



Freeze Dry Cycles

An Explanation of Your Freeze Dry Batches of Food

FREEZING CYCLE

1. Your Freeze Dryer is set at a default freeze time of 9 hours, you can choose to modify this time in the “Customize” menu on the Home Screen of the unit. Once the adjustment has been made, select “Start Customize” to begin your batch at the custom setting.

2. A 9 hour freeze time will cool the food to about -30 F. Nine hours is plenty of time to completely freeze most foods. However, when freeze drying things like ice cream or pineapple it is good to freeze the food for another hour or two.*

*We suggest this because people cut their food in different thicknesses and even the same types of fruit may have varying amounts of water and sugar per batch, it is difficult to know exactly how long to freeze something.

MAIN DRYING CYCLE*

1. Once the 9 hours of freezing has completed, the vacuum pump automatically turns on. Within a few minutes the vacuum pump will pull a good vacuum down to 500 mT. During this process the freezer will get even colder, as much as -50 F or more.

2. Once the vacuum gets down to 500 mT the heaters will turn on and the water will begin to sublimate (solid to gas) out of the food. The water vapor coming out of the food then freezes to the sides of the chamber.

3. The heaters turn on and off depending on the pressure in the chamber until there is minimal amounts of water sublimating off. The pressure will rise with the heating pads on and ice sublimating up to 700-800mT, this is normal.

4. This cycle will last 6-15 hours depending on the moisture and sugar content of the food*

*This cycles time will take longer for foods with higher water content (ie: Fruits>vegetables; juicier than an apple)

TIMED FINAL DRY*

1. When the vacuum pressure gets below 500mT and can stay below 500mT consistently, unlike the 1st Dry Cycle, the heaters stay on for a preset time of 7-12 hours**. We call this a Final Dry Time and it is used to wring every last drop of water out of the food.

**As with the freeze cycle, it is better to add two-three hours to the “Final Dry Time” when freeze drying high moisture and sugar foods like pineapple, peaches, ice cream, etc. This will ensure a higher first-time successful drying.