CRUNCHY, GOLDEN, CRISPY
THE ART OF DEEP FRYING

PHOTOS BY: Alal Pueh

Like it or not, the cooking method most people are afraid of also produces the food they love most – fried chicken, goreng pisang, etc. Malaysians love their food fried and in almost every restaurant or cafe that we go to, there will be at least one deep-fried item on the menu. If I were to conduct a sensory evaluation on the general public’s favourite texture for cooked food, I am pretty sure the answer will have one of these adjectives: “golden, crispy, crunchy”, these are the terms generally associated with deep-frying. It is easy to understand why deep-frying is favoured. It gives this wonderful taste profile to your food (most importantly, the children love it) – it makes chicken drumsticks crispy and golden brown, yet tender and moist; the crunchiness on the skin and the moistness in the fried chicken is incomparable. Deep frying makes the chicken, as the classic slogan goes, “finger licking good”.

The practice of frying food or rather preserving food with oil or fat can be traced back to ancient Egyptian times. Immersing foods in hot oil has been a long standing culinary tradition. One source cites that palm oil was first used as it was easy to obtain and be extracted. During a time when people struggled to survive on limited make food last longer, and a quick and easy way to obtain nourishment that is pleasing to the palate.

Despite the fact that deep-frying foods taste wonderful, we have been trained to dislike it, even become ashamed of liking it, because frying is supposed to be bad for health. In my experience as a chef, I have yet to meet anyone who doesn’t favour fried stuff (of course none would admit it on moral and medical grounds). Speaking of which, doesn’t fried foods cause obesity, heart attacks, cancer and a long list of chronic diseases?

In theory, just about anything can be deep-fried, as long as it is reasonably solid and has a high combustion point. The science behind deep-frying is straightforward, it is essentially submerging food in hot oil or fat and cooking it instantly at high temperature. When food is cooked in hot oil, the surface of the food will cook instantly, forming a seal that the fat cannot penetrate, at the same time the hot oil drives moisture out, which is why you will see the bubbles in hot oil. The moisture is converted into steam and that cooks the food inside out. Ideally, the results are crispy on the outside, and tender on the inside.

But, most people will still ask, doesn’t the food absorb a lot of oil while it is cooking? From the standpoint of food science, there will be some fat absorbed into the foods, which also depends on the type of foods you choose to deep fry – generally speaking the bigger the surface area your food has, the more oil will be absorbed – a potato chip has a wider surface than a chicken drumstick and it usually absorbs more oil than the drumstick upon frying.

When frying food, if the oil temperature is not hot enough, the food will tend to absorb a lot of oil and will appear greasy and wet. If the oil is too hot, the surface of the food will cook too fast and burn before the interior is cooked. So it is very important to know how hot your oil is before placing the food in. I would suggest using a thermometer for better monitoring as most food fry best at temperatures between 160° and 180°C.

Now the issue with oils is that they eventually go rancid although some are more stable than others. Palm oil has a very long shelf life while flavored oil will turn rancid in 20 minutes at room temperature if exposed to sunlight. Olive oil lasts about 3-5 years, but you can almost taste the difference after 3 years. Partially hydrogenated oils have the longest shelf-life and are the most preferred oils to be used in industry for pastries, breads and for deep frying, possibly being the culprits that give deep-fried foods a bad name.

To counter the oxidation process in oils, commercial food scientists have recommended adding a little BHT into edible oils to keep them from turning rancid. BHT is primarily a form of antioxidant and it acts to preserve the oils. Now whether the use of BHT has health implications or not it is out of the discussion here, the bottom line is, oils will last longer when antioxidants are added as preservatives.

Palm oil, on the other hand, has clearly won the health debate. In fact, palm oil comes with its own antioxidants. You have probably heard of beta-carotene, a precursor to vitamin A. What you may not know is that there are some 600 compounds that make up the entire family called carotenoids. These antioxidants protect the oil from oxidation. Any heart surgeon would tell you that cholesterol does not cause heart disease; it is rancid cholesterol that causes heart diseases, and antioxidants protect the cholesterol from going rancid. Natural palm oil is filled with natural carotenoids and it is very healthy oil. Apart from carotenoids, palm oil also contains a complete form of vitamin E which is another potent antioxidant. Beyond that, palm oil contains phytoestrogens which prevent cholesterol absorption and are suspected to have some effect on cancer prevention.
Perhaps what is most interesting is that palm oil is 40% saturated and 60% unsaturated, the unsaturated portion of palm oil being a monounsaturated fat, pretty much like that of olive oil. Unlike olive oil however, palm oil is packed with potent antioxidants and that makes it a healthier oil for heavy cooking. Even the saturated fat in palm oil has a neutral effect on blood cholesterol.

As palm oil it has more saturated fat that automatically gives it a higher smoking point than that of other fats, it allows foods to absorb less oil when fried in it. What matters more, because of its saturated oil molecules, palm oil tends to be very stable upon heating and does not go rancid easily. It fits perfectly to the Malaysian way of cooking where frying and deep-frying are a standing tradition.

There’s only one thing that may put “deep-frying” back on the slippery slope – try deep-frying your food in a polyunsaturated fat such as corn, canola, cottonseed, soy or other generic “vegetable” oil and you will end up having sticky and gunky kitchen surfaces which are hard to clean without using solvents.

Polyunsaturated fats are very unstable and are highly susceptible to high heat, sunlight and oxygen. And maybe, just maybe, the instability of such oils, if used in deep-frying, will cause them to be converted into peroxides and eventually damage your arterial tissues and cause plaque!

In the ’80s when soybean interests slandered palm oil, labelling it “unhealthy”, the food industry switched to partially hydrogenated oils for use in deep-frying, hence the anti-tropical oil movement began. Despite the benefits of palm oil mentioned above, occasionally, an article will make a valid point – producing palm oil leads to forest destruction and reduces the biodiversity of the jungle – but then again, surprises still crop up about how elephants and orang utans thriving in the palm forest.

Well, I do not wish to start a new discussion on environmental issues here, but there is one good reason why palm oil is taking off at last – it is perfect for deep-frying.

“ I really love cooking with the freshest ingredients and doing the simplest things to make the food taste great. Being privileged to have working experience around the world, I always love going to fresh produce markets to select the freshest ingredients of the day. Mediterranean cuisine is really one of my favourite cuisines to prepare. I am also fortunate for having worked in Asia for several years. There are many different flavours and techniques which I have combined into my specialty cuisine.”
PLANTAIN BANANA BRUSCHETTA & ROASTED PEPPER AND MANGO SALSA

INGREDIENTS:
1 large Green plantain banana (sliced, dusted in cornflour, fried in palm oil until crisp)
1 no each Diced roasted red and yellow pepper (remove skin and seeds, then marinate with olive oil, seasoning, chopped fresh coriander)
1 no Small mango (diced)
2 tsp Brown sugar
2 tsp Red palm oil
1 tsp Sea salt
Garnish Coriander leaves

METHOD:
1. In a bowl, mix together diced roasted pepper, diced mango, brown sugar, red palm oil and sea salt together.
2. Place a spoonful of the salsa on top of each slice of the fried plantain banana.
3. Garnish with fresh herbs and serve.

JACKFRUIT FRITTERS & FRESH POMEGRANATE AND BASIL SALAD

INGREDIENTS:
1 packet Tempura flour
12 pcs Jackfruit cut in half (seeds removed)
1 no Fresh pomegranate (removed from skin)
6 tbsp St. Dalfour Pomegranate Jam
Some Picked micro basil leaves

METHOD:
1. Mix some tempura flour with water to make batter. Dip jackfruit in batter and deep fry in palm oil till crisp.
2. Mix fresh pomegranate seeds with the pomegranate jam. Insert into jackfruit cavity. Decorate with basil leaves.
3. Serve while hot with vanilla ice cream.
Fact 1. Palm Oil is a Fruit Oil. Palm oil is obtained from the flesh, also known as mesocarp of the oil palm fruit. Like olive oil, palm oil is a fruit oil. Therefore, palm oil should not be mistaken for palm kernel oil which is extracted from the kernel or seed of the palm fruit. Each palm fruit produces about 96% palm oil and 10% palm kernel oil. Palm oil has a balanced composition of both saturated and unsaturated fatty acids coupled with high content of vitamin E.

Fact 2. Palm Oil has a history of food use of over 5,000 years. Based on archaeological evidence, palm oil consumption was discovered in an Egyptian tomb in Abydos. Since there was no palm oil being produced in the country, this evidence suggested that palm oil has already been widely traded during the time of the Pharaohs, which was approximately five thousand years ago.

Fact 3. Palm oil is one of the seventeen edible oils possessing an FHO/WHO Food Standard under the CODEX Alimentarius Commission Programme. Palm oil is presently the major edible oil traded and consumed by about 3 billion people over more than 150 countries worldwide. Being one of the most sustainable oilseed crops of incredible productivity, palm oil thus play an important role in starving off global hunger and improving the global food security.

Fact 4. Like all other vegetable oils, Palm Oil is cholesterol-free. Palm oil, like most other vegetable oils and fats, contains only traces of cholesterol (<50 μg/gm or <3 ppm). This amount is considered as cholesterol-free based on Malaysian Food Regulations. Compared to animal fats, palm oil is thus cholesterol-free.

Fact 5. Don’t get confused: Palm Oil is not the same as Coconut Oil. People tend to mistaken palm oil for palm kernel oil. It is palm kernel oil and not palm oil which portrays similar characteristics as coconut oil. Palm oil contains an equal proportion of saturated [mainly palmitic acids (44%)] and unsaturated fatty acids [mono unsaturated oleic acid (46%), and smaller amounts of polyunsaturated fatty acids (10%)]. On the other hand, coconut oil is only 8% unsaturated, the balance being mainly saturated fat consisting of lauric and myristic acids, which are proven to be cholesterol-raising.

Fact 6. Palm Oil is gifted with abundance of natural vitamin E. Palm oil is a rich source of natural vitamin E, both tocopherols and tocotrienols, having very potent antioxidant properties. In fact, among the commercially available refined vegetable oils, palm oil has the highest content of natural vitamin E tocotrienols. Refined palm oil contains vitamin E up to 500ppm.

Fact 7. Palm Oil is your best available frying oil in the market. Palm olein, the liquid fraction of palm oil, without undergoing hydrogenation is a very stable frying oil due to its balanced fatty acid composition and high content of vitamin E. Unlike the polyunsaturated cooking oil (such as soybean oil, corn oil, sunflower oil), palm olein has lower tendency to oxidise and it is resistant to formation of unhealthy polar components and cyclic polymers. Thus, with such advantages, it also offers a longer shelf life for products.

Fact 8. Why worry? Palm Oil products are trans-fat free. Palm oil is semi-solid in nature and this makes hydrogenation of palm oil unnecessary, thus avoiding the formation of detrimental trans fatty acids. Many solid fat products made with palm oil are actually trans-free, unlike the polyunsaturated edible oils which are liquid in nature and require the hydrogenation process to harden the oils in order to attain the semi-solid consistency for manufacturing of food products such as margarine, shortening, vegetable ghee, confectionery, and bakery products.

Fact 9. Know your fats… Palm Oil does not raise your blood cholesterol level. A number of controlled human studies worldwide have shown no significant rise in serum total blood cholesterol when palm oil replaced the habitual fats of healthy studied subjects with normal blood cholesterol levels. Thus, it is confirmed that palm oil tends to be neutral, as it does not raise nor lower blood cholesterol levels when you consume within the total recommended amount of fats (not more than 30% energy intake). Not only being trans-free, palm oil has only traces of the cholesterol-raising lauric and myristic acids. Most of the saturated fatty acids in palm oil are palmitic acids which renders the oil to be non-cholesterol raising, coupled with the high content of vitamin E. The bottom line is, palm oil is just like other fats if you use wisely in your diet and you can reap the attributes that it has to offer.

Fact 10. A bouquet of carotenoids present in Red Palm Oil. Red palm oil is a natural, minimally processed, rich edible oil with carotenoids and vitamin E. More than 20 natural carotenoids are present in refined red palm oil which explains its deep red colour. It is the only commercially-available refined cooking oil that contains a high amount of carotenoids, of about 30mg in every 100g of oil (500ppm), which are mostly beta-carotenes and alpha-carotenes.

For more information, please visit www.myNOURISH.org.my