



Chocolate Manufacturing: Intense Practical Course from July 8 to 26, 2024 / PROGRAM

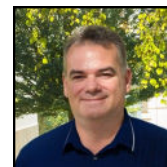
Course fee:
8.980,00 €

Services included:

- Refreshments: snacks and drinks
- Lunch and dinner at ZDS refectory
- ZDS-Diploma "Chocolate/Confectionery"

Your instructor:

Guillermo Geschwindner
Dipl.-Ing. Food Technology,
Technical Instructor Sugar Con-
fectionery and Chocolate



Any Questions?

Please contact our seminar department:
seminar@zds-solingen.de

Week 1

Monday, July 8, 2024

9:30 **Welcome**

10.00 **Theory: Cocoa**

- Cocoa tree, types and history
- Harvest, fermentation and drying
- Quality criteria

Cooko GmbH

Theory: Cocoa bean processing

- Cleaning, Roasting (bean, nib, liquor)
- Breaking, Winnowing
- Grinding to liquor
- Cocoa butter and powder

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13:00 **Lunch**

14:00 **Practice: Cocoa bean evaluation and processing**

- Evaluation of different cocoa beans
- Debacterisation
- Breaking and winnowing
- Nib roasting
- Pre- and fine grinding of Cocoa Nibs

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17:30 **Final discussion and end of the first day - Dinner**

Tuesday, July 9, 2024

8:30 **Theory: Raw materials: Cocoa butter, cocoa powder, sugar, milk ingredients, flavor**

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Theory: Manufacturing of chocolate

- Recipes
- Manufacturing of chocolate (mixing process, refining process, conching process)

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10.30 **Theory: Milk ingredients for chocolate and fillings**

ALPAVIT Champignon Hofmeister GmbH (OKG)

Theory: Manufacturing of chocolate (tbc)

- Recipes
- Manufacturing of chocolate (mixing process, refining process, conching process)

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13:00 **Lunch**

- 14:00 Practice: Chocolate manufacturing**
- Bühler group—Mixing, refining (5-roll refining), conching—Milk chocolate
 - McIntyre Refiner/ Conche—Dark chocolate
 - Netzsch Rumba system—White chocolate
 - Packint—Ball mill—Milk chocolate

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- 17:15 Final discussion and end of the day - Dinner**

Wednesday, July 10, 2024

- 08:30 Practice: Liquification of chocolate and finishing chocolates**

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- 09:30 Theory and practice: Netzsch Rumba system**

Netzsch-Feinmahltechnik GmbH

- 13:00 Lunch**

- 14:00 Practice: Chocolate tempering (manual tempering, seeding method)**

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Practice: Netzsch Rumba system

Netzsch-Feinmahltechnik GmbH

- 17:15 Final discussion and end of the day - Dinner**

Thursday, July 11, 2024

Visit of Sollich KG, Bad Salzuflen

- 6:45 Departure ZDS**

- 9:00 Arrival at Sollich**

Theory:

- Tempering of chocolate
- Enrobing
- Cooling

Factory visit and demos

- 12.30 -**

- 13.30 Lunch**

- 13.30 Departure**

Visit of Ludwig Weinrich GmbH & Co.KG, Herford

- 14.00 Factory visit and demos**

- 17.00 Departure to ZDS**

- 20.00 Dinner at the ZDS**

Friday, July 12, 2024

08:30 Practical exam of course topics - Part I

09:30 Theory: Moulding technologies

- Classic shell moulding
- Book moulding
- Cold stamping
- Hollow figures
- One shot depositing

Aasted Germany GmbH

13:00 Lunch

In the afternoon visit Schloss Burg, Solingen

Week 2

Monday, July 15, 2024

08:30 Theory: How to Measure Viscosity and Yield Point of Chocolate

Thermo Fisher Scientific

11.00 Flow properties of chocolate - Practical application

PGPR

Palsgaard A/S

13:00 Lunch

14:00 Theory: Particle Analysis Technology

Sopat GmbH

15.00 Practice: Particle Analysis Technology

Sopat GmbH

17:15 Final discussion and end of the day - Dinner

Tuesday, July 16, 2024

08:30 Theory: Allergen management

R-Biopharm AG

09:30 Theory: Emulsifier Lecithin

Bunge Loders Croklaan

Theory: Cocoa butter alternatives

- CBE
- CBR
- CBS
- And vegetable fats for fillings

Bunge Loders Croklaan



Practice: Elaboration of compounds and fillings

Bunge Loders Croklaan/ZDS

13:00

Lunch

14:00

Practice: Elaboration of compounds and fillings

Bunge Loders Croklaan/ZDS

17:15

Final discussion and end of the day - Dinner

Wednesday, July 17, 2024

8:30

Theory: Sensorial evaluation of cocoa beans and cocoa mass (part I)

Infopoint Kakao und mehr

Theory: Crystallisation of cocoa butter

- Composition of cocoa butter
- Temperindex
- Multitherm—Bühler Crystallization Index
- DSC

Infopoint Kakao und mehr

Practice: Crystallisation of cocoa butter

- Temperindex
- Multitherm-Bühler Crystallization Index

Infopoint Kakao und mehr

13:00

Lunch

14:00

Practice:

Crystallisation of cocoa butter

- Temperindex
- Multitherm - Bühler Crystallization Index

Infopoint Kakao und mehr

Theory:

Fat bloom and sugar bloom

Infopoint Kakao und mehr

17:15

Final discussion and end of the day - Dinner

Thursday, July 18, 2024

08:30 **Theory:** Sensorial evaluation of chocolate (part II)

Infopoint Kakao und mehr

13:00 **Lunch**

14:00 **Practice:** Sugar crust liquor

- With alcohol
- Without alcohol

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17:15 **Final discussion and end of the day - Dinner**

Friday, July 19, 2024

08:30 **Practical exam of course topics -Part II**

Theory: Fondant raw mass and fillings

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Practice: Fondant raw mass production

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Practice: Fondant

- Fondant deposited in starch or moulds
- Fondant as filling
- Fondant for extrusion

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Theory: Chocolate panning

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Practice: Chocolate panning

- Precoating
- Engrossing
- Smoothing
- Polishing
- Sealing

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Practice: Destarching and enrobing of sugar crust liqueur

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13:00 **Lunch**

Departure Solingen - Visit Chocolate Museum in Cologne

Week 3

Monday, July 22, 2024

09:00 **Theory:** Praliné

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Practice: Praliné

- Raw praliné different methods
- Praliné as filling
- Laminated praliné

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13:00 **Lunch**

14:00 **Practice:** Praliné

- Raw praliné different methods
- Praliné as filling
- Laminated praliné

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17:15 **Final discussion and end of the day - Dinner**

Tuesday, July 23, 2024

8:30 **Theory:** Truffle and ganache

Schokoladenglück GmbH

Practice: Truffle and ganache

- Deposited
- Extruded/ piped
- Cutted
- Rolled

Schokoladenglück GmbH

13:00 **Lunch**

14:00 **Practice:** Truffle and ganache

Decorations

Schokoladenglück GmbH

17:15 **Final discussion and end of the day - Dinner**

Wednesday, July 24, 2024

08:30 Practice: Truffle and Ganache Finishing

- Powdered, flakes, vermicelli
- Spiked
- Enrobed
- Colored

Schokoladenglück GmbH

13:00 Lunch

Practice: Fillings and decorations

Schokoladenglück GmbH

17:15 Final discussion and end of the day - Dinner

Thursday, July 25, 2024

08:30 Final exam - written

Theory: Croquant and brittle

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Practice: Croquant

- Hard croquant
- Laminated croquant
- Brittle

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13:00 Lunch

14:00 Theory: Caramel and liquid fillings

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Practice: Caramel

- Laminated caramel
- Toffee
- Liquid caramel for chocolate shells

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19:00 Farewell Dinner

Friday, July 26, 2024

08:30 Theorie: Pigging Technology

M&S Armaturen GmbH

09:30 Practice: Finishing of all products and packaging

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13:00 Final discussion and End of the course / Optional Lunch

- subject to alterations -