

Sensory or Organoleptic Properties of Food Materials.

Texture: The mouth feel of food products can be changed according to the ingredients or food materials included. Fats such as butter or margarine will change the texture of a food product. Shortbread has more fat than a cream cracker- the texture is also crumblier.

Smell: Foods have a distinctive aroma. Think of fresh bread, roast chicken, cauliflower cheese. This is because of the food materials used and the effect of heat on them. It is good to enjoy the smell of food prior to eating as the aroma can stimulate the flow of digestive juices which will enhance and help the digestion of food.

How a food product looks:

- i. **Colour:** Bread when toasted has a light golden brown colour. This is because of *dextrination*. The starch has been changed by dry heat. A cake will brown because of the effect of *Maillard reaction* which is the effect of heat on the proteins and sugar in the cake. *Caramelisation* is another form of browning. This happens when a sugar solution is heated to a high temperature, it thickens, turns brown and also adds flavour. Caramel is the yellow substance formed when sugar is heated alone and is also the final stage used to make gravy browning. Some browning such as *enzymic browning* of fruit and vegetables is not desirable. When an apple is cut and left in the air it will become brown and unattractive. This browning occurs because of the action of the enzyme polyphenol oxidase in the presence of oxygen.

Experiment on how to prevent browning of apple

FUNCTIONAL PROPERTIES OF FOOD DVD

Classroom VIDEO (Education with vision) Tel 01179291923

Terminology and examples section

- ii. **Shape:** Bread can be kneaded and shaped by *plaiting*, *coiling*, *twisting*. Foods like whipped cream, mashed potatoes, choux pastry, meringues can be *pipéd* through a nozzle or a piping tube. Piped mashed potato on Cottage pie can improve the appearance and aesthetic quality. Scones and pastry are *rolled* to specific thicknesses and *cut* into shapes by *pastry cutters*. These cutters can plain for savoury foods such as cheese scones or crinkled/fluted for sweet foods like jam tarts. Vegetables can be sliced, diced before adding to dishes. The regular shape and size will enable the vegetables to cook evenly.

Activity: Three food products and three methods of shaping –match method to correct food

Fluted cutter

Icing in a piping bag

Fruit Scone

Picture of person

Kneading

Decorated cake

Bread twist



- iii **Size:** Food products can be served as individual portions. A cup cake, a bread roll, a Cornish pastie are examples of single portions. A Victoria sandwich, loaf and a chicken pie are multi-portion food products. Too much or too little mixture in a paper case or container can make the product unsightly and unattractive.

A product specification can state the size of cut vegetables in the product as this will help to ensure quality control.

Cakes and breads are placed in appropriate sized tins.
A 100g mixture of Creaming Method or All in One Mixture will make 2 x 15cm x 3.5cm round tins = 1 x Victoria Sandwich Cake

250g strong flour will make a 15cm x 9cm x 7cm loaf

A two egg mixture of whisking method mixture (2 eggs + 50g caster sugar + 50g plain flour) will fit into a Swiss roll tin measuring 28cm x 17.5cm x 1.5cm

1. Name the food products pictured below.
2. Match the food product to the correct tin/s used in the making of them.



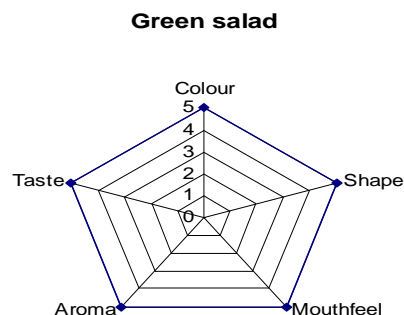
- iii. Decoration:** Foods can be decorated or made more appealing by different techniques such as:-
- Cutting:** vegetables or fruit can be cut into different shapes such as a tomato lily, carrot flowers or cucumber cones.
Cutters or pastry cutters are also used for cutting food- they can be fluted or plain.
 - Feathering:** drawing a skewer or a knife through lines of soft icing or chocolate.
 - Glazing:** Milk, egg, egg white, sugar solutions can be painted on food products before baking to enhance their colour.
 - Moulding:** icing can be moulded into different shapes.
Biscuit mixture can be shaped/moulded over wooden handles to form brandy snaps. This is done after the mixture has cooked but before it has cooled
Biscuits can also be piped or extruded before baking to give different shapes
Containers /moulds can be used to shape jellies and cornflour /blancmange.
 - Piping:** icing, whipped cream, mashed potatoes can be passed through a piping tube. A decorated cake will often have the icing piped on it.

Flavour: Different foods have different flavours. Foods can be: Sweet, savoury, spicy, salty, sour, bitter.

[Ref: Kidshealth.org /kids](http://Kidshealth.org/kids) for info on taste buds in the mouth

Foods can be flavoured by adding natural ingredients such as herbs – parsley, thyme, basil or spices like nutmeg, ginger. Flavouring extracts such as vanilla is added to ice creams, butter cream.

Cooked foods acquire a particular flavour – roast meat, baked bread, cheese on toast.



Star profiles can be created on Microsoft Office Excel and are used in the Food Industry to assess products.