Province of the
EASTERN CAPE
EDUCATION

HOSPITALITY STUDIES

GRADE 10

TERM 2 WEEK 6

DAIRY PRODUCTS NOTES

This document consists of 14 pages.

NUTRITIONAL VALUE:

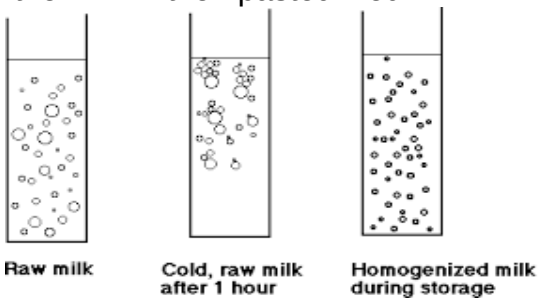
- High in calcium (needed for strong bones and teeth)
- Butter is classified under fats and oil
- 2-3 servings of Milk and milk products per day

Dairy Products refer to foods which come from cows. (Milk, cheese, cream and butter) Margarine is also considered as dairy although it contains no milk products.

TYPES OF MILK

Milk is classified according to its fat content and how it is processed:

	TYPE OF MILK	DEFINITION
1	**Whole milk /Full cream/ Fresh** 	• Sourced from the cow. Contains atleast 3.5% butter fat • Nothing is added or removed 
2	**Skim / non-fat milk** 	• All or most of butter fat (cream) is removed • 0.5% or less of cream remains 

3	**Low-fat Milk** 	• Contains 0.5-3% fat
4	**Pasteurized Milk**  	• Heated to kill harmful bacteria & micro-organisms. • It is heated to 72°C for 15 seconds and then cooled to 4°C. • There is a definite visible cream line. • Store in the fridge
5	**Homogenized milk** 	• Fat globules (cream) are evenly distributed and the milk in then pasteurized 
6	**Ultra-Heat-Treated (UHT) milk** 	• Milk is homogenized and then heated to 130°C for 1-2 seconds. • It's packed into cartons and cooled quickly • Has a definite cooked taste • Store unopened cartons in the pantry for up to 6 months. • Store opened cartons in the fridge

MILK TREATMENTS

	TREATMENT	DEFINITION
1	**Evapourated milk** 	• Pasteurized milk is concentrated by evaporating a large percentage of the water content before canning 
2	**Condensed Milk** 	• 60% of the water is removed and 40% sugar is added 
3	**Powdered Milk** 	• Milk is sprayed onto hot stainless steel plates that cause the water to evaporate • It is rehydrated by adding water to the powder

CULTURED DAIRY PRODUCTS

	PRODUCT	DEFINITION
1	**Buttermilk** 	• The liquid left after making butter
2	**Amasi (Maas)** 	• sour milk (Can be used as buttermilk substitute)
3	**Yoghurt** 	• Milk product cultured with bacteria. • Flavourings may be added 
4	**Flavoured milk** 	• Fruit purees/ syrups and sugar are added to milk

5	**Ice-cream** 	• Contains milk fat mixed with custard (milk, sugar and eggs) • Available in many flavours

CREAM

- Creams vary in thickness due to their amount of butter fat.
- Shelf life is increased by pasteurization.

TYPES OF CREAM:

	TYPE OF CREAM	DEFINITION
1	**Coffee cream** (pouring cream) 	• Thin consistency that cannot be whipped. • Can replace milk in coffee.
2	**Single cream** (fresh cream) 	• Slightly thicker, & can be whipped • used for enriching sauces and soups

3	**Double thick cream** 	• Is thicker and can be whisked to a peak • 59% fat content • Used for decorating desserts
4	**Synthetic cream** 	• Aerosol cans • Also in boxes (Orley Whip) 
5	**Sour Cream** 	• Either cultured or fermented by adding lactic acid bacteria. • It is thick and tangy and used in cooking
6	**Crème Fraîche** 	• A slightly aged, heavy cream used to make sauces

7	**Long-life / UHT cream**  	• Lasts longer and whips well if cold

WHIPPING CREAM

- One cup of cream whips up to two cups.
- Cream and other needed ingredients must be chilled
- Only sweeten the cream once whipped.
- Sugar decreases stability & makes it harder to whip. Castor/ icing sugar works better.
- If over-whipped, it'll become granular then turns into butter and whey
- Under whip cream if mixing into other ingredients, as folding in whips it more.

WHIPPED CREAM

OVER-WHIPPED CREAM

BUTTER

- It is made by churning fresh cream, then separating the curds (solids) from the whey (liquid).
- It has a unique flavour, and is usually salted.
- Clarified butter is also used = first the butter is melted, and then the milk solids are removed.

BUTTERS

CHEESE

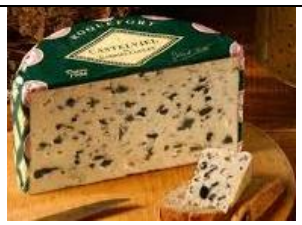
- Cheese is produced by curdling milk and separating the milk solids (curds) from the liquid (whey).
- This is done by adding ran enzyme called **rennet.**
- The resulting curds are drained, processed and cured or aged in a variety of ways.
- It is made from a variety of milks (cow, goats, sheep and buffalo). The type determines the cheese's texture and flavour.
- It takes 11 litres of milk to make 1 kg cheese

TYPES OF CHEESE

Grouped according to the type of milk, exture, age or ripening process:

	TYPE OF CHEESE	DEFINITION
1	**FRESH CHEESE**  **Cream/ cottage cheese**   **Fromage Blanc**	• Soft moist cheeses with a mild taste   **Feta**  **Goat Cheese**    **Ricotta** **Quark**   **Fresh Mozzarella**
2	**SOFT / RIND - RIPENED CHEESE**  **Brie**  **Camembert**	• Have surface mould • Ripen from the outside in  **Brie**  **Camembert**

3	**SEMI-SOFT CHEESE**  **Gouda** 	• More solid, but not easy to grate • Inedible wax coats the cheese to preserve moisture and shelf life.  **Edam**
4	**HARD CHEESES**  **Cheshire**  **Gruyere**	• Drier texture & firm consistency • Slice & grate easily   **Cheddar Cheese**
5	**HARD GRATING CHEESES** 	• Grated or shaved, rather than cut  **Parmesan**
6	**BLUE-VEINED CHEESE**	• A special mould is injected into the cheese before ripening • Range from creamy to crumbly and dry

	 **Roquefort**  **Stilton**	 **Gorgonzola**
7	**PROCESSED CHEESE** 	• made from one or more natural cheeses heated and blended together with emulsifiers and other ingredients • Has a gummy texture  

STORING DAIRY PRODUCTS

(1) Milk and Cream:

- Fresh milk & cream – in fridge below 4°C
- Seal containers to prevent them absorbing strong odours and flavours, like garlic , onions and fish
- Don't freeze unless homogenized or pasteurized
- Don't mix fresh with old products
- Store UHT products at room temp. When opened, store below 4°C

(2) **Cheese**:

- Keep fresh cheese cold, in their original packaging
- Place on clean, dry, rumpled paper towel in a covered container in the fridge. Leave some breathing space. Add a dry biscuit to reduce humidity and prevent mould formation
- Wipe off any mould with vinegar. Rub with oil and store as above with clean paper towels
- Keep blue-veined and soft / rind-ripened cheese in separate containers to prevent mingling.

COOKING MILK AND CREAM AND THE EFFECT OF HEAT

Milk undergoes the following changes when heated:

- Taste changes
- Water evaporates and sugar caramelizes if milk is exposed to heat for too long
- The fat in the cream separates at high heat. It starts to thicken when heated slowly – add cream to cooked sauces to thicken

COOKING CHEESE AND THE EFFECT OF HEAT

- Cheese proteins harden at high heat
- The fat separates from the protein and cooks out
- Some cheeses become stringy at high heat
- Add cheese at the end of the cooking process

(a) Grilled Cheese

- Assemble cheese sandwiches and heat until bread crisps and the cheese melts
- Grated cheese melts faster and more evenly than sliced cheese
- Grill sandwich slowly over medium heat

(b) Melted Cheese:

- Melt at low temperatures (the proteins toughen and become stringy when over-heated.)
- Never boil cheese sauces
- Keep cooking time short.
- Add cheese to sauces at the end. The heat of the sauce melts the cheese.
- Grate cheese for easier melting
- Aged cheese melt / blend into foods easier than young cheeses
- Aged cheese adds more flavor than young cheese = less cheese needed

LUMP PREVENTION

When thickening products:

(a) Make a paste with starch and cold milk (slaking)
(b) Add the paste (slurry) to boiling milk while stirring
(c) Cook thoroughly
(d) Or mix the starch with sugar, then add cold milk to the mixture and bring to the boil while stirring.