

Cocoa Ice Cream with egg yolks (custard)



• Batch for ice cream maker of 1.5 ltr/qrt (or more) • Preparation time: 20 mins • Total time: 18 hrs •

Ingredients:

- 65 gr cocoa powder, unsweetened (2.3 oz.; 2/3 cup) (see notes)
- 210 gr sugar, to be divided (7.4 oz; 1 cup.)
- 385 gr/ml fresh milk, whole (13.6 oz; 1½ cups)
- 450 gr/ml heavy cream, 35-40% fat (15.9 oz; 2 cups)

(for UK): 315 gr (11.1 oz.) double cream (50% fat) mixed with 135 gr (4.8 oz) whole milk; then use it like heavy cream

- 80 gr egg yolks, cold from the fridge (2.8 oz.; from 4 eggs weighing 65-75 gr each see notes)

❗ 1 cup = 235 ml | 1 Tbs. = 15 ml. | 1 tsp. = 5 ml

Instructions

Before starting, make sure that your ice cream maker is ready for churning when needed. This means that if it has a removable freezer bowl, it should be put in the freezer for the whole time indicated by the manufacturer, usually 24 hours.

Step 1 - Prepare the cocoa mixture

Prepare your workplace: place a rubber spatula and a whisk on a plate, next to the stovetop to have them handy to use interchangeably.

Sift the cocoa powder through a fine mesh sieve and into a bowl; set aside.

Warm the milk and 3/4 of the sugar: in a medium saucepan put the milk and 3/4 of the sugar (160gr; 5.6 oz.; 3/4 cup). Warm over medium heat, stirring often with the rubber spatula.

Add the cocoa powder: when all the sugar has dissolved and the milk looks hot and steamy, grab the whisk and add the cocoa powder, a spoonful at a time, whisking well after each addition.

Bring to a soft boil: increase the heat to medium high. Stir continuously with the rubber spatula, scraping the bottom of the saucepan as you go, so that the cocoa doesn't stick at the bottom of the pan. When the first bubbles appear on the surface, remove from the heat and pour the hot cocoa milk into a large heatproof bowl, scraping along all residues from the saucepan.

Cool it down: prepare an ice bath by putting ice cubes and cold water in a large bowl and carefully nest the bowl with the hot cocoa milk in it, taking care that no water slips into it. Leave it to cool down while you prepare the custard.

Step 2 - Make the custard

Prepare the egg yolks: put the cold egg yolks in a large heatproof bowl, and whisk them lightly to break them down. Put them in the fridge to keep them cold, keeping the whisk in the bowl. Aim to proceed with the recipe as soon as possible, as the egg yolks dry out quickly

Boil the cream and 1/4 of the sugar: place the heavy cream and the rest of the sugar (60 gr; 2.1 oz; 1/4 cup) in a medium saucepan. Warm over medium heat, stirring often with the rubber spatula, until the sugar dissolves.

Increase the heat to high and remove the egg yolks from the fridge.

Pour the boiling cream in the egg yolks: when the cream comes to a full boil (large bubbles cover the surface), remove it from the heat, and immediately start pouring it in a slow, steady stream into the cold egg yolks with one hand, while whisking them vigorously with the other.

Stir: with the rubber spatula, stir well and thoroughly for one minute, scraping the bottom and sides of the bowl.



Important: While the custard is still hot, use a rubber spatula to thoroughly scrape the sides and bottom of the bowl, where residues of egg yolk lie. You cannot see them, but they are there and they should be incorporated into the rest of the mixture, while it is still hot. Stir well.

Step 3: Mix and chill the ice cream mixture

Mix the the custard with the cocoa milk: remove the bowl with the cocoa milk from the ice bath and pour it into the custard, scraping along all residues left behind. Stir thoroughly with the rubber spatula, until no streaks remain.

Strain the ice cream mixture through a fine mesh sieve and back into the bowl the cocoa milk was in. If there are any tiny cocoa clumps left on the sieve, press them gently through the sieve and stir well.

Cool it down: refresh the ice bath with more ice cubes, and carefully nest the bowl with the ice cream mixture in it, taking care that no water slips into it. Leave it to cool down for about 30 minutes, stirring occasionally.

Chill thoroughly: when you churn it with the ice cream maker, the ice cream mixture should be thoroughly cold. To chill it, cover well and refrigerate for 12 hours and up to 3 days.

Step 4 - Churn the ice cream

Check the ice cream mixture if it is thoroughly chilled, before churning: it should feel fridge-cold to the touch (or if you have an instant-read thermometer, it should read 4°C–10°C / 39°F–50°F).

Prepare the ice cream maker according to the manufacturer's instructions.

Stir: this cocoa ice cream mixture may become very thick after chilling, so give it a nice, thorough stir with a rubber spatula to loosen it; this will allow it to churn for longer.

Churn: with the machine running, pour the ice cream mixture through the canister and into the ice cream maker.

Leave to churn until fluffed up and creamy; depending on your ice cream maker this can take anywhere from 30–60 minutes, depending your ice cream maker.



This cocoa ice cream will expand and fluff up during churning. It is ready when it looks smooth and fluffy, with a mousse-like consistency. This could take anywhere from 30–60 minutes, depending on your ice cream maker. To evaluate if it's ready, lift a spoonful; it should be thick enough to stand on the spoon, but still be soft like soft-serve ice cream. If, upon lifting some ice cream with the spoon, a pool immediately starts forming on its edges, you will have to churn it for longer. In any case, if you feel doubts about the consistency, leave it for ten minutes more. But beware: at this stage, do not expect it to be like store-bought carton ice cream; for now it should be more like soft-serve ice cream. It will firm up and become like store-bought ice cream only after it sets in the freezer. Note: some ice cream makers are programmed by the manufacturer to stop after a specific length of time, which doesn't make sense because in this time the ice cream may have not reached its fullest potential. So, if you notice that your ice cream maker stops on its own and upon checking, you find that the ice cream is sloppy instead of fluffy, try to turn the machine on again and leave it to churn until it reaches the desired texture.

Step 5 - Put in the freezer to set

Before serving the ice cream or removing it to a container for storage, you have to put it in the freezer to set. Remove the removable freezer bowl (still filled with the vanilla ice cream) from the ice cream machine, cover with a lid and put it in the freezer until set. Setting will take anywhere from 1 to 4 hours, depending your ice cream maker.

After this, you can serve it directly from the removable freezer bowl or transfer it to an airtight container for longer storing.

Storage and serving

Storage: in the freezer for one month, covered well to protect it from absorbing the freezer's smells.

Scooping: this ice cream, like all artisanal ice creams, freezes hard in the long term. To soften it to a perfectly scoopable consistency, put it in the refrigerator for one hour. If you have

Notes:

For best results, use a scale and measure the ingredients directly into the utensils, when you need them. Avoid weighing in one utensil and transferring to another, as this causes a small, but important loss of quantity, especially in liquids. If using cups to measure the ingredients, make sure that you thoroughly scrape the cup every time you empty it.

Cocoa powder: any unsweetened cocoa powder will do. You can either use "dutch-processed cocoa powder" or "natural cocoa powder". Dutch-processed is sometimes labelled as alkalized, whereas natural cocoa powder is sometimes labelled as "non-alkalized", you can use whichever you prefer. Dutch-processed cocoa powder gives a richer cocoa flavour and colour to the ice cream, whereas natural cocoa powder is slightly acidic and results to a lighter colour in the final ice cream.

Egg yolks: it is recommended to weigh the egg yolks, because egg sizes (and their yolks) may vary. If you do not have a scale, use only egg yolks from eggs which are in the range of around 65 - 75 gr; 2.3 - 2.65 oz (whole egg, in its shell). The weight of the eggs is written on their packaging and they may be labelled as "large" or "extra large", depending on the country they are sold.

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