

2016 NZIFST/CREST STUDENT PRODUCT DEVELOPMENT CHALLENGE



Blooming Flower



OUR CLIENTS

Futureintech ambassador: Ms Leah Davey, Business Manager - Process Cleaning Technologies

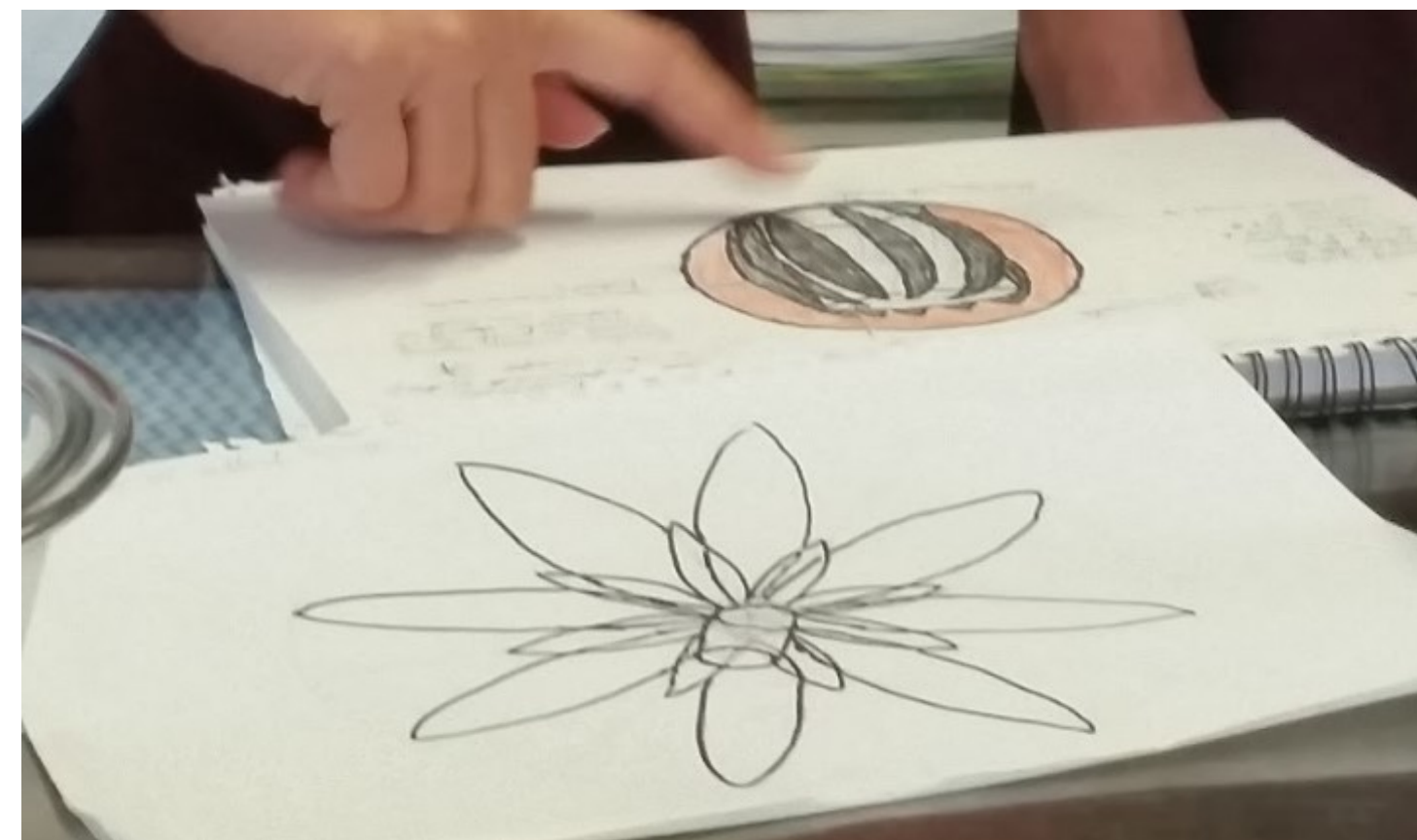
Our Sponsors:

Mr. Nicolas Sawyer (BSc, MBioEnt.) , New Zealand Sales Manager, Sensient Technologies for sponsoring our Westlake Boys High School team 'Blooming Flower'. The company also offered specialist ingredients such as caramels, dessert sauces, natural flavours and natural taste modulating flavours (for sugar reduction, fat reduction, and protein fortification) for our project."

Ms. Lily Tanyag, from Sensient Technologies- who kindly shared her expertise with chocolate tempering and gave us some handy tips

FUNCTIONAL PROPERTIES OF OUR INGREDIENTS:

Ingredient	Key Nutrient	Function of Ingredient	Country of origin	Allergens
Dark Chocolate flavour	Carbohydrates	Flavouring ingredient	Made in New Zealand with imported and local ingredients	N/A
Coffee flavour	Carbohydrates	Flavouring ingredient	Made in New Zealand with imported and local ingredients	N/A
Low carb caramel	Fat Carbohydrates	Flavoring ingredient	Made in New Zealand with imported and local ingredients.	N/A
Smoothenol	Carbohydrates	Enhances flavours in product	Made in United States	N/A
Sweetease 2G flavour Part A	Carbohydrates	Low calorie sweetener alternative	Made in New Zealand with imported and local ingredients	N/A
Sweetease 2G flavour Part B	Carbohydrates	Low calorie sweetener alternative	Made in New Zealand with imported and local ingredients	N/A
Kiwifruit flavour	Carbohydrates	Flavouring ingredient	Made in United States	N/A
Dark chocolate	Carbohydrates Fat	Flavouring ingredient Structure ingredient	Made in New Zealand	Contains cocoa butter
Lite cream	Fat	Thickener agent Flavouring ingredient	Made in New Zealand	Diary
Irish cream liquor	Carbohydrates Alcohol	Flavouring ingredient	Made in Ireland	Diary
Cornstarch	Carbohydrates	Thickener agent	Made in New Zealand	Corn syrup
Protein powder	Protein	Nutritional enhance of product	Made in New Zealand	Dairy
Rolled oats	Carbohydrates	Structure ingredient Flavouring ingredient	Made in New Zealand	Oats
Coffee	Caffeine	Flavouring ingredient	Made in New Zealand	Caffeine
Milk (Trim)	Protein Carbohydrates	Structure ingredient	Made in New Zealand	Dairy



Brief: Our futureintech ambassador, Ms Leah Davey gave us an opportunity to create a dessert that would be low in calories and high in protein.

Aim: To create a dessert which is high in protein, low in calories and tastes delicious for a target market of health conscious adults.

Specifications:

- Is low in calories as dessert is typically the final meal meaning that people will be resting therefore only burning minimal amounts of calories which is not ideal.
- Is high in protein as it provides the body with the capacity to build and repair tissue and are important part of building bones, muscles, cartilage, blood and skin.
- Needs to taste delicious
- Is appealing to the eye
- Needs to be able to be sold in a supermarket (Shelf stable)
- Incorporate complex techniques we learnt and implemented for our 'Be Heston' project (Flowerpot Tiramisu)
- A matter of perception - Challenge stakeholders perceptions

Constraints/Barriers

- To ensure the dessert is high in protein and also taste delicious.
- Creating the different components within our time restraints
- Implementing correct procedures to process each aspect of the dessert
- Finding a suitable mold to create our sphere
- Forming the chocolate petals
- Selecting how our product is to be packaged.
- Gaining ongoing feedback from our client and stakeholders

Functional Modelling

The Blooming Flower dessert has many components that are each integral for our end product. The components are: chocolate sphere, sauce, chocolate petals and the coffee cake. For the sauces we decided that one would be a cream sauce and originally had the second sauce as a coffee chocolate sauce but changed it to a low calorie caramel sauce as the coffee chocolate sauce was higher in calories. We also wanted to see if an ice cream was possible and if it would work so did some functional modelling around that concept. The Kiwi ice cream though a novelty, only added to the calories and after much consideration around constraints with packaging and storage we came to the conclusion that an ice cream would not work for our product. One of our stakeholders suggested we use either a chocolate sphere or the chocolate petals instead of having both components which we thought was feasible and we would try.

Acknowledgements:

We would like to take this opportunity to acknowledge and thank our mentors. They have each helped us during this project in multiple aspects and we could not have completed this without them.

- Mrs Sehji—HOD Food Technology
- Nicolas Swayer and Lily Tanyag— Sponsor and Mentor, form Sensient Technologies
- Leah Davey - Client
- Jessie McEnzie—Schools Programmes Coordinator
- Jenny Dee—Careers Coordinator
- Sharim Mendoza—Student Teacher, University of Auckland.

