



SWEET AS KIW



Issue

There is currently a gap in the market for savoury marinate meat sauces with a 'Kiwiana' theme, targeted towards young adults. The current wild appetite sauce range needs to be expanded, however to a more affordable price that does not contain allergens (eg: peanuts, dairy) as well as being low in fat but still maintain the brand main ideals.

Aim

The aim of our project is to develop a marinade sauce that is suitable for everyday meal occasions. The sauce will be savoury and designed for meats targeting young adults for their on the go lifestyles, which will hopefully expand the current wild appetite sauce range. The sauce developed will have a unique selling point like a 'kiwiana' theme and will be sold in supermarkets at an affordable yet competitive price.

Method

There were many steps and processes in order to develop the final product we have come up with:

- Brief Development (Context & Issue)
- Planning research on different types of planning tools to use to organise and simplify processes we need to complete
- Brief Development (Considerations, Need or Opportunity, Environmental Investigation, Conceptual Statement, Attributes)
- Initial Trialling- trialling a range of different types of recipes and get an overall idea about what type of recipe it will be (what particular specific aspects it will have)
- Finalised Brief
- Processing & Trialling (Research, Product Selection, Further trials adapting and altering the recipe to suit specifications and brief)
- Packaging & Poster



Experiments

The development of our sauce was shown through a variety of experiments with thickeners. Our team experimented with a powdered thickener- locust bean gum, brown sugar, honey and palm sugar in an attempt to thicken the sauce and balance the flavours. We found that the locust bean gum altered the thickness of the sauce too much for our liking, the brown sugar thickened and sweetened and the honey provided an overpowering sweetness without affecting the thickness. From the experiments done, it was shown that the palm sugar would help develop the sauce as it thickened the sauce and helped balance the flavours as the palm sugar added an extra sweetness that balanced the citrus provided from the lime.

Nutrition Information

| | | |
|-----------------------|------------------------------|----------------------------|
| Servings per package: | 12.00 | |
| Serving size: | 25.00 g | |
| | Average Quantity per Serving | Average Quantity per 100 g |
| Energy | 218 kJ | 874 kJ |
| Protein | 0.5 g | 2.2 g |
| Fat, total | 0.0 g | 0.2 g |
| - saturated | 0.0 g | 0.1 g |
| Carbohydrate | 11.6 g | 46.5 g |
| - sugars | 11.4 g | 45.6 g |
| Sodium | 197 mg | 787 mg |

Sensory testing

We conducted sensory testing by gaining stakeholder feedback after all trials that we completed. A control group (27 Westlake Girls High School year 9 students) was also used after initial trialling to get some new opinions on the flavours and the taste preferences of people outside of our food technology class. This sensory testing was a constant support to our group, ensuring that we kept our development on track and working on what prospective consumers would actually want out of our sauce if they were to see it at a supermarket.

Sensory testing - Stakeholder feedback

We had influences from stakeholder feedback who recommended different ideas to change our initial Lime-Honey Glaze recipe. Our main central stakeholder whom we were influenced by the most, was our mentor Hester. She had mentioned that the flavour of our first trialled sauce marinated with the chicken was not balanced well and that the flavour profile was flat and not "rounded". To improve the flavour balance we considered adding alternatives for sweeteners such as brown sugar and also sought professional advice from sauce companies (Culleys, King of Kiwi) who had recommended using palm sugar or salt. Consistency was another crucial aspect of the sauce that we had to perfect and by trialling the original recipe with thickeners such as Locust Bean Gum thickener resulted in a suitable consistency and viscosity.

Social and environmental implications

While we were producing the sauce, we had quite a few social and environmental implications we had to consider. A few of the key aspects considered were the age group of our stakeholders, the trends in the market, allergies, cost of final product, the nutritional value and shelf life/storage.

Product development

From our initial trialling and the feedback in which we received from it, we decided the honey and lime glaze was the best option. The sweet and sour flavours were very liked amongst our stakeholders however we decided to add kiwifruit to keep with our Kiwiana theme. The addition of Kiwifruit also gave our sauce a unique, stand out aspect which could fill the gap in the market for a New Zealand inspired sauce. Throughout developing our product we focused on one or two particular aspects of the sauce per trial which we needed to work on to make it fit or purpose. The main aspects which we explored were the flavour balance and thickness.

During development we did research into how the kiwifruit being used in a meat marinade can benefit the outcome of the food as it tenderises the meat by breaking down proteins. We also researched ways which we could balance out the sour citrus in our sauce which was the main overwhelming flavour with some more sweetness. We experimented by trialling 3 options: more honey, brown sugar and palm sugar. Although we were satisfied with the outcome of the brown sugar adjustment as it fixed both of our major issues, we found that the palm sugar was the better alternative with the viscosity and sweetness balancing out nicely. After consulting with our mentor Hester, and receiving more stakeholder feedback we found that palm sugar was a good way to solve both main issues and pleasing the consumers.

Research

Palm Sugar is never refined or bleached like white sugar. So the nutrients it was made with are still there. Palm sugar is crystalline sugar that's naturally brown in colour and naturally rich in a number of key vitamins, minerals including potassium, zinc, iron, and vitamins B1, B2, B3 and B6. Palm sugar cooks, dissolves and melts just like regular sugar, it has a superior taste without the metallic ending flavour that brown sugar has.

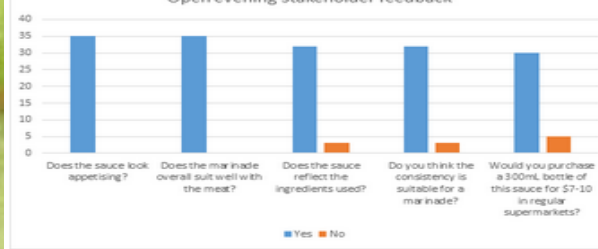
Constraints

Food product availability: Because we were using kiwifruit there was a certain period where it was not in season in NZ. During this time we had to use kiwifruit which not as flavourful as we had hoped. We overcame this constraint by using product that was not always grown in New Zealand and instead imported, but was still of high quality.

Budget: Due to the nature of our products some were not in season so became quite expensive when trialling consistently. We did have to sacrifice some more luxury ingredients such as manuka honey (we changed to using regular clover honey) to be able to budget in purchasing out of season, imported produce.

Equipment: To create a smooth consistency in our sauce we used a stick blender for blending the kiwifruit to our desired texture however in the first few trials we did not have access to this and had to use a regular blender. This caused issues because the regular blender did not make the kiwifruit as smooth and ultimately affects the final product. Although this was a constraint we had, we did carry on with trialling and eventually gained access to one in our 2nd trial.

Open evening stakeholder feedback



Further Development

If we had time to further develop our product we would like to explore adding some more spice to our marinade. Through modelling we did find a great balance of flavours however when we did our survey, we found that quite a few people had responses saying they would like a sweet and spicy sauce. Although our sauce currently has a small amount of chilli already in it, further modelling using more chilli could add another interesting aspect to the sauce.

Conclusion

Overall, the aim and need or opportunity that we produced was achieved as we have completed the requirements to process and develop a sauce for the company Wild Appetite. From the need/opportunity, we were able to fulfil being able to come up with a new product to sell in supermarkets that is used for or with meat to create a meal. The brief that we received from Wild Appetite directed us to create a meat sauce to be packaged in a 300mL plastic squeeze bottle so that it is easier to use. The brief stated that we had to develop a sauce for meat however did not specify what type of sauce eg. Pour over, stir-fry, marinade. Although we were initially considering to develop a pour over sauce, we ended up selecting recipes that were mostly marinades as these were the most common sauces and easiest. Another factor that encouraged us to develop a marinade instead of a pour over or any other type of sauce was that the majority of the kiwi fruit sauces on the web were marinades. Because there were no pour over kiwi fruit sauces for meat and we did not have prior experience with developing a sauce, nevertheless a kiwi fruit sauce, we decided to confirm making a marinade instead. Our group intended for our sauce to contain a unique factor (e.g. some sauces in the market are low in fat, sugar or salt) however due to the difficulty of these factors, we instead developed a sauce with its own uniqueness within itself of containing kiwiana ingredients. The aim and need/opportunity that we initially created were eventually achieved and has thus resulted in the development of our own "Honey-Lime w/ Kiwi Fruit Marinade" which has fulfilled the majority of the aspects in the aim and need/opportunity.



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