

METABOLISM
MEMORY BOOST
HEALTHY CHOICES
DISEASE PREVENTION
IMPROVED CONCENTRATION
BETTER WEIGHT MANAGEMENT
BREAKFAST

Key words

- Health and Safety
- Hygiene
- Nutrition
- Macronutrients
- Carbohydrates
- Protein
- Fat
- Micronutrients
- Vitamins &

There are three types of carbohydrate: **Starch; Sugar and Dietary Fibre.**

When a starch is exposed to **dry heat** it undergoes a **structural change** and breaks down into **sugar (dextrin).**

This process is called **dextrinization.**

Enzymatic browning occurs when fruits/vegetables are exposed to air and go brown, resulting in a negative effect on colour, flavour and nutritional value

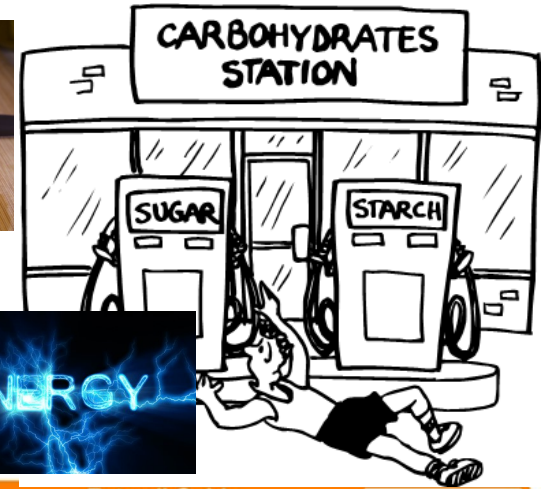
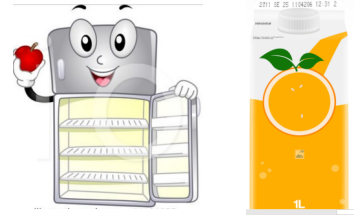


Enzymatic browning can be slowed by:

Placing cut fruit/vegetables in **cold water** or by adding a fruit juice to the water

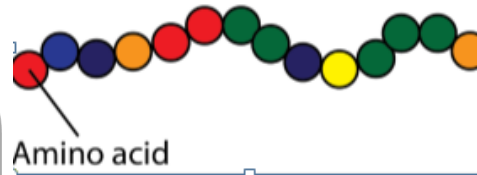
Refrigeration

Soaking in **fruit juice (citric acid)**



Growth and Repair

Dextrinisation



Coagulation is the process of a liquid turning solid. In eggs this is due to **heating**. **Protein foods** often **denature** and change structure when heated



Only **protein food** can **denature** (change structure). This occurs when they are exposed to **heat, acid** and **physical manipulation**.



Coagulation

Food Technology—Yr. 7: Spring 1 Knowledge Organiser

Bread making processes	Bread making ingredients	Equipment used
<p>Weighing and measuring to ensure accurate quantities</p> <p>Sifting to aerate the flour</p> <p>Cutting in to disperse the liquid throughout the dry ingredients</p> <p>Kneading to stretch the gluten, add more air and smooth the dough</p> <p>Proving to allow the carbon dioxide to develop, bubbling through the dough and expanding it</p> <p>Knocking back to remove large air bubbles</p> <p>Shaping to form the dough ready for baking</p> <p>Glazing to bind any ingredients to the dough, to give a golden colour and shiny appearance</p> <p>Baking to cook the dough and dextrinise the starch</p>	<p>Strong bread flour Is the bulk (largest) ingredient and has a higher gluten content to support the framework of the bread</p> <p>Fast action yeast is the raising agent and adds volume</p> <p>Sugar is used to feed and activate the yeast</p> <p>Salt adds flavour to the bread</p> <p>Oil keeps the bread moist (longer shelf life)</p> <p>Warm water activates the yeast and binds the dough together</p>	<p>Digital scales used to weigh accurately</p> <p>Sieve for aerating the flour</p> <p>Palette knife used to cut the liquid into the dry ingredients</p> <p>Hands specifically the heel of the hand used to knead the dough</p> <p>Rolling pin can be used to roll out the dough prior to shaping</p> <p>Pastry brush used to apply milk to baked products</p> <p>Oven tray and parchment paper to place bread rolls on, the paper is to prevent sticking</p>
	<p>To activate, yeast needs:</p> <p>Food</p> <p>Liquid</p> <p>Warmth</p> <p>Time</p>	<p>Gluten is the protein in wheat, barley and rye. It helps to form the structure of baked products. Gluten needs liquid, kneading and heat to form. Some people are allergic to gluten (coeliac dis-</p>



Dextrinisation is when a starch carbohydrate is subjected to dry heat (oven or grill), it changes into a sugar (dextrin) and goes brown

Pasta can be bought **fresh** or **dried**. **Fresh pasta** needs **less time** in boiling water as it **does not need to rehydrate**. **Dried pasta** has had **all its moisture removed** and is hard. It needs **10-12 minutes** in **boiling water to rehydrate, soften and cook**. **Dried pasta** has a much **longer shelf-life** due to the removal of moisture. In terms of **cost** fresh pasta is usually more expensive



5 mins.

ASDA Fresh Egg Fusilli
500g
£1.40 (£2.80 per kg)



10-12 mins.

ASDA Fusilli
500g
£0.55 (£1.10 per kg)

CARBS = ENERGY (FUEL)

Complex = Continuous

- ✓ Vegetables
- ✓ Whole Grains
- ✓ Beans
- ✓ Glycogen
- ✓ Starch
- ✓ Dextrose

Simple = Spike

- ✓ Fruit
- ✓ White flour pasta, bread, tortillas
- ✓ Sugar, honey
- ✓ Sweets
- ✓ Fructose, lactose, maltose, sucrose, glucose



Bridge grip



Claw grip

Key words

Kneading

Proving

Knocking back

Gluten formation

Glazing

Dextrinization

Carbohydrate

Staple foods

Starch



A sauce is a **liquid** that has been **flavoured and thickened**. Sauces are used to **add flavour, colour, aroma and texture** to a meal. The **thickness** of a sauce is known as its **viscosity**.

Green chopping board

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Functions of ingredients in shortened products	Common pastry products	Decoration and glazes
<p>Plain flour is the bulk ingredient, does not rise and contains starch carbohydrate</p> <p>Fat (usually butter) adds colour and flavour. It shortens by coating flour in butter, creating crumbly, melt-in-the-mouth textures</p> <p>Cold water or milk is used to bind the ingredients into a dough. For a richer pastry use egg yolk.</p> <p>Sugar can be added if you want a sweeter product</p>	<p>Tarts </p> <p>Pies </p> <p>Pasties </p> <p>Turnovers </p> <p>Quiche </p>	<p>Egg glaze </p> <p>Dusted icing sugar </p> <p>Drizzled glacé icing and fruits </p> <p>Lattice work </p> <p>Crimping </p>
<p>Egg wash is used to seal and glaze the pastry, giving a golden, shiny finish, milk is used with scones</p>		

"I bake... what's your superpower?"

BestFriendsForFrosting.com



Rubbing in is a process where you use your **fingertips** to gently **rub butter and flour together**. The end result should look like **fine bread-crumbs**. The **butter** needs to be **cold** or it will melt and make a sticky mess. Lift hands above bowl to let air cool mixture down.

A **crumble** is made by **rubbing the cold butter around the flour** particles. The **butter** then **melts** in the oven and forms a sweet, but still crumbly **layer** over the fruit. Other ingredients can be added for extra texture, e.g. oats or nuts.



Scones are known as 'rubbed in' cakes, as are rock cakes. They have a hard exterior, are **dry and crumbly** inside and a shorter shelf life than cakes that contain more fat.

Shortcrust is also made by **rubbing in** cold fat and flour. The fat coats the flour particles preventing water getting to the dry flour. This is called **shortening** and is what gives the pastry its **crumbly/melt in the mouth**



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Key words

- Weighing and measuring
- Aerating
- Rubbing in
- Resting
- Rolling and shaping
- Patting and cutting
- Glazing
- Baking



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