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Manned Spacecraft Center



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Treatment of Blueberries Prior to Freeze Dehydration

The problem:

During experiments directed toward the development of freeze dried rehydratable fruit bars, it was noted that freeze dried blueberries (and several other fruits) had tough, chewy skins upon rehydration. This detracted substantially from the palatability of the rehydrated product.

Solution:

Soften the blueberry skin by treatment with a weak solution of sodium hydroxide prior to freeze dehydration.

How it's done:

The pre-treatment consists of submerging punctured blueberries in a .25% sodium hydroxide solution at a temperature of 150° F for a period of 45 seconds. Upon removal from the sodium hydroxide, the berries are drained and washed in cold tap water. Blueberries treated in the above manner exhibited the desired taste and texture.

Notes:

1. The procedure related above was performed only on frozen, unsweetened blueberries, not fresh blueberries.
2. No additional documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
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Patent status:

No patent action contemplated by NASA.

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