

# The Professors' Crunchy Ice Cream



## A product guide for sellers

This document gives some information about the product you'll be selling in a questions and answers type format.

You might consider distributing a copy of this to volunteers who will be selling or giving them a verbal brief. However, everything in this document should be treated purely as helpful thoughts rather than being a comprehensive advice and answers to all questions on the product.

### **Q: What is “Crunchy Ice Cream”**

**A:** Crunchy ice Cream is the name given to the Australian version of “Freeze Dried Ice Cream”

### **Q: What is “Freeze Dried Ice Cream”**

**A:** “Freeze Dried Ice Cream” is real ice cream that has had most (about 98%) of the moisture sucked out of it through a process called “Freeze Drying” which is also known by the fancy name of “lyophilisation”

### **Q: What is “Freeze Drying”**

**A:** To freeze dry something you first require every drop of water in something to be frozen. For Ice Cream, this frozen solid state happens at around -40 Degrees Celsius (Which also happens to be -40 degree Fahrenheit!). Next you need to very slowly warm it up under high vacuum. The low pressure means the ice becomes involved in “sublimation” meaning the ice goes straight to gas, by-passing the water stage. The gas then gets sucked away from the item your freeze drying and Bob's your uncle - It's freeze dried!

### **Q: Who thought of Freeze Drying?**

**A:** Freeze-drying, as a general concept, has actually been around for centuries. The ancient Incas of Peru used mountain peaks along the Andes as natural food preservers. The extremely cold temperatures and low pressure at those high altitudes prevented food from spoiling in the same basic way as a modern freeze-drying machine and a [refrigerator](#) freezer.

### **Q: Is Freeze Dried Ice Cream “Astronaut food”?**

**A:** That's a definite “Sort of!” - NASA (The US Space agency) originally tried to take Freeze Dried Ice Cream into space as a lightweight treat for their astronauts. But freeze dried ice cream is “Crunchy” and fragments which doesn't work well in zero gravity! The solution was to crush the freeze dried ice cream down into a powder, add an edible adhesive gel and reform the mixture into squishy cubes – Yuck! They did take it into space so “Yes”, it was astronaut food but they only used it on one mission then dumped the horrible little cubes from the menu. So “No” it's no longer astronaut food and nor was it for very long.

### **Q: Is Crunchy Ice Cream the same as Dippin' Dots, those little balls of ice cream?**

**A:** No, The little balls are drops of ice cream frozen by dropping them into liquid nitrogen. They go super-cold and need to be kept very cold or they melt. Crunchy Ice Cream is a totally different technology and doesn't melt.

### **Q: What flavours are available?**

**A:** Currently only the Vanilla flavour is available, but there will be more flavours coming soon!

### **Q: Why Vanilla?**

**A:** Vanilla is the hands-down number #1 selling flavour of ice cream in the world!

### **Q: Why doesn't Crunchy Ice Cream melt outside of the freezer?**

**A:** The freeze drying process has removed (effectively) all of the water from the ice cream and so it doesn't require refrigeration to hold it's structure and without water there is no ice, without ice there is no melting.

### **Q: How long does it last in its packaging?**

**A:** Crunchy Ice Cream is packed in a special high barrier multi-layered packaging. The packaging guarantees at least two years shelf life, and this is what Crunchy Ice Cream is stamped with in its “Best Before” date. However, we believe that the ice cream will actually last for several years if left in it's packaging, in a dry and dark place at a constant temperature of around 20 Degrees Celsius.

### **Q: How long does it last out of its packaging?**

**A:** When Crunchy Ice Cream comes out of it's packaging the water in the air (humidity) starts to reconstitute the ice cream. How quickly depends on the humidity. Our tests show that Crunchy Ice Cream remains crunchy for about 2-3 days out of its packaging in NSW east coast summer humidity. After 3 days it starts to go a little squishy and gets increasingly

less palatable. You can slow this down to about 2-3 weeks by placing the Crunchy Ice Cream in an air-tight container after the packaging is opened.

***Q: Can I put it in the fridge or freezer to make it cold?***

A: You can, but it sort of defeats the point! The Crunchy Ice Cream will not be adversely effected by being in a fridge or freezer and it will retain the cold for only a brief period of time (because of the water content being near zero). Even after you take it out of the fridge of the freezer, it still won't melt.