

Flaming Lemons

Issue:

As part of the Crest challenge we have been given the opportunity to invent and produce a new flavour of sauce. Since Groenz nor the Food market has Lemon and Red chilli sauce existing in their stores, we decided that we would invent this new flavour called "Flaming Lemons" due to its spicy lemonade taste.

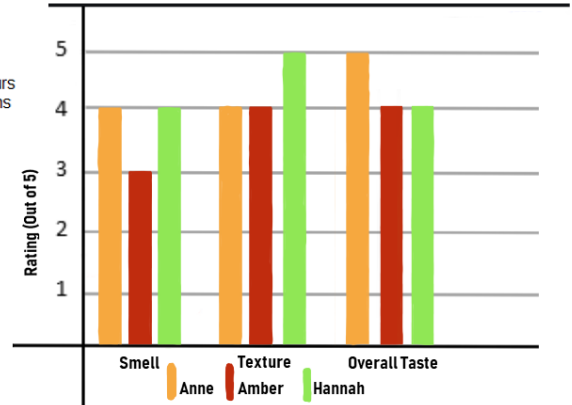
Aim:

Our Aim was to develop a new and unique flavour sauce for Groenz that would be suitable in their shelves and for New Zealanders and Australians to enjoy.

Specification:

- Meet New Zealand Food safety legislation.
- Taste delicious of a spicy lemon
- Suitable for Halal accreditation
- Full of natural ingredients with no artificial flavours
- Marketing resembles the taste of burning lemons
- Resembles the taste of spicy lemons
- Fit within pH of <4.2

Sensory Analysis



Methods:

- Market research in existing sauce products and on current sauce trends.
- Completing a range of research that would be necessary to comply with Groenz specification, Such as pH, shelf life, Halal Laws, E numbers and reading up on New Zealand's Food Legislation.
- Brainstorming ideas for new and unique sauce designs.
- Get some stakeholders and have them comply to a Consent form.
- Developing prototypes with range of different quantities of ingredients and chillies
- Have our prototype trial by students and stakeholders (Help through surveys and sensory tests)
- Considering their feedback and taken into further development
- Considering the estimated budget, price and nutrients table for sauce.
- Test pH and bacteria to see if Sauce is shelf stable
- Finalizing our final sauce design.
- Considering packaging and labeling.



We are glad to say that Flaming Lemons is backed with natural ingredients and with no food additives.

Nutritional Value Table per serving and per 100g (100mL)

	Per serving	Per 100g
Energy	1567.6kJ	391.9kJ
Total fat	1.1g	0.3g
Saturated fat	0.1g	0g
Carbs	89.4g	22.3g
Total sugars	88.5g	22.1g
Protein	2.5g	0.6g
Iron	1.5mg	0.4mg
Sodium	164mg	41mg
Fibre	5.2g	1.3g



Process Development:

In our first Trial we experimented with four different unique flavours. That being honey ginger and carrot, apple ginger and miso, spicy tamarind and peanuts and red chilli and lemon sauce. Overall the Chilli Lemons prove to be most favorable among our stakeholders.

In our second Trial we experimented our sauce with two different chillies, Red and Green. Although some of our stakeholders enjoy the green chilli and lemon for its taste, the green chilli has less of that chilli spiciness and lacks vibrant colours. So we further our development with the red chilli.

In our third trial we continue the same process but with more red chilli. We gather our ingredients in the right quantities and blend in a food processor until the sauce becomes smooth and consistent. However the sauce's lemon was too overpowering even adding more chilli and sugar made no effect. Our stakeholders even commented that the lemon was overpowering and that it needed to be lessened. But we had considered in our fourth Trial that we add more chilli and salt and perhaps reduce the amounts of lemons needed in our sauce.

Final Outcome:

We were able to create a new flavour sauce with the delicate taste of spicy chili and sour lemon. Although we're struggling to keep the sauce at a balance between spice and sour. We had to modify our sauce to lessen the amount of lemon to hopefully solve the sour issue. Overall we had positive responses about our sauce, except with the few complaints about the sauce being too sour. We manage to make sure that our sauce meets the specifications that were required for us to make the sauce sustainable and suitable for New Zealand's Food Market. Unfortunately our sauce has proven through bacteria testing that it can grow bacteria despite our sauce's low pH. Which would indicate that our sauce won't last long on the shelf. However, we recommend to keep the sauce safe in a refrigerator for a longer shelf life.

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