



INTERNATIONAL FEDERATION
FOR HOME ECONOMICS



IFHE Programme Committee
Household Technology & Sustainability –
the experts in household management

Best Practice FAQs in Cooking[©]

Frequently Asked Questions (FAQs):

1. Which is the most efficient appliance in the kitchen to do a cooking job?

It depends on the cooking job that has to be done:

- For boiling water use an electric kettle.
- For boiling eggs use an egg boiler.
- For brewing coffee use a coffee machine.
- For cooking dry legumes like dried beans use a pressure cooker.
- For cooking small amounts of food (less than 0.5 L) use a microwave oven.
- For baking small amounts of meat use a toaster oven.
- For cooking rice use a rice cooker.

2. How can dry legumes and rice be cooked in an energy saving way without pressure cooker?

Soaking of dry legumes and rice before cooking decreases the cooking time and thus the energy consumption.

3. Shall the energy be turned off a few minutes before the food is ready?

Turning off the energy 5 to 10 minutes before the cooking process ends is energy saving. But experience is necessary to make sure that the water does not stop boiling before the food is ready. Turning off the energy too early and turning it on again might consume more energy than necessary. The interruption of the cooking process might compromise the quality of the dish.

Solid heating plates are heated by electrical resistance. They take longer to heat up and also longer to cool off. Also *radiant elements* placed under heat-resistant ceramic glass take longer to heat up and cool off. Turning off the energy a few minutes before the cooking process ends is applicable on both stove tops.

Halogen elements use a quartz-halogen lamp to radiate heat to the ceramic glass surface, they are more energy efficient than solid heating plates and radiant elements. *Magnetic induction elements* heat metal pans directly by exciting the metal molecules, they are also energy efficient. Both halogen and magnetic induction elements heat up and cool down fast. Find the right time to turn off the energy before the cooking process ends needs some experience.

4. Why do some pots and pans don't work on induction hobs?

Magnetic induction elements heat metal pans directly by inducing an electric current in the bottom of the pot. The pot or pan must be made from ferromagnetic material that is electrically conductive. Therefore special cookware is necessary for cooking on induction hobs. E.g. pots and pans made from copper or aluminium are not suitable for induction hobs; also pots made from steel containing nickel can not be used.

5. How does a microwave oven heat up food?

Microwaves heat food directly by exciting mainly the water molecules in the food. The food stuff is heated by heat conduction from the fringe to the centre. Interruption of microwave radiation provides the time which is needed for the heat flow. Stirring of the food may also be needed to ensure a uniform temperature in the food. The more water molecules have to be excited, the more time and energy is necessary to heat up the food stuff. Microwave ovens are therefore very energy efficient for small amounts of food, up to 0.5 L. For cooking larger portions heating in a pan or pot on a stove top is less energy intensive.

6. Why shouldn't the microwave be used for defrosting?

Defrosting in a microwave is fast but consumes energy. Most efficient is defrosting in a refrigerator. It helps cooling the refrigerator and thus decreases the energy consumption of the refrigerator. Defrosting in ambient temperature is also energy saving but can cause sanitary problems.

7. Why should oven racks not be covered with foil?

Energy consumption for producing aluminium foil is high. The foil can reduce the air flow inside the oven and thus increase the cooking time.

8. Why is cooking by solar cookers not mentioned in the best practices?

Cooking with solar cookers is time intensive and not suitable for all kinds of dishes. Solar cookers that are available in the market need direct solar radiation and have to be handled with care in order to avoid burnings.

9. Shall metal grease plates under burners be lined with aluminium foil?

Lining metal grease plates under gas burners helps to reflect the heat to the bottom of the cookware, but energy consumption for the production of aluminium foil is high. Keep grease plates under gas burners clean to ensure proper reflection of heat.

10. What is the appropriate size of the gas flame?

The gas flame should touch the bottom of the pot only. If the flame is visible all around the bottom of the pot, it is too large.

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