

How To Make Ice Cream

And What Goes Into It

Ben Spielman, 2025

What's In Ice Cream?

What's In Ice Cream?

What's In Ice Cream?

1. Base

What's In Ice Cream?

1. Base
2. Flavorings and Colorings

What's In Ice Cream?

1. Base
2. Flavorings and Colorings
3. Mix-Ins

What's In Ice Cream?

1. Base
2. Flavorings and Colorings
3. Mix-Ins
4. Toppings

Base

What's in Ice Cream?

The base is what makes up most of the ice cream. It's responsible for the texture of the ice cream itself (not including mix-ins or toppings).

Base

What's in Ice Cream?

- Something creamy

Like: cream, coffee creamer, milk, milk powder (if there are other liquids), etc.

Base

What's in Ice Cream?

- Something creamy
- Something sweet

Like: Sugar, corn syrup, artificial sweeteners, etc.

Base

What's in Ice Cream?

- Something creamy
- Something sweet
- Something surprising...

EXAMPLES ON NEXT SLIDE

Xanthan Gum

Xanthan Gum

Or Eggs

These help prevent heat shock and can be beneficial to ice cream texture (like eggs).

— — — — IF ASKED ABOUT HEAT SHOCK — — — —

Heat shock (in ice cream) is the process by which the ice crystals gradually grow and eventually give the ice cream a crunchy texture. This growth is caused by small amounts of the ice cream thawing and freezing again due to temperature changes from actions like taking the ice cream out of the freezer.

Ingredients like xanthan gum or eggs help prevent this process by absorbing the water.

Source: [McGill University](#), [University of Minnesota](#)

However, adding too much xanthan gum can cause the ice cream to take on a "gummy, teeth-coating" texture. (Malek and Goode)

Flavorings and Colorings

What's in Ice Cream?

Flavorings and colorings are added to change the flavor and color of the ice cream base itself.

Flavorings and Colorings

What's in Ice Cream?

- Something flavorful

Like: vanilla extract, lemon extract, salt, spices, cocoa powder, etc.

Flavorings and Colorings

What's in Ice Cream?

- Something flavorful
- Something colorful

Like: food coloring

Mix-Ins

What's In Ice Cream?

Mix-Ins

What's In Ice Cream?

- Distributed throughout ice cream

Mix-Ins

What's In Ice Cream?

- Distributed throughout ice cream
- Distinctly not ice cream

Mix-Ins

What's In Ice Cream?

- Distributed throughout ice cream
- Distinctly not ice cream
- Will be exposed to liquid and then frozen.

Plan Accordingly

Mix-Ins

What's In Ice Cream?

Some examples:

Mix-Ins

What's In Ice Cream?

Some examples:

- Crushed Lemon Drops

Mix-Ins

What's In Ice Cream?

Some examples:

- Crushed Lemon Drops
- Chunks of Snickerdoodle Cookies

Mix-Ins

What's In Ice Cream?

Some examples:

- Crushed Lemon Drops
- Chunks of Snickerdoodle Cookies
- Turkey Skin Brittle

Mix-Ins

What's In Ice Cream?

Some examples:

- Crushed Lemon Drops
- Chunks of Snickerdoodle Cookies
- Turkey Skin Brittle
- Peppermint Patties

And More!

Toppings

What's In Ice Cream?

Toppings

What's In Ice Cream?

- Added right before serving (and eating)

Toppings

What's In Ice Cream?

- Added right before serving (and eating)
- Can be any temperature

The first thing ice cream does when you eat it is melt. Who cares if your topping is hot?

Toppings

What's In Ice Cream?

- Added right before serving (and eating)
- Can be any temperature
- Can be extra mix-ins

But How Do You Make Ice Cream?

But How Do You Make Ice Cream?

The best and most useful method I've found to make any kind of ice cream you want is to:

But How Do You Make Ice Cream?

1. Find a Specific Recipe

But How Do You Make Ice Cream?

1. Find a Specific Recipe
2. Follow it

But How Do You Make Ice Cream?

1. Make the Base

But How Do You Make Ice Cream?

1. Make the Base
2. Add Flavorings
and Colorings

But How Do You Make Ice Cream?

1. Make the Base
2. Add Flavorings
and Colorings
3. Churn

But How Do You Make Ice Cream?

1. Make the Base
2. Add Flavorings and Colorings
3. Churn
4. Add Mix-Ins

But How Do You Make Ice Cream?

1. Make the Base
2. Add Flavorings and Colorings
3. Churn
4. Add Mix-Ins
5. Freeze

Make the Base

But How Do You Make Ice Cream?

Make the Base

But How Do You Make Ice Cream?

- Combine the ingredients chosen for your base

Make the Base

But How Do You Make Ice Cream?

- Combine the ingredients chosen for your base
- Chill the base in the refrigerator (optional)

Add Flavorings and colorings

But How Do You Make Ice Cream?

Add Flavorings and colorings

But How Do You Make Ice Cream?

- Mix in flavorings and colorings into the base

Add Flavorings and colorings

But How Do You Make Ice Cream?

- Mix in flavorings and colorings into the base
- Chill in refrigerator (dependent on recipe)

For example, if your flavorings contain spices like ancho chile powder, you might want to let the recipe sit for a while to allow the spice to completely saturate.

Congratulations!

You now have pre-ice cream.

Churn

But How Do You Make Ice Cream?

Not really much substitution available on this step.

Churn

But How Do You Make Ice Cream?

- Use an ice cream maker

Not really much substitution available on this step.

**Can't I Just Put my Pre-Ice
Cream Into the Freezer?**

Technically Yes.

**Technically Yes.
But You Won't Get Ice Cream.**

“That’s called a cream-flavored popsicle.”

Me, right now, to all of you.

Churn

But How Do You Make Ice Cream?

- Use an ice cream maker

The process of churning the ice cream adds air and keeps the ice crystals that form small and unnoticeable. If the ice crystals get too big, your ice cream gains a distinctly crunchy texture.

Add Mix-Ins

But How Do You Make Ice Cream?

Eventually, your ice cream will reach a soft-serve consistency in your ice cream maker.

Add Mix-Ins

But How Do You Make Ice Cream?

- Add the mix-ins to your soft-serve consistency ice cream.

Add Mix-Ins

But How Do You Make Ice Cream?

- Add the mix-ins to your soft-serve consistency ice cream.
- Specific recipes might have specific methods

Freeze

But How Do You Make Ice Cream?

Freeze

But How Do You Make Ice Cream?

- Add Ice cream to a (preferably) air-tight container

Airtight helps keep humid outside air from getting into the ice cream and forming ice crystals inside the container.

Freeze

But How Do You Make Ice Cream?

- Add Ice cream to a (preferably) air-tight container
- Close the container

Another thing you can do to help keep ice crystals from growing on your ice cream is to press a layer of parchment paper onto the surface of your ice cream in the container. This make sure that any crystals that grow in the container aren't on the ice cream itself.

Freeze

But How Do You Make Ice Cream?

- Add Ice cream to a (preferably) air-tight container
- Close the container
- Put container in the freezer

Freeze

But How Do You Make Ice Cream?

- Add Ice cream to a (preferably) air-tight container
- Close the container
- Put container in the freezer
- Wait... for at least a couple hours.

Congratulations, You Now Have Ice Cream!

Sources

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Questions?