



Teachers at the professional learning and development course at Massey.

NZIFST Careers report

Professional learning and development for food technology and science teachers

In April, Massey, Lincoln and Otago Universities ran professional learning and development courses for the teachers involved in the 2014 NZIFST/CREST Student Product Development Challenge.

Those attending included teachers doing the Challenge for the first time and those who had attended previous courses run by the universities for Challenge teachers. In addition to the 22 Challenge teachers, 10 science and food technology teachers from other schools, who wanted to learn more about food science and technology, also attended.

The one day course covered

- The product development process
- Product formulation
- Processing to ensure food safety
- An introduction to functional food ingredients
- Nutrition information panels and nutrition claims

The teachers also had the opportunity to tour the food science/technology department at the university.

At Massey, during the session on functional food ingredients, the teachers used the alginate MUFTI kit to make cola “caviar”. Two fourth year food technology students who had done the Challenge, Hannah Easton and Kate Morris, joined the teachers for lunch, to discuss their experiences doing the Challenge. One of the teachers who attended the Massey course had this feedback: “Thank you so much for Tuesday. It was a wonderful experience. It was great to see the use of MUFTI kits in action. We are making olive oil caviar next week.”

At Otago, the teachers did a crash course in developing a novel yoghurt. They started with an exercise in yoghurt benchmarking, and learnt about the vocabulary for expressing product characteristics, to assist their students to think, and describe attributes beyond ‘nice’, ‘yuk’ or ‘yum’. They learnt about ingredients, the functional role of the starches, pectins and gums, and processing methods for yoghurt, and how these influence product texture, mouthfeel and stability against syneresis. The teachers also compared nutrition information panels of commercial yoghurts.

This was followed by an ‘accelerated’ one hour NPD exercise, where they worked in pairs to design a yoghurt with berry fruit, targeted at teenagers. They were given some ingredient choices, asked to visualise three alternative yoghurt products and select one for development. In the lab, they prepared the fruit mix, improvising as they went. The teachers found out that formulation takes time, care and attention. Then they developed some prototypes, testing combinations of fruit and yoghurt, varying the ratios and appearance (layered vs. mixed through). Having settled on a final formulation, they ‘scaled up’ their product, making 12 x 30g samples and coding them for sensory evaluation purposes. All this was done within a strict 60 minute time limit!

The group learned how to write an ingredient label and calculate a NIP, and entered their final product into the FSANZ Nutrient profiling scoring calculator to determine if their product would be eligible to carry a claim under the new Standard 1.2.7. The result, to their surprise, was yes!

The final session was a controlled sensory evaluation exercise, mimicking a consumer acceptance test. Using the sensory booths, the teachers rated their yoghurts and one commercial sample for overall liking, appearance, texture and flavour. Although their yogurts were moderately well liked, they discovered that the product most well liked was the commercial one! Never forget the first rule of product development – ‘always taste your own products’.

The teachers also caught up with Sarah Adam, a second year student who had done the Challenge in 2010, to discuss her experience; she mentioned that one of her key learnings was the importance of setting milestones for the stages in the project work, and ensuring deadlines were met.

NZIFST wishes to thank John Grigor, Steve Flint, Charles Brennan, Phil Bremer and their colleagues for running these courses; this is the sixth year we have organised professional development for Challenge teachers, and they obviously value it.

Jenny Dee, FNZIFST