

## Lab 14c: Liquid Nitrogen Ice Cream

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The following recipe for ice cream will serve 15-20 people.

### Ingredients

1 ½ quart of half and half

1 quart of heavy cream

1 ½ cup sugar

5 tablespoons vanilla if you like vanilla ice cream.

(You may add other things to flavor the ice cream like chocolate syrup, peaches, bananas, etc.)

### Material Needed

Large stainless steel pot. We use one that is at least 4 gallons. The pot needs to be resistant to the cold temperatures of liquid nitrogen. Most plastic pots are not.

Long wooden spoon for stirring.

Measuring cup and spoons for sugar, vanilla.

Heavy gloves.

Eye goggles.

5 liter container of liquid nitrogen.

Containers to put servings in. 8 oz Styrofoam cups are fine.

Plastic spoons.

Sometimes you can purchase ice cream mix in grocery stores near the milk section. You can use all half and half instead of the cream if you wish. It will just change the texture of the ice cream. Mix the half and half, cream, sugar, vanilla, and other items in the large pot. Then pour in a small amount of liquid nitrogen. You must continuously stir with the wooden spoon.

The only tricky part in making this ice cream is to not put in liquid too rapidly. If you do, the mixture will bubble up and expand out of the pot, making a big mess. Have one person pour in liquid nitrogen while another person stirs. Pour the liquid nitrogen in a little bit at a time until you get the hang of it. There will be a lot of water condensation so that you probably will not be able to see the bottom of the pot. This makes it sort of mysterious to observers, but makes it difficult for you to tell whether you are putting in liquid nitrogen too rapidly. Continue stirring until the ice cream is as hard as you wish. Don't let it clump. This may mean you are not stirring fast enough or putting in liquid nitrogen too fast.

Make sure liquid nitrogen is not poured on the person's hand or arm! I advise you not to wear open shoes, because there is a chance you might spill some liquid nitrogen.

