



TEA & COFFEE TIME PASTRIES

FROM BASE FORMULATIONS TO
LUXURY HOTEL EXECUTION

PREVIEW ONLY



CALLEBAUT®
CHOCOLATE ACADEMY

COURSE AGENDA

Upon purchasing the course you will get access to the entire workbook.
In this preview, we give you a sneak peek of theory, equipment and recipes.

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THEORY

COCOA POWDERS

Cocoa Powder (Lesson 0.8)

Cocoa Powder is the result of pressing cocoa liquor in a process similar to extracting olive oil. The result of this process is cocoa butter and a cake of cocoa solids, which, when ground, becomes cocoa powder. More or less fat can be extracted from cocoa liquor to produce cocoa powder with varying fat levels.

There are two broad categories of cocoa powder: natural and alkalised (also called "Dutched"). Alkalised cocoa powder has been treated with an alkalisising agent to increase its pH. This often makes it a bit darker than natural cocoa powder when dry and changes the flavour a little. Natural cocoa powders have not undergone this alkalisation process, and while the exact pH can vary among brands and types of cocoa powder, it is usually neutral to slightly acidic. Generally speaking, natural cocoa powder will be lighter when dry, though colour can vary greatly.

While often overlooked, fat content is another important aspect of a given cocoa powder. Defatted cocoa powder, for example, will allow for better volume in anything containing whipped egg whites, since there is no fat to interfere. We can also find cocoa powders in the range of 10-12% and 22-24%. Note that a cocoa powder's fat content comes entirely from cocoa butter.

Which type of cocoa powder is right for your application? That depends on your recipe and your desired outcome.

Natural or Alkaline?

You will recall that in our discussion of different leaveners, we touched on acids and bases and their reactions in a product. Baking powder is a self-contained item. It contains the right balance of acid and base to create lift in our product and will not react much with other ingredients. Baking soda, on the other hand, is a base (alkaline substance), and it is all alone and free to react with any acids in your recipe.

If you've chosen an alkaline cocoa powder, that, plus the addition of alkaline baking soda, could create a batter or dough that is too basic. This can lead to odd colours and unpleasant flavours, and your product may not rise. Therefore, if your recipe uses baking soda as a leavening agent, you will want to consider a natural cocoa powder. Its acidity can even be a part of the leavening reaction in your baked goods.

Baking powder works well with alkaline cocoa powders, as it provides everything it needs to react and leaven the product.



High or Low Fat?

A cocoa powder with 22-24% fat is a good choice when we want a product with a very moist crumb. Choose this type of cocoa powder for sponges, muffins, or financiers.

A cocoa powder with a lower fat content, in the 10-12% range, is appropriate for products that are a little drier, such as a cookie, shortbread, or sablé dough. Any product that won't benefit from extra moisture or softness does not need a higher-fat cocoa powder.

Let's not neglect appearance. Processing and fat content can have a big impact on a cocoa powder's colour, and it's important to note that some cocoa powders undergo a dramatic colour change when they are mixed with a liquid. Would your product benefit from a deep, dark, chocolate colour? Or are the particular flavour notes from a natural cocoa powder, for example, more noticeable in a particular product? These are all factors to consider when choosing cocoa powder.

Adding cocoa powder

Let's say you have a recipe for a tart dough, shortbread, or cake that you like, and you want to create a chocolatey version. Adding cocoa powder to the dough is a logical step. It also seems logical to reduce the flour in the recipe by an equal amount and replace it with an equal amount of cocoa powder. This is an excellent start, but it is important to be aware of how incredibly absorbent cocoa powder is. Flour can absorb around 40% of its own weight in water, but cocoa powder is capable of absorbing 100% of its weight in water. Adding cocoa powder to a recipe requires the addition of extra liquid to avoid an end product that is overly dry.



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EQUIPMENT LIST

Most of the tools our chefs use in the videos are standard equipment in any kitchen. However, there are a few specialty items that you may wish to seek out before beginning to recreate the recipes. It is not necessary to have each of the tools listed here, and you may adapt your technique to the tools you have, but you will find that these items make the job of perfecting the recipes much easier.

Standard Kitchen Equipment

- ✓ Baking parchment
- ✓ Bicycle cutter
- ✓ Chopping boards
- ✓ Cling film
- ✓ Convection oven
- ✓ Cooling rack
- ✓ Food processor
- ✓ Freezer (-20°C) or Blast freezer
- ✓ Gloves
- ✓ Hand blender
- ✓ Induction burner
- ✓ Knives
- ✓ Ladle
- ✓ Microwave
- ✓ Micro scale
- ✓ Offset palette knife
- ✓ Pastry Brush
- ✓ Piping bags
- ✓ Piping tips
- ✓ Probe thermometer
- ✓ Rasp-style zester
- ✓ Refrigerator
- ✓ Rolling pin
- ✓ Scale
- ✓ Scissors
- ✓ Sieves
- ✓ Silicone Mats

- ✓ Silicone Mats, Perforated
- ✓ Spatulas
- ✓ Spoons
- ✓ Stand mixer
- ✓ Strainers
- ✓ Trays 60 x 40 cm
- ✓ Trolleys for 60 x 40 cm trays
- ✓ Whisks

Specific to this Course, Optional

- ✓ 1 cm bars
- ✓ 4 mm ruler
- ✓ Box cutter/X-Acto® knife
- ✓ Dough sheeter
- ✓ Engineer's caliper
- ✓ Espresso Tamper
- ✓ Grass piping tip
- ✓ Metal baking beans
- ✓ Metal Ring moulds: 7 cm x 5 cm & 4 cm x 5 cm
- ✓ Mini tart moulds
- ✓ Mould: Silikomart Pleincouer Oval 145
- ✓ Mould: Silikomart Fashion Eclair 80
- ✓ Pastry Tip: 11 mm
- ✓ Round cutters: 7 cm & 4 cm
- ✓ Spray gun and compressor
- ✓ Toothpicks or skewers
- ✓ Travel cake mould



Get a taste of the Luxury Version of our Brownie with this preview featuring the ganache recipe.

BROWNIE

LUXURY VERSION

Yield: 10 pieces
Equipment: Silikomart Mould Fashion Eclair 80, Grass piping tip, 1 cm ruler

Component 1: Ganache

Ingredient	Qty (g)	Qty (%)	Method
Heavy cream	150 g	20.48%	1. Combine the heavy cream, corn syrup, and vanilla paste in a pot and simmer.
Corn syrup	208 g	28.39%	2. Pour the mixture over the chocolate. Let it sit for a few seconds, then gently whisk to emulsify.
Vanilla paste	6.6 g	0.90%	3. Add the yolk to the mixture and mix well.
Callebaut Zestina Peru Dark Chocolate 65%	230 g	31.40%	4. Cool the ganache to 40°C by pouring it over plastic wrap on a marble or granite counter top and agitating with a rubber spatula.
Egg yolk	23 g	3.14%	5. Transfer the ganache back into the bowl.
Butter, room temperature, soft	115 g	15.70%	6. Whisk the butter into the ganache. Then use an immersion blender to create a stable emulsion.
Yield: 732.6 g			7. Scrape the sides of the bowl, then cover the ganache with plastic wrap touching the surface.
			8. Store at room temperature until ready to use.



CALLEBAUT ZESTINA EXPERIENCE PERU DARK CHOCOLATE 65%

Sweet notes with gentle bitterness and vibrant acidity.

[View product](#)

TROUBLESHOOTING

PROBLEM	REASON	SOLUTION
BROWNIE		
My ganache separates.	This is coming from the imbalanced ratio between liquids and solids.	Be sure to scale all of the ingredients accurately. When heating the liquids, do not allow them to come to a boil or simmer them for too long, as this will cause the water to evaporate and create an imbalance in the recipe.
The cocoa paste seizes up when I incorporate it into the batter.	The cocoa paste was too cold.	Melt the cocoa paste to a minimum of 45°C, ensuring that all the cocoa butter and cocoa mass content have been fully melted. This will help mitigate the relatively cold temperature of the batter and give you extra working time.
My ganache separated once it was crystallised.	Incorrect emulsion of the ganache or incorrect pre-crystallisation	Check the ganache process and pre-crystallise correctly.
TRAVEL CAKE		
The crumble is too soft as I'm moulding it.	The crumble has a high butter ratio in the recipe and has been allowed to become too warm.	Make sure to work with a cold crumble, cutting as you need and working on a cold tray or table.
My butter melted when I incorporated it into the ganache.	The ganache is too hot.	Make sure the ganache is not warmer than 40°C. This will facilitate the incorporation of the butter without melting it all and will maintain the creamy texture.
When glazing the cake, I end up with a slightly thick layer and the glaze is not smooth.	The cake is probably too cold.	Glaze the cake at room temperature so the glaze doesn't cool down too quickly.
My cake doesn't have a homogeneous texture, resulting in a dense and greasy product.	The liquid ingredients were too cold/ not at room temperature.	In order to create a good and stable emulsion, ensure all ingredients are at room temperature before beginning the mixing process.
FINANCIER		
My batter is rubbery.	The brown butter was too hot.	Make sure the brown butter is at a temperature of no higher than 45°C, otherwise the butter will start to coagulate the egg whites.



OUR CHEF'S PRODUCT RECOMMENDATIONS



CHOCOLATE

Callebaut Selection



Callebaut Power 41 Milk Chocolate 41%
2.5 kg

[View product](#)

Callebaut Signature Collection - Single Origin



Callebaut Zestina Experience Peru Dark Chocolate 65%
1 kg

[View product](#)



Callebaut Zestina Experience Dominican Republic Dark Chocolate 70%
1 kg

[View product](#)

COCOA POWDER



Callebaut Botanical Experience Extra Brute Cocoa Powder
1 kg

[View product](#)



Callebaut Velvet Experience Légère 1% Cocoa Powder
0.75 kg

[View product](#)

INCLUSIONS



Callebaut Pailleté Feuilletine
2.5 kg

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COCOA PRODUCTS



Callebaut Cocoa Butter

[View product](#)



Callebaut Cocoa Nibs
0.8 kg

[View product](#)



Callebaut Cocoa Mass
2.5 kg

[View product](#)

CHOCOLATE CHIPS



Callebaut Baking Drops L, Milk Chocolate
10 kg

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NUT INGREDIENTS



Callebaut Hazelnut Praliné 50%
5 kg

[View product](#)



Callebaut Gianduja Pale
5 kg

[View product](#)



Callebaut Hazelnut Bresilienne
1 kg

[View product](#)



READY FOR THE
NEXT COURSE?

THE ART OF VIENNOISERIE

FROM THEORY TO PERFECT LAMINATION

BY ROMAIN DUFOUR

In this class you will learn

- the role of each ingredient in your viennoiserie product
- which lamination to choose
- how to experiment with flavours and textures

This course will equip you with the knowledge and confidence to create stunning laminated pastries in innovative shapes and remarkable flavours!

JOIN THE
CLASS!