



Fats And Oils





Fats and Oils

Lipids are also known as fats and oils.

- Fats are solid at room temperature
- Oils are liquid at room temperature



- Visible fats can be clearly seen in or on food e.g. butter, cream, fat on meat
- Invisible fats and oils on the other hand are not clearly visible as they are combined with the food



Classification of Fats

ANIMAL

Saturated:

- Suet (adipose tissue – pastries, steamed puddings and mincemeat)
- Dripping (fat melted from beef – roasting, frying)
- Lard (pig fat –pastry making, frying)
- Butter
- Eggs



Polyunsaturated:

- Oily fish
- Fish liver oils





Classification of Fats

VEGETABLE

Unsaturated:

- Vegetable oils (maize, olive, soya beans)
- Margarine
- Nut oils (coconut, almond and walnut)
- Seeds (sesame, sunflower and rapeseed)





Factors affecting choice of Fats and Oils

- ✓ **Health:** Choice of fat/oil may depend on saturated /unsaturated fat content e.g. Butter versus Low Fat spread

- ✓ **Plasticity:** Ease of spreading and creaming

- ✓ **Flavour:** Use in salad dressings e.g. Olive Oil. Butter is thought to have better flavour than margarine in cake making



Nutritional Value

Protein: Butter and Margarine contain traces while oils are usually lacking

Fat: Butter approx 82%, Oils approx 99.9%. Low fat options approx 40% .
Concentrated source of energy (9kcal per 1g of fat)

Carbohydrate: Lacking

Vitamins: Source of Fat Soluble Vitamins – A,D, E and K

Minerals: Traces of calcium in butter and margarine

Water: Varies in proportion to fat content



Dietetic Value

Fats and Oils:

- Provide heat and energy
- Protect delicate organs
- Provide insulation
- Delay hunger
- Supply essential fatty acids
- Add flavour to food





Culinary Uses of Fats and Oils

- Improve appearance of sauces



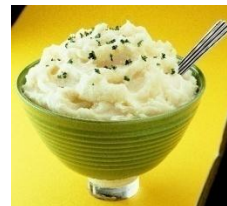
- Prevent sticking in cooking e.g. frying



- Create emulsions e.g. mayonnaise



- Add flavour to food



- Give pastry its crumbly texture (Shortening)

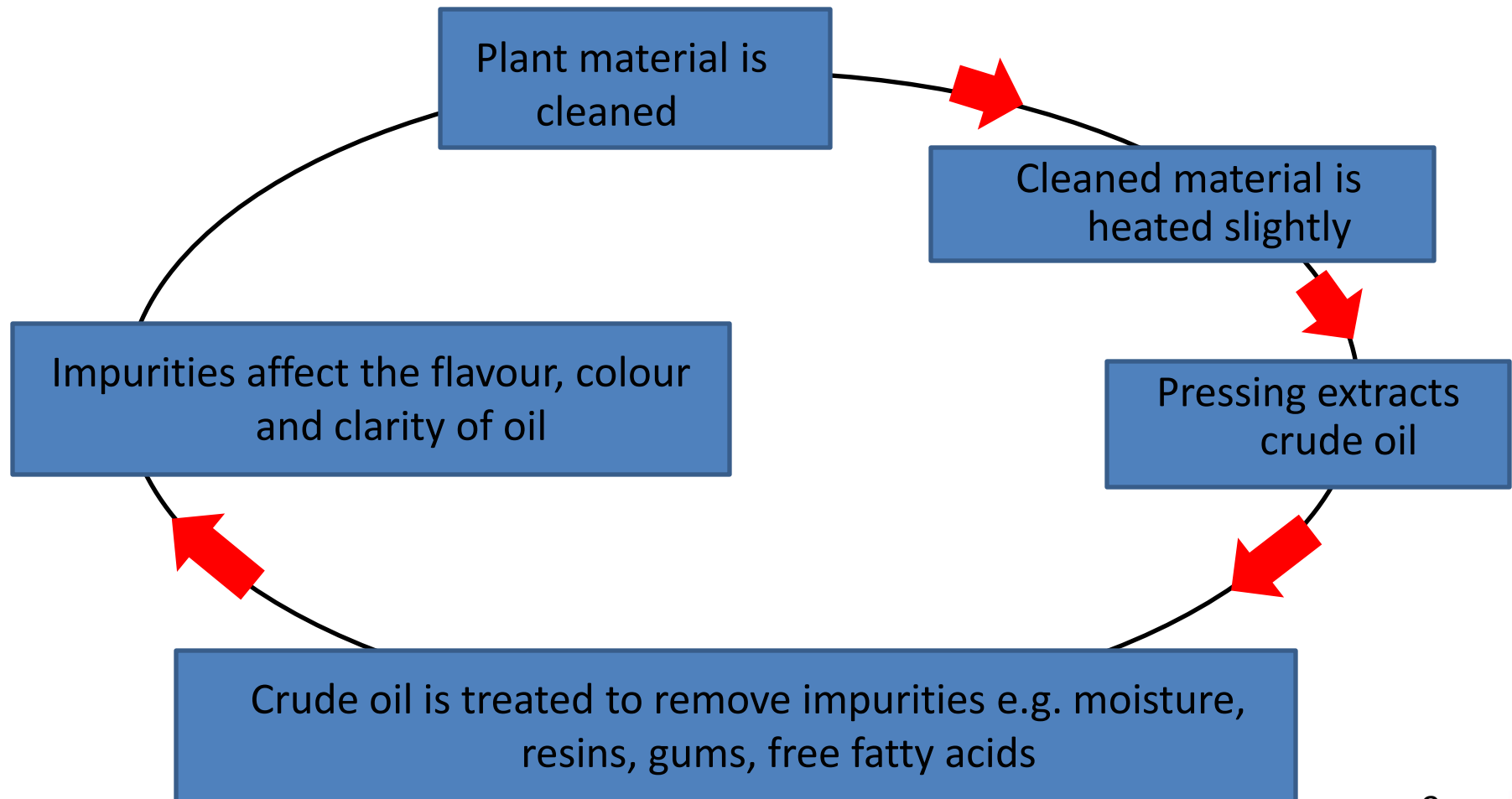


- Act as a preservative e.g. Improves shelf life of bread and cakes





Processing of Vegetable oils





Margarine

Definition: Water in oil emulsion originally developed as butter substitute.

Block



- Made mainly from vegetable oils but can contain fish and animal oils
- High in saturated fat
- Foil/waxed paper wrapping

Uses: Spreading, baking and frying

Soft



- Contains vegetable oils, whey/buttermilk and water
- High in saturated fat (but a little less than block margarine)
- Packaged in plastic tubs

Uses: Spreading, baking and frying



Manufacture of Margarine

Oil Extraction: Oils from various sources are extracted and refined



Hydrogenation: Hydrogen is forced through the oil



Blending: Different oils are mixed together



Other ingredients added: These include water, skimmed milk, salt, flavouring, colours and vitamins



Emulsification: Emulsifying agent is added. At this point, the mixture becomes solid



Packaging: Weighed, wrapped and labelled






Dairy Spreads

Dairy Spread	Low-fat dairy spreads	Spreadable low-fat butters	Functional Dairy Spreads
Ingredients	Water, vegetable oil, milk proteins, emulsifiers, stabilisers, salt, colourings, Vitamins A,D, E	Water, cream, milk protein, salt, potassium sorbate, beta-carotenes, Vitamins A, D, E	Sunflower oil, vegetable oil, buttermilk, plant stanol ester, water, salt, emulsifiers, stabilizers, carotene, Vitamins A and D
Nutritional Info	<ul style="list-style-type: none"> •Trace Protein •Fat (38 – 40%) •Low in saturates •High in mono-unsaturates 	<ul style="list-style-type: none"> •Protein 7% •Fat 40% •Higher in saturated fat 	<ul style="list-style-type: none"> •Trace Protein •No Hydrogenated fatty acids •Virtually no trans fatty acids



Dairy Spreads

Dairy Spread	Low-fat dairy spreads	Spreadable low-fat butters	Functional Dairy Spreads
Examples	Dairygold Light, Avonmore Extra-light 	Connaught Gold 	Benecol, Flora Pro-Active 



Storage of Fats and Oils

Oils: Store in a cool, dry dark place



Butter/Margarine/Dairy Spreads: Store in the fridge



Important

- Keep fats covered to prevent absorption of smells and flavors
- Check best before dates



