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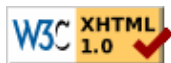
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## Berry burst ice-cream topping

Dale Wicken and Emma Haddock

*Hastings Girls High School*

*Year 13 Food Technology: full-year project*

*Teacher: Karen Cowley*

Dale and Emma formed a company to develop and manufacture a product for Heinz Wattie's as part of the [Lion Foundation Young Enterprise Scheme](#).



For their project, Heinz Wattie's gave the girls the brief to create a new product for them with the following specifications:

- The product must contain berries
- No dressing or jam products are to be developed
- It is preferred that products have a healthy nutrition profile i.e. <10g/serving of sugar, <1.5g/100g of saturated fat and <600mg/100g of sodium.
- The product needs to be acidified (pH <4.0)
- The product needs to be pasteurized (>10 minutes at 90°C)
- The product must be hot-filled (>58°C)
- The product must be packed into glass jars
- The product must have the shelf life of one year

The product also had to be sold to the public at the Hawke's Bay Farmers' Market and make a profit – a very specific and practical deadline that gave the whole enterprise a firm base in reality.

Before the receiving their brief in late February, the girls needed to fundraise for start-up money for their project. With initial capital of \$10 each of their own money, they bought the ingredients to make Valentine's Day biscuits, which they sold at a good profit. This exercise proved useful in determining roles for their 'company' before the project began, with Dale as the 'Communications/Production Director' and Emma as 'Managing/Finance Director.'

Having received their brief, the girls brainstormed several concepts – from pie fillings through to salsas – and made preliminary trials before choosing a self-hardening ice cream topping as the best idea. The concept was inspired by Choc Whiz, a product that, when warmed and poured on ice-cream, cools to a hard chocolate shell. The girls decided to try and make a berry-flavoured version, which would be new to the market and had the added selling point of its antioxidant health benefits.

Once their concept was determined, the girls started on their biggest challenge: formulating a recipe that would do what they wanted. As it was the initial inspiration for their idea the girls started trials using Choc Whiz as an ingredient mixed with the berry mix but weren't happy with the "unappealing light brown colour" that resulted.

"Another problem with using this recipe as our base was that it would prove highly costly and also, we weren't too happy with using an existing product to create ours as it didn't seem very honest. We realised that we would have to develop a recipe completely from scratch that worked in the same way that Choc Whizz does," Dale explains.

The girls then searched for self-hardening sauce recipes on the internet and conducted numerous trials with a range of ingredients. These trials helped the girls identify several factors that they wanted for their final product. For taste, the girls

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narrowed down the choice of berries to raspberries for their unique tartness, and white chocolate was chosen over dark as it let the taste and dark purple colour of the berries come through.

However, duplicating the hardening of the sauce proved extremely difficult, as many of the key ingredients used for this such as paraffin wax or vegetable oil would separate from the berry mix upon cooling. The girls decided to seek expert advice on this problem from Massey Professor Matt Golding who suggested using cocoa butter. He also suggested they concentrate their berry mix further to create a stronger flavour.

However, the right balance of the two main ingredients was hard to strike: the girls found that blends using more chocolate set well but had little berry flavour and an unappealing colour, when they increased the berry content, the mixture refused to form a hard shell .

In the end the final product they took to the Hawke's Bay Farmers' Market didn't quite meet their expectations – the consistency when cooled was more like a toffee than a shell. However, the product received an exceptionally favourable public reception.

The satisfaction of creating a successful product added to what was a very positive experience for both of the girls. "Being involved with Young Enterprise was very rewarding," says Dale. "We've both gained life and business skills as well as a boost to confidence in public speaking. The client, Heinz Wattie's, and the other stakeholders all expressed their enjoyment of our product, so we can confidently conclude that our product is fit for purpose and we are incredibly pleased that it is so popular."

Since then the girls company "Berry EDJ-Y" has sold multiple units of their "Berry burst ice-cream topping" and, most exciting of all, the product has had considerable interest from Heinz-Wattie's, who are interested in purchasing the patent to market for their Australian branch. The project has earned the girls a National Excellence Award

#### **Client comment**

The girls had a particularly large challenge to overcome with the stability of their formulation and I was very impressed with the way they went about solving the issue. A big part of solving technology problems is knowing who to ask, where to look and what to try, their approach saved them many hours of possibly wasted work by consulting appropriate experts.

Their approach to the project was very professional and methodical and the excellent finished product is the result of that. The topping has a really good balance of raspberry and chocolate flavours without being overly sweet and is the right consistency to pour over ice cream. It meets 90% of the criteria that was in the original brief which is more than acceptable for a sweet, dessert type product.



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