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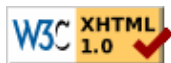
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Soy Yoghurt Project

Samantha Eagle

Tararua College

Year 12 Food Technology, full year project

Teacher: Diana Eagle

When Hansells NZ Ltd offered the opportunity for a student to work on an authentic investigation, Samantha Eagle took on the challenge.

Hansells had previously formulated a soy based product as an extension to their 'yog-it' range of yoghurt sachet products, but pulled it from the market due to its short shelf life and low selling rate. However, they had recently been approached by Oppenheimer NZ who thought that one of their new soy powder products would be suitable for use

Samantha was asked to investigate if a 'yog-it' product made with the soy powder could be developed.

She reinvestigated the culture and carrier options while comparing the performance of the new soy powder. Her investigations had to be very expansive as she needed to build her understanding of yoghurt formulation. As there are so many variables within a yoghurt food system it took time to formulate a product, further complicated by the use of soy instead of milk powder.

This involved the application of knowledge from investigations related to the denaturing of proteins, the linking between acidity and the isoelectric point, and the role of micro-organisms in this process.

During this time Samantha was also examining current practice at Hansells, current market products and the soy market. She concluded that there was a need for a soy yoghurt product for consumers and Hansells.

Samantha spent a lot of time working on the development of a product and had to overcome various problems

Hansells and Oppenheimer were impressed with Samantha's understanding of the process and in-depth investigations, especially considering her age and lack of experience. Although she did not get a product suitable for manufacture, both companies saw how her work would benefit their future development work related to the issue.

Samantha was awarded a New Zealand Scholarship for her work on this project.

Teacher comment

"Samantha showed excellent technological practice. She interacted well with her various consultants with their different needs, kept a detailed log book, conducted sound research and showed creativity. Even though the temptation to move the project to an area that would have given her a positive result must have been very strong, she remained true to her original aims and objectives and gave her client a much better outcome because of it.

"She was required to learn aspects of food chemistry and food microbiology as well as the impact of operations such as heat on the ability of soy powder to thicken. Her



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application of knowledge led to one of her creative ideas where she added a step by microwaving the yoghurt to start the denaturation process.

"This project demonstrates students should be encouraged to undertake technology projects where the focus is on the process they use to solve the problem, rather than just obtaining a successful end product. In this case the product was not successful but the student knows that she has tested all the options and is confident in this conclusion."

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