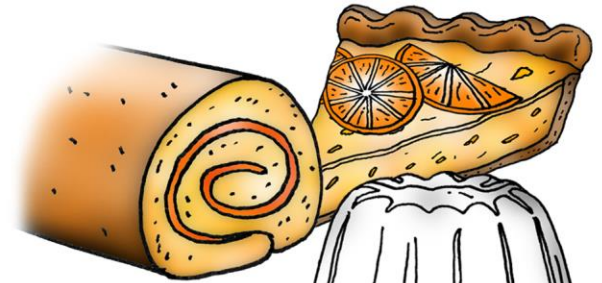


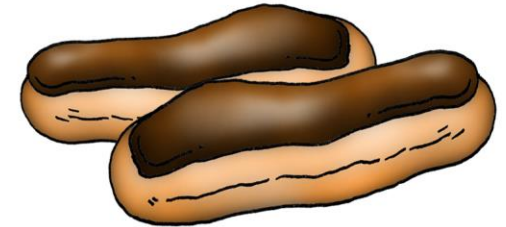
FOAMING
AERATE
COAGULATION
EMULSIFICATION
PLASTICITY
SHORTENING
DENATURATION
GELATINISATION
DEXTRINISATION
CARMELISATION



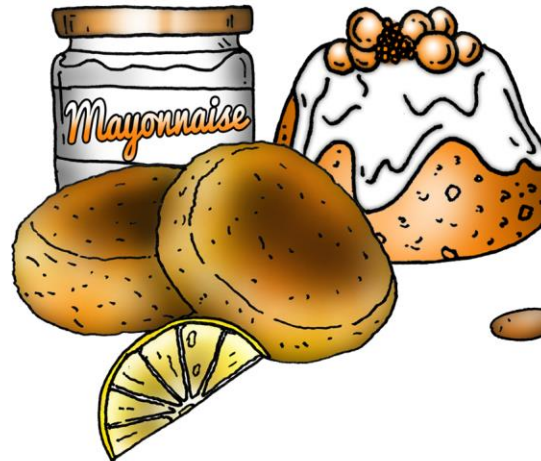
Fried
VS
Steamed



ThinkIT FOOD SCIENCE



AERATE *sweeten* COLOUR
add colour CARMELISATION *volume*
DEXTRINISATION *emulsify* BINDS
FLAVOUR *bulk* TEXTURE
coagulates SHORTENS *structure*
INCREASES SHELF LIFE



Cooking of Food:

Is it important to cook food?

- Explain the physical changes that occur to fish when cooking.
- Compare the differences in texture and flavour that can be achieved cooking eggs in a variety of ways.
- Justify why to food should be cooked to ensure consumers are safe and boredom is avoided.

Chemical Properties of ingredients:

Chemical is the science to explain the changes.

- Considered what factors have caused pastry in a quiche to be hard and tough when cooked.
- A carrot cake has sunk during cooking explain the possible causes for this.

Functional & Chemical Properties of carbohydrate:

- Discuss the potential issues of not stirring a béchamel sauce continually whilst making.
- Compare how a roux sauce is thickened compared to a blended sauce.
- Consider why controlling the colour of a caramel sauce is important.
- Explain the reason for physical changes that occur during the baking of a sponge cake.

Heat Transfer:

- Discuss the differences in appearance, texture, flavour and nutritive value between fish cooked by deep frying and steaming.
- Consider the changes that occur to a shin of beef whilst cooking a stew. Justify why this method is used to cook this cut of meat.
- Carrots have been boiled are soft, mushy, lack flavour and have lost some colour. Using these observations evaluate the method used and its suitability. Suggest and justify an alternative method to use.



Functional & Chemical Properties of fats & oils:

- Think about what happens to egg white when whisking if it contains some fat e.g. egg yolk in the mixture.
- Consider what happens if you add oil or water too quickly to a stable emulsion.
- Think about how an emulsifier prevents a liquid from separating.
- Compare mayonnaise and a vinaigrette
- Consider why tub margarine has more plasticity than block butter and how this affects its cooking properties. Justify your answer.

Functional Properties of ingredients:

Functional is the how they change food

- Egg in a custard and flour in a béchamel sauce both help to thicken the sauce. Explain the differences between the process in each sauce.
- Compare the choice of fat used to make cakes and pastry, considering their functional properties.

Functional & Chemical Properties of proteins:

- Explain why you would marinate meat and the effects the process has.
- Consider the changes that occur to eggs during meringue making.
- Using your knowledge of ingredients and process consider the factors that caused a loaf of bread to be heavy with a closed texture and pale colour.

Functional & Chemical Properties of raising agents:

- Consider why oil based doughs need an additional raising agent to enable the dough to rise.
- Consider why you would use an alternative raising agent to bicarbonate of soda when making a Victoria sandwich.
- Justify why baking powder is a better raising agent to add to plain flour in baking.