

Commodities

2 Less froth is produced with its use.

Soft brown sugars are only partly refined. They are made from the syrup residues when refining white sugar. Can be called 'Pieces' or 'Foot' sugars. They are available in light or dark colour. They are used in fruit cakes, gingerbreads, flapjacks, gingernuts and chutneys.

Barbados sugar is a crystalized brown sugar produced by evaporation. It contains minute traces of natural salts. It is made from sugar cane.

Demerara sugar True demerara sugar is made from raw cane sugar from which only coarse impurities have been removed. The crystals are coarse and brown. It is used to sweeten coffee, in cakes such as flapjack and in toffee making.

NB ALL of these sugars are approximately 100% sucrose

Sucrose is a double sugar or disaccharide. When used in making jams it is changed by the acid present into *invert sugar* which prevents sucrose from crystallizing in the jam. Invert sugar occurs naturally in honey, it is a mixture of glucose and fructose.

Other sugars

Monosaccharides

1 *Glucose* is found in grapes, honey and onion. During digestion it is obtained from starch and double sugars by carbohydrate hydrolysis. Confectioners' glucose or liquid glucose is made commercially by hydrolysing maize starch with dilute hydrochloric acid.

(a) Glucose is rapidly absorbed.

(b) Liquid glucose is used to make icings, sweets, other confectionery and jams.

2 *Fructose* is the sweetest sugar and is found in sweet fruits and honey. During digestion it is obtained with glucose when sucrose is hydrolysed.

Disaccharides

1 *Maltose* is obtained from starch by the action of the enzyme diastase. During digestion maltase changes maltose to glucose.

2 *Lactose* is the least sweet of all sugars. It is found in milk. The enzyme lactase changes lactose to glucose and galactose.

Other sweeteners

Until September 1983 the only artificial, intense sweetening agent permitted in the UK was saccharine which is 550 times as sweet as sugar.

Saccharine has no energy value. Users can detect a bitter/metallic flavour in the mouth after use. Saccharine is the main constituent of branded sweeteners such as 'Sweetex', 'Hermesetas' and 'Sucron'.

The Food Additives and Contaminants Committee has now included six new sweeteners in the 'allowed' list.

One of these new sweeteners is **aspartame** with the brand name 'Nutrasweet'. 'Canderol', a new table top sweetener containing 'Nutrasweet', is now available. One tablet is equal to one teaspoon of sugar. Aspartame is a dipeptide and like all proteins has a calorific value of 17kJ (4 kilocalories) per gram. It is approximately 200 times as sweet as sugar. There is no bitter aftertaste. Its use is now approved in twenty-five countries and it is used in products such as breakfast cereals, desserts, toppings, soft drinks.

Manufacturers of foods intended for babies and young children will not be allowed to use sweeteners in these products.

Aspartame should not be used by people with phenylketonuria. Doctors will be asked to tell patients who suffer from this condition that they must not use products containing this sweetener. One in twelve thousand infants is unable to metabolise phenylalanine. They lack the enzyme which deals with this amino acid which can then build up in the body, damaging brain cells and adversely affecting development. A routine blood test on every new baby identifies an individual with this deficiency. Special drugs and foods are prescribed.