

Day 1

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| 08.45 | <i>Registration and Refreshments</i> |
| 09.15 | Welcome and Introductions Steve Osborn, Business Innovation Manager, Leatherhead Food Research |
| 09.30 | Cocoa from Farm to Factory Melanie Reynolds, Product Services and Development Manager, ADM Cocoa UK Ltd Describes the methods used for the production of cocoa liquor from beans, the growing regions of cocoa trees, harvesting, fermentation, drying and processing. Cocoa powders used in coatings will also be covered in brief. |
| 10.15 | Dairy Ingredients Steve Osborn, Business Innovation Manager, Leatherhead Food Research Covers the different milk ingredients used in chocolate and how the ingredient properties are important for the processing and sensory quality of chocolate. |
| 10.55 | <i>Refreshments</i> |
| 11.15 | Refining and Conching Dave Cruickshank, Consultant, Dave Cruickshank Associates Learn about refining and conching, the importance of each process and the critical parameters that need to be controlled. |
| 12.00 | Legislation Dijana Mitic, Regulatory Advisor, Leatherhead Food Research Legislation is always something to consider in any development process; you will be taught the basics. |
| 12.45 | <i>Lunch</i> |
| 13.40 | Chocolate Recipes and Flavouring Naomi Baker, Product Services and Development Technologist, ADM Cocoa UK Ltd Learn how ingredients can affect the flavour of the final product. You will also have the option to taste a range of chocolates. |
| 14.25 | Troubleshooting Bloom Chocolate Problems Using Microscopy Kathy Groves, Microscopy Consultant, Leatherhead Food Research Learn how microscopy can be used to troubleshoot chocolate problems. |
| 14.45 | Practical Session 1 – Particle Size, Viscosity Measurement and Microscopy James Spinks, Microscopist, Leatherhead Food Research Marina Andres-Brull, Senior Research Scientist, Leatherhead Food Research Annie Teoh, Principal Research Scientist Leatherhead Food Research Barry Ridley, Product Manager - RS Rheometer & Powder Flow Testers, Brookfield Viscometers Limited A chance to learn measurement techniques for chocolate properties. Also take a closer look at chocolate under the microscope. |
| 15.30 | Discussion of Practical Session (and Refreshments) |

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| 16.50 | Close |
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Day 2

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| 08.30 | <i>Registration and Refreshments</i> |
| 09.00 | <p>Cocoa Butter and Chocolate Tempering Kevin W Smith, Consultant, Fat Science Consulting Ltd</p> <p>The cocoa butter in chocolate can crystallise into six different crystal forms. Chocolate needs to be tempered to get the fat into the correct crystal form, which results in the chocolate having better gloss, contraction and shelf life. Methods of tempering will be described, as well as how to measure the temper of your chocolate.</p> |
| 09.45 | <p>Emulsifiers and Flow Properties of Chocolate Awaiting speaker confirmation</p> <p>Understand the importance of flow characteristics for the production of different chocolate products and how emulsifiers affect the flow properties. Learn how to measure chocolate viscosity and important factors to control during measurement.</p> |
| 10.45 | <i>Refreshments</i> |
| 11.00 | <p>Countline Production Dave Cruickshank, Consultant, Dave Cruickshank Associates</p> <p>Covers production of countline products with particular emphasis on recipe considerations in formulating multi-component products to minimise stability problems such as moisture and fat migration. Manufacturing options and typical steps used for different countline production will also be covered.</p> |
| 11.45 | <p>Cooling and Handling of Chocolate Kevin W Smith, Consultant, Fat Science Consulting Ltd</p> <p>Describes the importance of the correct handling of chocolate, such as humidity and temperature.</p> |
| 12.30 | <i>Lunch</i> |
| 13.15 | <p>Tour of Chocolate Production – Sir Hans Sloane, Chocolatier</p> <ul style="list-style-type: none"> ○ Tour ○ Demonstration ○ Product Tasting ○ Questions and Answers <p>Delegates will be coached to the facilities and brought back to Leatherhead.</p> |
| 16.30 | Close |

Day 3

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| 08.30 | <i>Registration and Refreshments</i> |
| 09.00 | Vegetable Fats for Chocolate and Coatings Geoff Talbot, The Fat Consultant Vegetable fats used in chocolate and coatings fall into three main groups – cocoa butter equivalents, cocoa butter replacers and cocoa butter substitutes. The differences between these groups will be explained. |
| 09.45 | Chocolate Panning Nick Hewitt, Managing Director, Capol (UK) Ltd The art and science of chocolate panning including: preparation of centres; production method for chocolate coating, polishing and sealing. |
| 10.15 | Enrobing Principles Geoff Talbot, The Fat Consultant Understand the importance of chocolate characteristics on enrobing quality and how the enrober components are used to achieve complete coating of centres. |
| 11.00 | <i>Refreshments</i> |
| 11.15 | Fat and Moisture Migration and Shelf Life Geoff Talbot, The Fat Consultant The design of the product is critical in minimising shelf-life problems such as fat and moisture migration between components and on the formation of bloom. Each of these issues will be discussed and ways suggested for minimising the problems. |
| 12.00 | Microbial Issues Concerning Chocolate Dr Peter Wareing, Principal Food Safety Advisor, Leatherhead Food Research Microbiological aspects of chocolate production are discussed, from initial fermentation, through to roasting, conching and packing. Spoilage and food safety aspects will be reviewed. Some typical case histories of food poisoning outbreaks will be outlined, together with their implications. |
| 12.45 | <i>Lunch</i> |
| 13.30 | Practical Session – Chocolate Tempering, Shell Moulding, Enrobing and Panning Persis Subramaniam, Team Leader - Product Development, Leatherhead Food Research Kathy Groves, Consultant Microscopist, Leatherhead Food Research Annie Teoh, Principal Scientist, Leatherhead Food Research Geoff Talbot, The Fat Consultant Nick Hewitt, Managing Director, Capol (UK) Ltd A chance to get hands-on with chocolate, watch a demonstration of hand tempering and then have a go yourself at tempering, coating, moulding and panning. Use the enrober and change the settings to achieve that perfect cover. Participants may send samples or submit questions for the practical sessions. Please contact Persis Subramaniam in advance with your questions, E: psubramaniam@leatherheadfood.com |
| 15.00 | <i>Refreshments</i> |

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| 15.15 | Global Trends in Chocolate Products Mia Naprta, Insight Analyst, Leatherhead Food Research Keep up to date with the current trends surrounding chocolate confectionery. |
| 16.00 | <i>Close</i> |