



Dear students

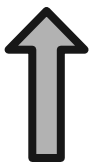
Make use of this template for designing your presentation

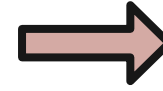
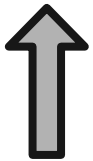
Do not hesitate to make changes so as to suits in your needs.

Please, start with some general information on food processes and why these are needed.

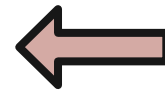
List each process and its characteristics, uses, pros and cons, etc.

Please at the end of your slide, type your name and the first letter of your surname.





FOOD PROCESSING

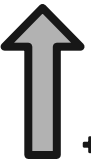




Food process technology deals with the production processes in the food preparing industry which includes a set of

- **Physical**
- **Chemical**
- **Microbiological**

techniques used to transform raw ingredients into final food products.





ADVANTAGES



Ensuring food safety

Bacteria-killing

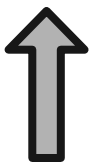
Removing dangerous toxins

Increasing availability and convenience

Decreasing the cost of foods

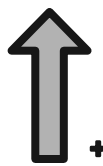
Eating a greater variety of foods.

Preserving nutritional quality



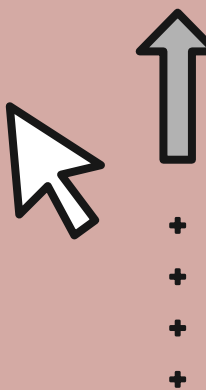
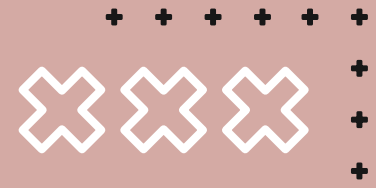


Methods of food processing





FERMENTATION





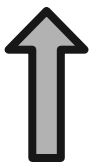
- **Food fermentation is one of the oldest and most important technological procedures of food preservation.**
- **On that occasion, new foods can be created (alcohol-beer, wine; lactic acids- yogurt, vinegar, vitamins, aromas..)**

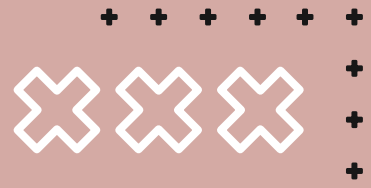




Did you know?

- **That daily consumption of 500g yogurt on daily basis improves that quality of digestion after only 10 days.**
- **Apple cider vinegar is a natural elixir made by fermenting apple juice.**
- **During the fermentation process, natural sugars from apples are broken down with the help of bacteria and yeast. What is formed is first alcohol, and then vinegar.**





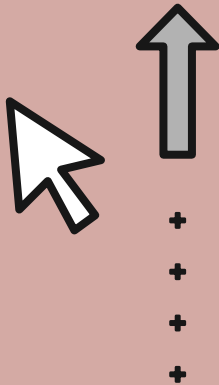
Advantages of food processing

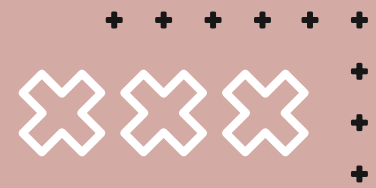


- **Fermented food is a potential chelator (detoxifier) and contains a much higher level of beneficial bacteria than probiotic supplements, which makes them ideal for optimizing our flora.**

- **Prevention of obesity and diabetes and regulation of fat absorption in the diet**

- **In addition to the health benefits of fermented foods and many other benefits, one of the main ones is the longer shelf life of foods.**





Methods of food processing



- **Alcoholic fermentation is a biochemical process in which carbohydrates, and in a narrower sense glucose, are converted into ethanol (drinking alcohol) and carbon dioxide under anaerobic conditions.**
- **Lactic acid fermentation is the metabolic process by which glucose and other hexose sugars (as well as disaccharides of hexagonal sugars, e.g. sucrose or lactose) are converted into cellular energy and the metabolite lactate.**
- **In addition to alcoholic and lactic fermentation, there are also vinegar, lemon, propionic, which are also very important for food processing.**



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Fermentation



The breakdown of sugars by bacteria, yeasts or other microorganisms under anaerobic conditions. This means, no oxygen is needed for the process to take place (apart from oxygen present in sugar). Fermentation is notably used in the production of alcoholic beverages such as wine, beer, and cider, and in the preservation of foods such as sauerkraut, dry sausages, and yoghurt, but also for raising dough in bread production

Nikos P,



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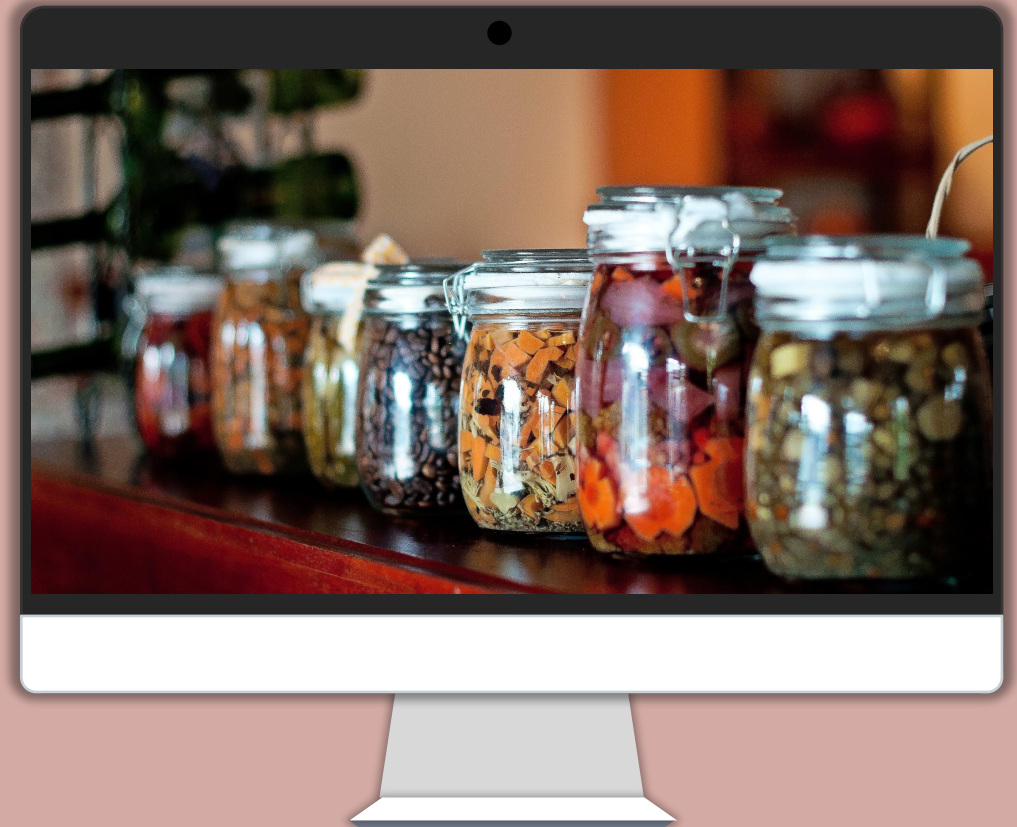
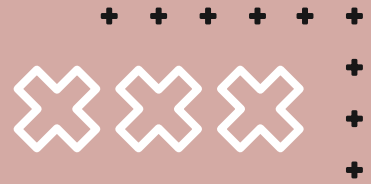




CANNING

A method of preserving food by heating it to a high temperature and then storing it in an air-tight container.

Savvoula k





PASTEURISATION



Food is heated and then quickly cool down to kill microorganisms. For example raw milk contain harmful bacteria and that can cause foodborne illnesses. Boiling it or pasteurising is crucial to ensure it is safe to consume. Apart from dairy products, pasteurisation is widely used in preservation of canned foods, juices and alcoholic beverages. Savvoula K

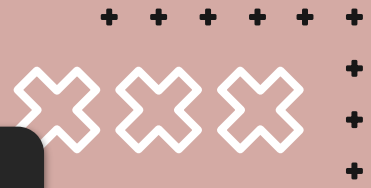




Freezing

Food temperatures are always low to stop the activity of harmful bacteria. This process can be used on variety of foods including fruits, vegetables, meat and ready meals.

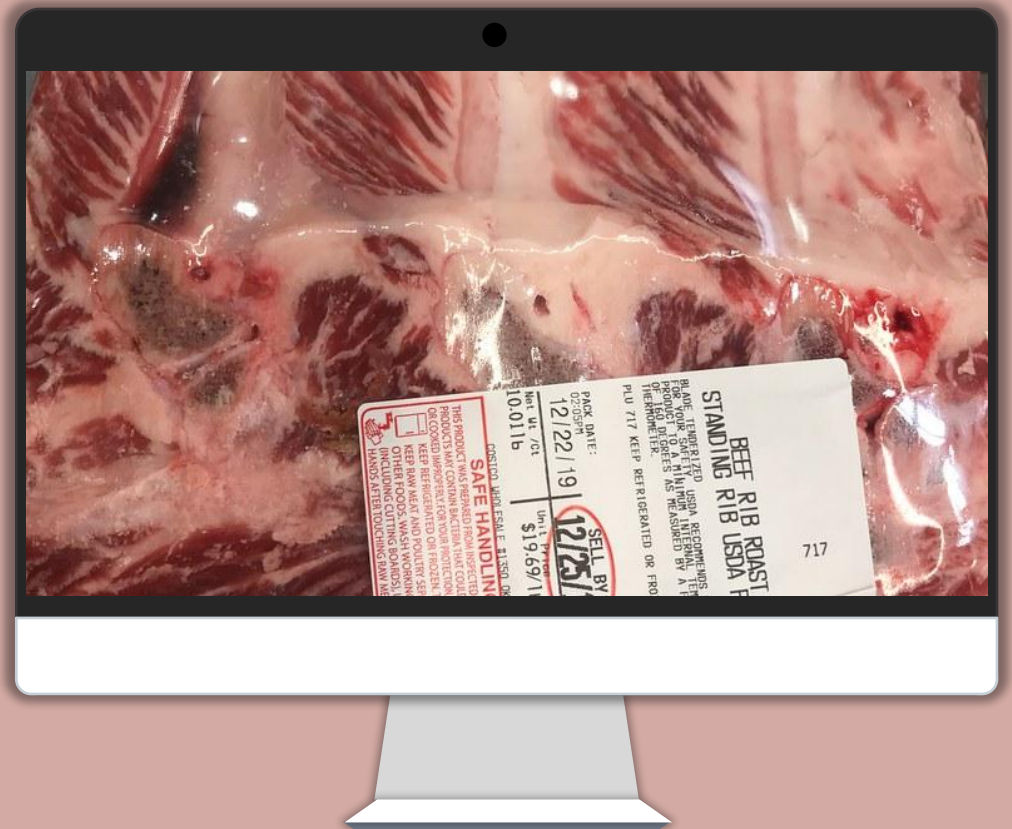
Savvoula k

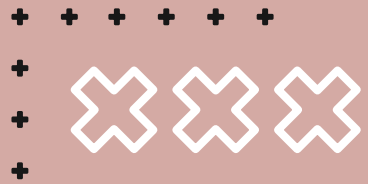


Refrigerating

The life of many foods may be increased by storage at temperatures below 4 °C (40 °F). Commonly refrigerated foods include fresh fruits and vegetables, eggs, dairy products, and meats.

Nikos P



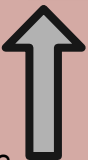


Smoking



A process of heat and chemical treatment of food to help preserve it by exposing it to smoke from burning material such as wood. Smoked foods usually include types of meat, sausages, fish or cheese.

Nikos P



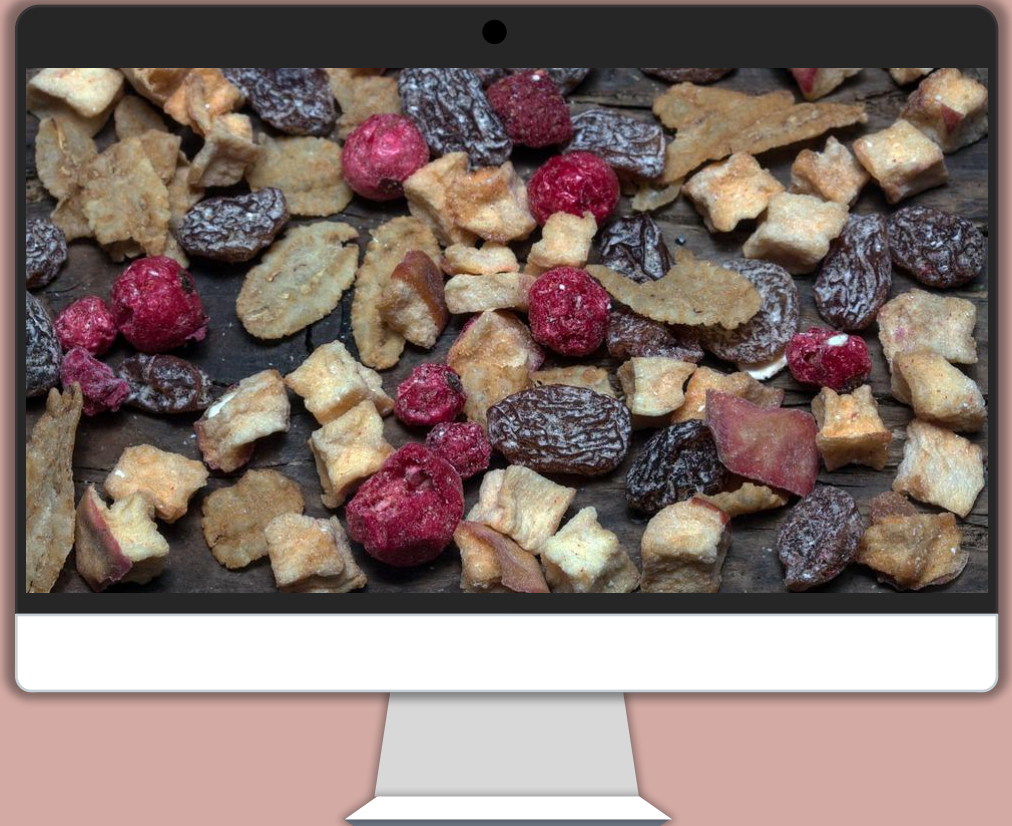
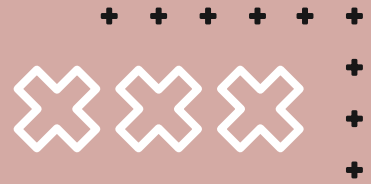


Dehydration

Dehydration, or drying, of foods has long been practiced with plant based products (herbal plants, fruits, aromatic plants, etc).

Foodstuffs may be dried in air, superheated steam, vacuum, or inert gas or by direct application of heat.

Nikos P





DISADVANTAGES

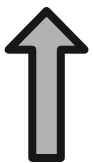
Processed foods are linked with health problems

Food processing removes some of the nutrients, vitamins and fibers

Processed food increases the risk for cancer, Type 2 diabetes and heart disease

Is responsible for a big amount of global greenhouse gas emissions

Requires large amount of natural resources





Thank you!

Group 1

