers a product with very low sulfite content and excellent organoleptic features (flavor, texture, smell and color). The new processing technology was developed with

industrial peaches: Pavie Catherine, Fortuna, Loadel, Carson, Bowen, Andross, Ross, Dr. Davis, Rizzi, Everst, Riegels, Hesse and Sullivan's Late.

Dried peaches with low sulfite content are a delicious, healthy and natural product available year-round that contribute to the diet of children, youths, sportspeople, adults, individuals with celiac disease and consumers in general.

Undesirable colors or browning appear during the dehydration of peaches, which range from light yellow to dark coffee, due to enzymatic reactions (polyphenol oxidase) and non-enzymatic reactions (Maillard). Traditionally, peach browning has been controlled for years in Argentina by burning mineral sulfur in a closed environment. This compound inhibits polyphenol oxidase, and preserves the organoleptic properties of the product, especially, color. Likewise, it prevents development of certain microorganisms, has pesticide effects, softens the cell wall to facilitate drying and removes air from tissues. Between 5 and 6.5 kg of fresh peaches are needed to obtain 1 kg of dried peaches. With this technology, only between 3 and 4.5 kg are needed to produce the same amount, obtaining yields above 65%. The development could achieve a national and international scope since it improves organoleptic features of the dried peaches consumed at present, which is a marketing advantage.

Small farmers and micro-enterprises in the peach drying business in Mendoza, Argentina, have expressed their interest in the development of this product.

Peaches dehydrated with this combined technique feature:

1. Noticeably lower sulfite content compared with the dried peaches available in the national and international market.
2. Excellent color that is persists during the storage period.
3. Higher yield (weight and volume). Delivers 65% more yield than classic technology.
4. Improved texture.

Degree of completion: ADVANCED.

Peaches dried with this technique have been developed in the laboratory and in a pilot plant. The technology has been transferred to small farms and small-scale businesses.

***National Coordination Office for Technological Cooperation and Institutional Relations, INTA .  
Intellectual Property Department-Technological Antenna. Dr. Mariana Nanni  
[nanni.mariana@inta.gob.ar](mailto:nanni.mariana@inta.gob.ar)***