# “Note-by-Note Disassembled Black Forest Gateaux”

**By Dereck Vale**

**Materials and Methods**

| Equipment | Brand/Model | Picture |
|---|---|---|
| 2x Small pots | Stainless Steel Standard Pot |  |
| 1x Measuring Cup | Stainless Steel Measuring cup |  |
| 1x Kitchen Aid hand mixer | Robot Coup kitchen Aid hand mixer |  |

| | | |
|---|---|---|
| 1x Thermometer | Hygiplas Thermometer |  |
| 1x Flat tray | Rectangle Shape flat tray |  |
| 1x Parchment paper | |  |
| 1x Silicone Spatulla | Hygiplas Silicone Spatula |  |

| | | |
|---|---|---|
| 1x Microscale | New Horizon Microscale |  |
| 1x Weighting Scale | Jadever Digital Weighting Scale |  |
| 1x Oven | Electrolux |  |
| 1x Small whisk | Stainless Steel whisk |  |

| | | |
|---|---|---|
| 3x Medium Bowls | Stainess Steel Cooking Bowl |  |
| 1x Large bowl | Stainess Steel Cooking Bowl |  |
| 1x Fridge | Electrolux | |
| 2x Tablespoons | Stainless Steel Tablespoon |  |

**Ingredients**

Chocolate sponge

| Ingredient | Weight (g) |
|---|---|
| **Dry:** | |
| Soya Protein Isolate | 40g |
| Potato Starch | 75g |
| Glucose Powder | 43g |
| Sodium Bicarbonate | 4.5g |
| Sodium Chloride | 1g |
| **Wet:** | |
| Water | 155g |
| Olive Oil | 20g |
| Soy Lecitin | 3g |
| Malic Acid | 2g |

| | |
|---|---|
| Cocoa Aroma | 9g |
| Brown Colouring | 2g |

**Method:**

- Mix dry ingredients: soya protein, potato starch, glucose powder, cocoa aroma, sodium bicarbonate, sodium chloride.
- Combine water, oleic acid, lecithin and colouring. Blend and emulsify
- Add Malic Acid to wet emulsion for the last as it starts the reaction.
- Whisk dry ingredients into wet immediately
- Let batter sit for 3 minutes to aerate
- Spread 2-4mm on silicone mat or baking paper.
- Bake at 160C for 6 minutes
- Remove warm and flexible and let it chill.

Gelling Paste Cherry Filling

| Ingredient | Weight (g) |
|---|---|
| Gellan Gum | 10g |
| Xhantan Gum | 5g |
| Water | 500g |
| Glucose Powder | 15g |
| Red Colouring Liquid | 0.2g |
| Cherry Aroma | 3g |
| Almond Aroma | 2g |

**Method:**

- Heat water to 90C
- Mix dry ingredients together first (Gellan gum, xanthan gum, sugar) to prevent clumps
- Slowly sprinkle the dry mix into the hot water while whisking vigorously
- Maintain at 90C for 1 minute until fully hydrated
- Remove from the heat and le the mixture cool to 60C
- Add colour and cherry+ almond aromas and mix gently.
- Pour into a container or mould and leave at room temperature for 30-45 minutes
- The gel should set firmly at room temperature and remain stable.

Cherry Sphere – Reverse

| Ingredient | Weight (g) |
|---|---|
| **Cherry Liquid:** | |
| Water | 100g |
| Glucose Powder | 15g |
| Cherry aroma | 1g |
| Almond aroma | 1g |
| Red Colouring | 0.5g |
| Calcium Lactate | 2.5g |
| Xanthan Gum | 0.4g |

| **Alginate Bath:** | |
|---|---|
| Water | 990g |
| Sodium Alginate | 10g |
| Sugar or Maltodextrin | 5g |

**Method:**

1. Prepare Alginate Bath:
    - Combine Sugar and Alginate and whisk in water. Use an immersion blender to avoid clumps
    - Let sit for 10 minutes to hydrate. This becomes the setting bath.
2. Prepare the cherry liquid
    - Heat 100g water to warm (not boiling).
    - Add 2.5g calcium lactate and stir until dissolved.
    - Add 0.3g xanthan gum (rain it slowly while stirring). This gives a syrup-like texture that drops cleanly.

Vanilla Cream Sphere – Reverse

| Ingredient | Weight (g) |
|---|---|
| **Cherry Liquid:** | |
| Water | 100g |
| Glucose Powder | 15g |
| Vanilla Flavour | 1g |
| Cream Aroma | 1g |
| Yellow Colouring | 0.5g |
| Calcium Lactate | 2.5g |
| Xanthan Gum | 0.4g |
| **Alginate Bath:** | |
| Water | 990g |
| Sodium Alginate | 10g |
| Glucose Powder | 5g |

**Method:**

3. Prepare Alginate Bath:
    - Combine Sugar and Alginate and whisk in water. Use an immersion blender to avoid clumps
    - Let sit for 10 minutes to hydrate. This becomes the setting bath.
4. Prepare the vanilla cream liquid
    - Heat 100g water to warm (not boiling).
    - Add 2.5g calcium lactate and stir until dissolved.
    - Add 0.3g xanthan gum (rain it slowly while stirring). This gives a syrup-like texture that drops cleanly.

Kirsch-Cherry Reduction

| Ingredient | Weight (g) |
|---|---|
| Water | 120ml |
| Ethyl Alcohol (food grade, 20%) | 10ml |
| Cherry Aroma | 3g |
| Almond Aroma | 2g |
| Xanthan gum | 0.7g |
| Succinic Acid | 0.5g |
| Glucose Powder | 12g |

**Method:**

- Blend all ingredients and heat until syrupy.

**Pictures**

*Chocolate Sponge*

*Kirsch Reduction*

*Cherry Spheres*

*Final Dish*

**References**


Belitz, H.-D., Grosch, W. and Schieberle, P. (2009) *Food Chemistry*. 4th edn. Berlin: Springer.

Charters, S., Pettigrew, S. and Jones, S. (2021) 'Reducing fat without reducing pleasure: Consumer acceptance of reformulated foods', *Appetite*, 158, 105010. doi: 10.1016/j.appet.2020.105010.

Damodaran, S. (2017) *Food Proteins and Their Applications*. Boca Raton: CRC Press.

Dickinson, E. (2010) 'Food emulsions and foams: Stabilization by particles', *Current Opinion in Colloid & Interface Science*, 15(1–2), pp. 40–49. doi: 10.1016/j.cocis.2009.11.001.

European Commission (2008) *Regulation (EC) No 1334/2008 on flavourings and certain food ingredients with flavouring properties*. Available at: https://eur-lex.europa.eu (Accessed: 20 December 2024).

European Commission (2012) *Regulation (EU) No 231/2012: Specifications for food additives*. Available at: https://eur-lex.europa.eu (Accessed: 20 December 2024).

Food Safety Authority of Ireland (FSAI) (2012) *Guidance on Food Flavourings*. Dublin: FSAI.

Food Safety Authority of Ireland (FSAI) (2024) *Food Additives Legislation and Guidance*. Dublin: FSAI.

Lawless, H.T. and Heymann, H. (2010) *Sensory Evaluation of Food: Principles and Practices*. 2nd edn. New York: Springer.

McClements, D.J. (2015) *Food Emulsions: Principles, Practices, and Techniques*. 3rd edn. Boca Raton: CRC Press.

McGee, H. (2004) *On Food and Cooking: The Science and Lore of the Kitchen*. Revised edn. London: Hodder & Stoughton.

Mouritsen, O.G. (2017) *Texture: A Gastronomic Journey*. New York: Columbia University Press.

Phillips, G.O. and Williams, P.A. (2009) *Handbook of Hydrocolloids*. 2nd edn. Cambridge: Woodhead Publishing.

Phillips, G.O. and Williams, P.A. (2011) *Handbook of Food Proteins*. Cambridge: Woodhead Publishing.

This, H. (2014) *Note-by-Note Cooking: The Future of Food*. New York: Columbia University Press.

This, H. (2020) 'Molecular gastronomy, note-by-note cooking and the future of food', *International Journal of Gastronomy and Food Science*, 19, pp. 1–6. doi: 10.1016/j.ijgfs.2019.100186.

Zuidam, N.J. and Nedović, V.A. (2010) *Encapsulation Technologies for Active Food Ingredients and Food Processing*. New York: Springer.