Blue Alpine Helpful Freeze Drying Chart

Eutectic Temperature*

105° or Less & 500 to 700 mTorr ← → 105°-110° & 700 to 900 mTorr → 110°+ & 900 to 1200 mTorr+

Ultra Fragile	Fragile	Normal
Pineapple	Broccoli & Cauliflower	Lean Meats
Grapes	Blue Berries	Most Fruits
Cherries	Citrus Fruits	Most Veggies
Canned Fruit	Peaches & Mangos	Leafy Greens
Canned Veggies	Apricots	Pureed Fruits & Veggies
Pickles	Pumpkin	Herbs
Melons	Tomato	Liquids (Milk, egg, etc.)
Hard Cheese	Very Ripe Fruit	
	Most Tropical Fruits	

Common Things You Can't Freeze Dry:

Oil Based:	Not Enough Water	Too Messy Or Too Much Sugar	Hard But Possible
Chocolate †	Jerky	Honey	Sausage
Lard & Butters	Dry Beans	Syrup	Salami
Nuts	Dehydrated Fruit	Jams	Pepperoni
Cooking Oils	Fruit Leather	Jellies	Heavy Cream
Mayonnaise	Candied Fruit	Jell-o	Canned Fruit
Coffee Beans	Sugar	Alcoholic Drinks	Canned Veggies
Potato Chips	Salt	Soda	

For Best Storage Results:

- Use gloves when handling freeze-dried food.
- Cut away as much fat as possible from meats.
- Seal freeze-dried food in mylar bags within 15 minutes of removal from the freeze dryer to prevent rehydration from atmospheric water.
- Use 7 mil (per side) mylar bags for long term storage.
- Use oxygen absorbers in mylar bags
- Clean the outside of mylar bags and store in plastic containers to prevent attracting rodents.
- Store freeze-dried food in a dry, cool, dark place like a basement pantry or cellar.

*The eutectic temperature is the highest temperature you can bring frozen food in a vacuum during the freeze-drying process, without causing a breakdown of the structure of the food.

†Some foods cannot be freeze-dried by themselves, but when mixed with another food it can be. For example: Chocolate mixed with a marshmallow paste can be freeze dried. However, the shelf life is still limited due to the oils in the food.

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Eutectic Temperature

105° or Less & 500 to 700 mTorr | 105°-110° & 700 to 900 mTorr | 110°+ & 900 to 1200 mTorr+

Ultra Fragile

- Canned Fruit
- Canned Veggies
- Cantaloupe
- Cherries
- Grapes
- Hard Cheese
- Honeydew melon
- Pickles
- Pineapple
- Very Ripe Fruits
- Watermelon

Fragile

- Apricots
- Blue Berries
- Broccoli
- Cauliflower
- Lemons & Limes
- Mangos
- Most Tropical Fruits
- Oranges
- Peaches
- Pumpkin
- Tomato

Normal

- Apple
- Asparagus
- Banana
- Basil
- Beef
- Bread
- Candy
- Carrots
- Cheese Cake
- Chicken
- Coconut
- Cooked Rice
- Cottage Cheese
- Eggs
- Fish
- Herbs
- Ice Cream
- Kale
- Milk
- Onions
- Pears
- Peas
- Peppers
- Pork
- Pureed Fruit
- Pureed Veggies
- Raspberries
- Shrimp
- Smoothies
- Spinach
- Strawberries
- Tomato Sauce

EXTRA TIPS:

- The eutectic temperature is the highest temperature you can bring frozen food in a vacuum during the freeze-drying process, without causing a breakdown of the structure of the food.
- If a particular food comes out shriveled, extra flat, or has a jerky-like texture consider lowering the temperature on future loads.
- Blending or pureeing older, extra-ripe fruits and veggies can make loads easier and faster.
- Cut foods into evenly sized pieces for a uniform result.

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Common Things You Can't Freeze Dry:

Oil Based:	Not Enough Water	Too Messy Or Too Much Sugar	Hard But Possible
Chocolate	Jerky	Honey	Hard Cheese
Butter	Dry Beans	Syrup	Sausage
Peanut Butter	Dehydrated Fruit	Jams	Salami
Lard	Fruit Leather	Jellies	Pepperoni
Nuts	Candied Fruits	Jell-o	Bacon
Mayonnaise	Sugar	Alcoholic Drinks	Heavy Cream
Sour patch candy	Salt	Soda	Canned Fruit
Red hots candy			Canned Veggies
Coffee Beans			Juices
Cooking Oils			
Fatty Bacon			
Potato Chips			
Oreos			

EXTRA TIPS:

- While some things cannot be freeze-dried by themselves, it becomes possible when mixed with something that can be freeze-dried. For example, chocolate cannot freeze dry, but if mixed with a marshmallow paste, it can. However, the shelf life may be limited due to the oils in the food.
- Some foods, like juice, can be freeze-dried if watered down sufficiently or if turned into an ice slushy.
- Some high-sugar foods are hard to freeze dry because they make such a big mess.
- Honey can be freeze-dried if watered down with added xanthum gum to stabilize it or if cooked into a hard candy.
- Foods covered with skins (like grapes) might need to be cut in half to allow water to escape during the freeze-drying process.
- Some food may still freeze dry even with high oil and fat, but their shelf life may be limited.
- It never hurts to try something you are not sure about; the worst-case scenario is it doesn't work!