

RESEARCH

Research on Malaysia

In 2013 Malaysia's population was 29.72 million people and it is home to one of the largest populations of Overseas Indians, constituting about 8% of the Malaysian population. When researching popular cuisines in Malaysia multiple websites came up with the dishes: roti canai, congee, nasi lemak and calamansi lime. When we researched popular sauces in Malaysia most of the websites said bajak chilli sauce, dried shrimp chilli sauce, peanut sauce, shallot chilli sauce, sweet chilli sauce and sweet soy sauce. Most of these sauces are used in the cooking process of the popular Malaysian dishes listed above. During our research we found that Malaysians use a variety of different chilli sauces when cooking and that they also put a lot of chilli in their meals, this suggests that they can handle large amounts of chilli.

Research on Peanut satay

Peanut sauce, satay sauce, bumbu kacang, sambal kacang or pecel is a sauce made from ground roasted or fried peanuts, which is widely used in Indonesia, Malaysia, Thailand, Vietnam, China and Africa. Peanut sauce is said to go best with chicken, meat and vegetables and it is often used to add flavour to grilled meat that is skewered, poured over vegetables as salad dressing or as dipping sauces for dishes like spring rolls. The main ingredient in Peanut satay is ground roasted peanuts, which peanut butter is a very popular substitute for. A typical peanut satay recipe usually contains ground roasted peanuts or peanut butter smooth or crunchy, coconut milk, soy sauce, tamarind, galangal, garlic, and spices. Other possible ingredients used in making peanut satay are chili peppers, sugar, milk, fried onion, and lemon grass. The texture and consistency of a peanut sauce is based on the amount of water being mixed in it, whether you want it thin or thick.

Research on chemical additives

Chemical additives are used in foods to make it appear fresher, more attractive or last longer on the shelf. Some additives that are put in food are harmless but others have impacts, impacts such as; hives asthma, nausea and headaches. Popular chemical additives that are added to food are: methylcyclopropene, artificial flavouring, benzoic acid, canthaxanthin, emulsifiers, sodium nitrate and nitrate. The chemical additive methylcyclopropene is a gas and it is pumped into crates of apples to stop them from producing ethylene and it preserves apples from up to a year and bananas for up to a month. Artificial flavouring is used to mimic natural flavours in food and a single artificial flavouring can be created from hundreds of individual chemicals. Benzoic acid is often added to milk and meat products and it temporarily inhibits the proper functioning of digestive enzymes. Canthaxanthin is a chemical additive that is added to egg yolk as a pigment to make it golden yellow so that it is more palatable. Emulsifiers which are made from vegetable fats, glycerol and organic acids is used to extend the shelf life of bread products and allow liquids that wouldn't normally mix such as oil and water to combine smoothly. Sodium nitrate and nitrate is used to preserve meat and this chemical reaction occurs easily during the frying process. Research on chemical preservatives: Chemical preservation is a substance which delays the growth of micro-organisms without necessarily destroying them and it prevents deterioration of quality during manufacture and distribution. It is used either through artificial addition or through the action of micro-organisms. To control microbial contamination you can lower the temperature during storage, reduce the PH levels of the product, control the oxygen and carbon dioxide concentrations and remove the nutrients needed for growth. The use of chemicals as preservatives is strictly regulated by governmental agencies like the Food and Drug administration also known as the FDA.



THE SAUCERERS

HOPE, DYNEEKA, JADE AND REHUTAI

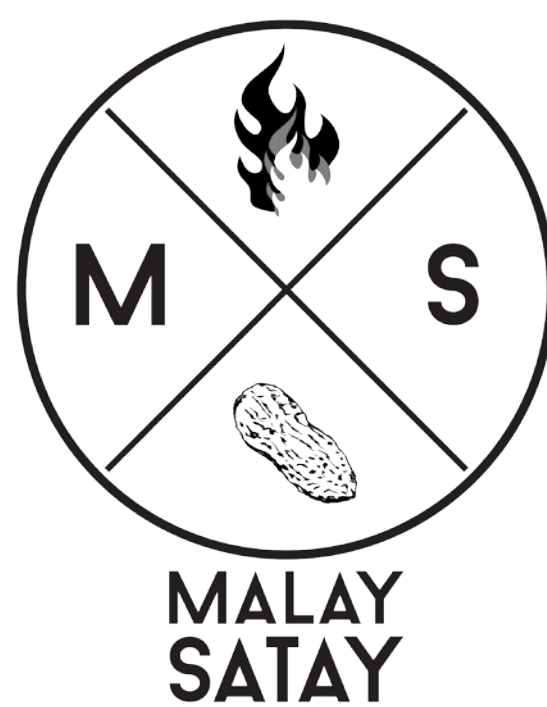
OUR AIM

Our group's intention is to create a sauce for the Asian market more specifically for Malaysia. We want to create a sauce that can be sold in the New Zealand and Malaysian markets, which will appeal to all ethnicities within the targeted market. We wanted to add chilli to an existing sauce on the market as we realized through our research and survey monkey, Asian's tend to have a stronger tolerance of heat when it comes to food. We think that there is a need for this sauce on the market as we have found that there is very little variety available in popular supermarket stores such as, Countdown and Pak n Save.

FINDINGS

While experimenting with our satay sauce we trialled different ingredient to see the effects it had on the sauce. We tried smooth peanut butter and crunchy peanut butter, we tried spring onion, red onion and brown onion, we tried dried chillies and fresh chillies, we tried substituting lemon and lime juice for balsamic vinegar and white wine vinegar and we tried cooking off the onion, garlic and chilli and we tried it fresh in the sauce. When we substituted smooth peanut butter for crunchy we found that it gave the satay sauce an unusual texture that majority of our taste panel found unpleasant. A few members of our taste panel also mentioned the saltiness of the satay due to the chunks of peanuts, to prevent this we decided, as a group, that we would use smooth peanut butter with no add salt as we believed it would be more appropriate to use to make a smoother sauce with an aesthetically pleasing. When we were adding the garlic, chilli and onion to the satay sauce fresh we wanted to test frying them off before adding them to the sauce mixture to see if it enhanced the flavour in the sauce. Our taste panel found that frying off the garlic, chilli and onion brought out more flavour in those ingredients adding more depth to the flavour of our sauce and we chose to go with brown onion as when it is fried it brings out more of a pungent flavour than red onion and spring onion. Our decision to use fresh chillies rather than dried was because we felt that the fresh chillies gave off more heat than the dried chillies and we wanted to have that kick of heat in the sauce.

PACKAGING



For the products design, we have chosen to go with a more trendy and modern display. We have chosen to use a bold font to make the products name stand out on the shelves, we decided to add silhouette of a fire to represent the spices in the sauce and we used a silhouette of a peanut to represent the satay sauce. Originally we looked at using colours such as yellow and red to represent the hot spices of the sauce as well, as we thought it would help the sauce stand out in the markets.



FINAL RECIPE

CHILLI PEANUT SATAY

Ingredients:

- 2 Tablespoons peanut butter (smooth)
- 1 Tablespoon Vegetable oil
- 2 Tablespoons soy sauce
- 25ml water
- 1 Tablespoon soft brown sugar
- 1 Tablespoon lemon juice
- 1 Tablespoon lime juice
- 1 garlic clove
- ½ brown onion
- 3 small red chillies
- 1 teaspoon sweet chilli sauce
- ½ teaspoon chilli flakes
- 1 Tablespoon balsamic vinegar

Method:

1. Chop 3 small red chillies, ½ a brown onion and a clove of garlic finely then put in a pan with a bit of oil.
2. Then add the sweet chilli sauce and chilli flakes to the pan and then cook until caramelised. Once caramelised take the pan off the heat and put to the side.
3. In a bowl put the peanut butter, vegetable oil, soy sauce, water, brown sugar, balsamic vinegar, lemon juice and lime juice and then add the ingredients from the pan.
4. Using a beater or blender mix the ingredients together until it becomes a medium consistency, not too thick but not too runny.

NUTRITIONAL PANEL

Nutrition Information		
Servings per package	6.00	
Serving size	387.00 g	
	Average Quantity per Serving	Average Quantity per 100 g
Energy	4060 kJ	1050 kJ
Protein	27.3 g	7.1 g
Fat, total	73.7 g	19.0 g
- saturated	12.3 g	3.2 g
Carbohydrate	43.4 g	11.2 g
- sugars	37.0 g	9.6 g
Sodium	3790 mg	981 mg



ACKNOWLEDGEMENTS

On behalf of The Saucerers we would like to thank our sponsors for the help and the support which helped us to participate in the silver crest challenge.

We would like to thank the company GroeNz for their support and confidence in our work. We would like to thank them for providing us with samples when trying to come up with ideas for a sauce and for providing us with necessary equipment such as containers and bottles for sauce storage. We would especially like to thank Sophie Shaw who works at GroeNz for mentoring us during our sauce making process, she was an incredible help to our team. Sophie helped us with the PH levels of our peanut satay sauce and when we were in need of help during the sauce making process we were able to email her and get a fast and helpful reply. We would like to thank GroeNz and Sophie Shaw for showing us around the factory and demonstrating the equipment, rules and safety and hygiene that is demonstrated in a factory which we could then bring back to the school kitchen and use.

Our team would also like to thank the royal society for giving us the opportunity to participate in the silver crest challenge; we have had a great experience participating in the competition and have grown closer as a team. Lastly we would like to thank Our Wainuiomata High School teachers Mrs. Reddy, Mrs. Naidu and Mr. Croft for assisting us with help when we needed it and giving us access to resources that we needed to complete this project. Without the help from these people we would not have been able to participate in the competition or create a sauce to present so we would like to thank all of these people for everything they have done for our group.

Yours sincerely

The Saucerers

