**TRAINING FICHE TEMPLATE**

| **Module** | Module 3 |
| --- | --- |
| **Title** | UNIT 2: Jellification, Preserve in Jellies, Jams and Compotes |
| **Keywords** | Jellification, preservation, preserves, jelly, jam, compote, chutney |
| **Topic/Area** | |  | 1: General issues on healthy and low-impact food | | --- | --- | |  | 2:  Typical local products and varieties (basic and advanced) | | x | 3: Traditional food preservation/conservation techniques | |  | 4: Food elaboration/consumption techniques / according to Food Pyramid | |  | 5: Traditional, local and heritage related recipes | |
| **Level** | ADVANCED |
| **Description/Contents** | **JELLIFICATION, PRESERVATION IN JELLIES, JAMS AND COMPOTES**  Jellies, jams and compotes, broadly known as preserves, are closely associated with the seasons of the year and with minimizing food waste, can be prepared using preservation and conservation techniques. A typical example is apple peel jelly and apple compote.  Jellification is the technique that underpins the preparation of jellies, jams and compotes, and consists of converting a liquid into a gel. A gel is an elastic, translucent substance, whose suspension of particles acquires greater or lesser fluidity according to the concentration of the gelling agent.  The factors that influence the gelling process are: temperature, gelling concentration, pH, sugar and storage. Pectin, starch, xanthan gum and agar are examples of gelling agents, providing texture to the jelly, jam or compote through its thickening and stabilization, resulting in greater firmness.  We can obtain gels from various foods such as dairy products, egg whites, fruit, vegetables, meat or fish. Its preparation and use in cooking are diversified.  In the Mediterranean region, fruit **jelly** is prepared by cooking fruit peels and seeds in liquid (water, fruit juice) and sugar, and straining the result. A fruit jelly is characterized by having a translucent color, with a shiny surface and a smooth texture. Fruit peels have a high amount of pectin, such as apples, which facilitates jellification.  **Jams and compotes** are prepared by cooking the pulp of the food (fruit or vegetable, fresh or frozen) in water or fruit juice and sugar, until it reaches a thick, slightly shiny consistency, and a syrupy concoction. On average, we use about 500 gr of sugar for every kilo of fruit. Honey, agave, pectin or stevia are good alternatives to sugar. The fruit or vegetable are cooked fresh or frozen, normally in chunks for jams and whole for compotes. The cooking syrup of compotes can be flavored with spices, such as cinnamon, anise or nutmeg, or fresh herbs like mint, and contain alcoholic beverages. For an even healthier alternative, fruits can be cooked without any added sugar, in an even slower cooking, providing a more intense flavor to ingredients.  The preparation of jellies, jams and compotes is a slow process, which requires low heat and constant attention, as the ingredients must be mixed frequently. Unique versions of jellies, jams and compotes can be cooked at home, using different selections of seasonal products. If properly packaged and stored, they can last for several years. To extend durability, the glass recipients can be pasteurized in boiling water for 8 to 10 minutes. *(link to sterilization fiche, basic, mod. 3, unit 4).*  **Chutney** (a jellified sweet and sour condiment of Indian origin) can also be considered a compote, since its consistency is less solid, requiring, in the final part of the cooking technique, the addition of an acidic ingredient (lemon, lime or vinegar). Chutneys can be used as a complement to the preparation of dishes. |
| **Benefits/Advantages** | Jellies, jams and compotes can be part of a healthy diet. Their nutritional value depends on the choice of the gelling agent added to the main ingredient. If we use sugar, the energy values increase significantly, whereas if we use a substitute such as pectin, the energy values will be much lower. The amount of gelling agent will determine the durability of the jelly, jam or compote, as it acts as a preservative. The gelling agent has the function of binding to the water molecules available in the preparation. The less water we have available, the less proliferation of fungi we will have.  Jellies, jams and compotes are especially associated with the surplus of fruits and vegetables, especially seasonal. However, they are also excellent in reducing food waste of ripened fruit, making use of less noble parts such as peels and seeds, or reusing fresh fruit and vegetables leftovers, reducing costs of raw materials.  Jellies, jams and compotes can add a special touch to meat, fish, vegetarian, or cheese dishes, also often serving as a complement to interim meals such as breakfast and snacks. |
| **Representative products** | Fruit jelly, jam and compote: strawberry, raspberry, blackberry, apple, quince, blueberry, grape, plum, cherry, pineapple, fig, orange.  Vegetable jelly, jam and compote: pumpkin, tomato, carrot. |
| **Risk management** | To optimize the organoleptic properties of the fruit or vegetable, we must keep the container covered during the cooking time, so that the evaporation resulting from the confection remains in the jelly, jam or compote, intensifying the flavor.  If possible, store them in dark and cool places.  The high concentration of a gelling agent in jellies, jams and compotes prevents the growth of microorganisms. However, fungi can appear on the surface. Whenever that happens, carefully remove them prior to consumption. To prevent fungi and extend the shelf life of the product, sterilize the containers and close them, whenever possible, in a vacuum. Consult the link on best practices for packaging jellies, jams and compotes *(link to the sterilization fiche).* |
| **Language** | English |
| **Country** | Portugal |
| **Partner** | UA |
| **Further references** | <https://www.fao.org/3/v5030e/V5030E0m.htm>  <https://www.researchgate.net/publication/266214656_EC94-448_Let's_Preserve_Jams_Jellies_Preserves/link/54b52dc20cf2318f0f972bc6/download> |