



1

Introduction to Pastry Doughs

- Pâte – French for “dough,” “paste,” or “batter”
- Tourrier – classical kitchen brigade
- Non sweet pastry dough
 - Pie Dough, Pâte Brisée, Pâte à Foncer
- Sweet pastry dough
 - Pâte Sucrée, Pâte Sablée, Sablé Breton
- Puff Pastry, Pâte à Choux
- Phyllo Dough and Strudel Dough

2

Introduction to Pastry Doughs

- Ingredient Functions for Pastry Dough
 - Flour
 - Fat
 - Liquids
 - Sugar
 - Eggs
 - Leavening Agents
 - Salt

3

Introduction to Pastry Doughs

- Ingredient Functions for Pastry Dough
 - Flour
 - Pastry flour
 - Low-protein bread flour
 - Ratio of sugar
 - Hydration rate
 - Fats
 - Effects on flavor, texture, leavening and mouth feel
 - Common Fats
 - Melting point of the fats

4

Introduction to Pastry Doughs

- Ingredient Functions for Pastry Dough
 - Liquids
 - Common liquid: water and/or milk
 - Dissolves water-soluble ingredients
 - Transformation into steam
 - Aids from lactic acid
 - Sugar
 - Powdered, Superfine and Granulated sugar
 - Effects of the size of the sugar grain
 - Hygroscopic property
 - Maillard Reaction

5

Introduction to Pastry Doughs

- Ingredient Functions for Pastry Dough
 - Eggs
 - Hydration
 - Structure
 - Texture
 - Leavening
 - Flavor
 - Color
 - Leavening Agents
 - Chemical leavening
 - Physical leavening

6

Introduction to Pastry Doughs

■ Ingredient Functions for Pastry Dough

- Salt
 - Improves flavor and shelf life
 - 1.5 to 2% of flour weight
- Other Ingredients
 - Lemon juice, vinegar
 - Nut flours
 - Spices
 - Flavoring extracts

7

Pastry Dough – Unsweetened

- Balancing of sweetness with the filling
- Balancing of tenderness, flakiness and crispiness
- Types of Unsweetened Short Pastries
 - American Pie dough
 - Mealy Pie Dough
 - Flaky Pie Dough
 - Pâte Brisée
 - Pâte à Foncer

8

Pastry Dough – Unsweetened

- American Pie Dough
 - 100% flour, 70% butter, 20-30% water, 5-8% sugar
 - Mealy dough / Flaky dough
 - Degree of the fat incorporated into the flour
 - Pastry Flour
 - Hard fat: butter, shortening, margarine, lard
 - Water
 - Sugar

9

Pastry Dough – Unsweetened

- Mixing Dough
 - Mealy Pie Dough
 - Fat is mixed in until it resembles coarse cornmeal
 - Top and Bottom of the pies
 - Flaky Pie Dough
 - Flour and Fat are mixed until the size of hazelnuts
 - For drier fillings

10

Pastry Dough – Unsweetened: Mixing Pie Dough

- Precautions for Mixing
 - Temperature of the ingredients (cold fat)
 - Mix the flour/fat phase to a proper stage
 - Sufficient mixing
 - Proper amount of water
- Review of Unsweetened Dough
 - Rest the dough for at least 4 hours
 - Minimize waste when cutting

11

Pastry Dough – Unsweetened

- Pâte Brisée – “Broken Pastry”
 - Most frequently used
 - 100% flour, 50-60% butter, 20% water
 - “Sablage” and “Fraisage”
 - Fine crumb, little flavor
 - Traditionally must not contain sugar.
- Pâte à Foncer
 - Similar to pâte brisée, but with eggs/egg yolks
 - Lining pastry
 - Sweet and savory applications

12

Sweet Pastry Dough



- Enriched with sugar and fat
- Types of enriched sweet pastries
 - Pâte Sucrée
 - For precooked pie or tart shells
 - Pâte Sablée
 - Very crumbly; for cookies and petit fours
 - Pâte Breton (Pâte Sablée à Breton)
 - Open and crumbly; for cookies and petit fours
 - Pâte à Linzer
 - Light and delicate; for linzer tarts

13

Sweet Pastry Dough



- Ingredient Functions for Sweet Pastry Dough
 - Flour: low-protein bread flour, all-purpose flour
 - Unsalted butter
 - Sugars
 - Eggs
 - Salt
 - Leavening agents

14

Sweet Pastry Dough



- Mixing Methods
 - Sanding method
 - Dry ingredients and hard fat are blended, then liquid is added
 - Creaming Method
 - Minimum incorporation of fat and sugar
 - Hard or soft butter

15

Sweet Pastry Dough



- Pâte Sucrée – “Sugared Dough”
 - Similar to pâte brisée with higher proportion of sugar and (usually) eggs.
 - 100% flour, 50% butter, 50% sugar, 20% egg.
 - Creaming or sanding method
 - Tender, crispy and crumbly with lovely golden color.
 - Good shelf life

16

Sweet Pastry Dough



- Pâte Sablée – “Sandy Dough”
 - Similar to pâte sucrée with higher proportion of sugar and less liquid.
 - 100% flour, 60% butter, 40% sugar.
 - Delicate, rich and crumbly texture
 - Sometimes contains baking powder/baking soda
 - May contain cooked egg yolk
 - Typically cookie-like and often referred to as “shortbread.”

17

Sweet Pastry Dough



- Pâte Breton
 - From Brittany, France. Traditionally a cookie.
 - 100% flour, 75% butter, 70% sugar, 30% egg yolks
 - Has open crumb and very sandy texture.
 - Start with whipping egg yolks and sugar
 - Add soft butter, mix to an incorporation
 - Add sifted dry ingredients, mix until incorporation
- Pâte à Sablée Breton
 - Used for tart and petit four bases
 - Not suitable for lining molds

18

Sweet Pastry Dough



- Pâte à Linzer
 - Used for linzer tarts
 - 100% flour, 50% butter, 45% sugar, 20-30% eggs, 30-40% nut meal
 - Often flavored with spices such as cinnamon
 - Often contains baking powder
 - Has light and delicate texture.
 - Cream butter and sugar
 - Add the eggs and incorporate
 - Add dry ingredients, mix until incorporated

19

Sweet Pastry Dough



- Crumb Crust
 - Made from finely ground cookie crumbs moistened with melted butter.
 - 100% crumbs, 50% sugar, 25% melted butter.
 - Can be made from chocolate cookies, graham crackers, gingersnaps, vanilla wafer and macaroons.
 - Breakfast cereals can also be used. Ground nuts and spices can also be added.
 - Melt butter.
 - Add dry ingredients, mix until incorporated

20

Puff Pastry



- Pâte feuilletée
- Laminated dough, non-yeasted
- Typically no sugar added to the dough
- Savory and sweet applications
- Use of low-protein bread flour

21

Puff Pastry Dough



- Basic Process
 - Détrempe
 - Beurrage
 - Four to six folds
 - Single and double folds

22

Puff Pastry Dough



- Types of Puff Pastry
 - Traditional
 - Blitz
 - Inverted
 - Italian

23

Puff Pastry Dough: Basic Process



- Traditional Puff Pastry
 - Made from beurrage and détrempe
 - Dough should rest in refrigerator between fold
- Blitz Puff Pastry
 - Golf-size balls remain in dough
 - Do not overmix
 - Forms a cohesive dough once lamination begins
 - Usually 4 folds

24

Puff Pastry Dough: Basic Process



- **Inverted Puff Pastry**
 - Made by using a reversible dough sheeter
 - Butter is mixed with flour
 - Requires 5 single folds
- **Italian Puff Pastry**
 - Also known as *pasta sfogliata*
 - White wine and eggs are included in the dough
 - Lamination process same as the traditional puff pastry

25

Puff Pastry Dough: Basic Process



- **Working with Puff Dough**
 - Avoid warming of the dough
 - Relax the dough before cutting

26

Pâte à Choux



- French for "cabbage"
- Paste is cooked over stove
- The paste is then piped and baked
- Savory and sweet application

27

Pâte à Choux



- **Cooking and Baking**
 - Bring the liquid, fat, salt and sugar to a boil
 - Remove from heat, and add the flour at once
 - Cook over low heat as stirring
 - Beat the mixture in a paddle fitted bowl, then add $\frac{3}{4}$ of the eggs at once
 - Adjust the consistency by adding more eggs
 - The paste is piped and egg washed, scored and baked

28

Pâte à Choux Variations



- **Cream puff** – 2"- to 3"-round pastry often filled with pastry cream or creams, coated in fondant, chocolate or glaze.
- **Profiteroles** - tiny 1" round pastry often filled with ice cream or pastry cream and drizzled with chocolate
- **Chouquettes** - tiny unfilled round pastry topped with pearl sugar or chips.
- **Éclairs** – 4- to 6-inches long baked pastry and filled pastry cream or creams then dipped in ganache or poured fondant.



29

Pâte à Choux Variations



- **Religieuse** – French for "nun." It refers to a pastry of two *pâte à choux*, with one smaller on top of another, filled with a flavored *pastry cream* and glazed with *fondant* of the same flavor, and decorated with *buttercream* of the same flavor.
- **Paris Brest** – a 3- to 4-inch ring of choux pastry filled with hazelnut flavored pastry cream.
- **Cygnets** – French for "swan" since these *pâte à choux* are decorated to resemble a swan.



30

Pâte à Choux Variations



- **French cruller** - a fluted, ring-shaped glazed doughnut made from choux pastry.
- **Beignet** – bite-size deep fried doughnut-style choux pastry,
- **Churros** – deep-fried strips of choux pastry often served with hot chocolate.
- **Gateaux St. Honoré** – a puff pastry based cake with rings of caramel dipped profiteroles, filled with crème chiboust and finished with whipped cream.
- **Croquembouche** – a French wedding cake made with a tower of choux pastry.



31

Strudel and Phyllo Dough



- Paper thin layers of dough that are brushed with fat and then stacked or rolled up to make layered pastries.
- **Strudel** is an Eastern European pastry that begins as a soft dough made of strong flour, eggs and water.
- **Phyllo** is a Greek version usually made only of flour and water (and occasionally a small amount of oil).
- Both dough are stretched when developed, into a very thin, transparent sheet.

32

Storage and Service



- Considerations depend on the individual characteristics of each item
- Temperature and humidity control
- Freezing of the bases and doughs

33

Conclusion



- A variety of baked goods can be produced from a selection of sweetened and unsweetened pastry dough
- Understanding the formulation and characteristics of each dough is important to the success of the formula.

34