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# Fridge guide: The right temperature

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Refrigerating and freezing groceries

**LIEBHERR**

Refrigeration and freezing



BioFresh 0°C

## Cool right – enjoy to the max.

As Johann Wolfgang von Goethe once put it, “No pleasure is temporary, for the impression it leaves behind is lasting.” New technologies ensure long-lasting enjoyment, where food stays flavoursome, full of vitamins and appealing to the eye for longer. Whether for cooling, freezing or stocking up – the decisive factor is the interaction of constant temperatures and a humidity level that is adapted to the foods.



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## The right temperature for every food.

The right combination of humidity and temperature is the key to long storage while retaining nutrients. But different foods have different requirements. Good hams cure in dry mountain air, mangos grow in places with high humidity, and cheese develops its aroma in cool caverns.

## BioFresh options at a glance.

BioFresh offers the optimal conditions for every type of food with its versatile, adjustable drawers. Read [here](#) which temperature and BioFresh option suits which food best.

### Meat and dairy products

Meat is quite demanding when it comes to temperature and humidity. The BioFresh Meat & Dairy safe offers the ideal conditions. Low humidity and a temperature just above zero significantly slow the formation of micro-organisms and ensure a longer storage life. And the conditions for milk, cheese and yoghurt are perfect.



### Fruit and vegetables

The high water content of fruit and vegetables requires storage conditions with high humidity. The BioFresh Fruit & Vegetable safe creates the optimum climate and ensures a constant temperature of just above 0 °C with precise electronics. The ideal storage conditions not only prevent the food from freezing, they also protect it from drying out and preserve the valuable vitamins as far as possible.



### Fish

Fish and seafood are stored on ice at the fishmonger – and for good reason, because their storage temperature is ideally at freezing point. When set to 0 °, the BioFresh safe offers the ideal conditions for storing fish. Eel, salmon and perch last even longer with BioFresh Professional with the Fish & Seafood safe. You can set the temperature in this climate zone to exactly -2 °C thanks to independent temperature control. Combined with the Meat & Dairy safe, fish stays fresher for considerably longer.





## Freezing the right way – innovative technology.

Freezing foods not only increases its storage life: The quicker and fresher the goods are frozen, the more vitamins and minerals are retained. This is why fish is frozen directly after being caught, for example. The “shock freezing” process keeps fish much fresher than fish sold at the counter in the supermarket after long transport routes, even after it is thawed. Incidentally: unlike freezing, thawing out should be done slowly and in the fridge for best results. Read more here about innovative freezing options.



### **FrostSafe: Maintains the cold in the freezer compartment.**

Cold escapes every time the freezer is opened. This not only increases the energy consumption. It leads to temperature fluctuations and negatively affects the quality of your foods. This is where drawers can be of assistance. Thanks to extra-high drawers that are closed all around, significantly less cold escapes from the FrostSafe than from conventional freezer compartments.

### **SuperFrost: Freezing made easy.**

The automatic SuperFrost function is an easy and energy-saving way to freeze groceries. It quickly lowers the temperature to -32 °C and thus creates the cold reserve needed for to preserve vitamins when freezing food. As soon as the freezing process is completed, the automatic SuperFrost system returns to normal mode and thus helps save electricity.

### **DuoCooling: The perfect combination.**

With DuoCooling technology, the temperature of fridge-freezer combinations can be set and controlled precisely and independently in the refrigerator and freezer compartments. This function is found in appliances in which the refrigerator and freezer sections have their own controls for temperature regulation. DuoCooling also stops smells from stored food passing from the freezer compartment to the refrigerator compartment and vice versa. This also prevents the food from drying out.

### How to freeze holiday leftovers the right way.

Holidays are times when families get together and cook something big. But what to do with the leftovers? One option is to freeze them. Find out how to freeze soups, meat, sauces, and stews properly and what you should keep in mind when thawing them out.

#### Prepare the leftovers correctly.

- Meat: allow to cool, divide into portions.
- Vegetables: clean, wash, cut to size, blanch them and allow to cool.
- Fruit: wash, skin, de-seed, de-stem, or peel and freeze them with or without sugar solution.

#### Packaging the right amounts.

- Fruit and vegetables: no more than 1 kg per package
- Meat: no more than 3 kg per package
- Prepared food: no more than 1 kg per package

## Pack foodstuff properly.

Solid foods such as meat, vegetables, bread or baked goods can be defrosted or cooked in the microwave, but only in suitable packaging or containers. Put liquid and soft foods such as juices, soups and soft fruit into solid containers which are microwaveable.



### Freezing checklist: Overview of foods

Foods	Preparation	Length of storage in freezer compartment
Casseroles	Frozen raw or cooked in a container, remove from container and wrap in film	2-3 months
Roasts	Freeze whole or in slices, place between layers of foil or film	3 months
Stews	Only cook slightly, freeze portions in solid containers or bags which can withstand boiling	3 months
Goose/duck	Remove unwanted parts, make into portions and package	2-4 months
Cubed meats	Package into portions of no more than 3 kg	3-6 months
Rabbit	Remove unwanted parts, package either whole or cut into pieces	8 months
Whole hams	Package into portions of no more than 3 kg	2-3 months
Dumplings	Fully cook and put into solid containers or bags for boiling	3 months
Beef strips	Package no more than 6-8 pieces flat, place foil/film between layers	9-12 months
Red cabbage	Well suited for freezing	8-10 months
Pork	Lean meat can be stored longer than fatty meat. Package pieces in portions of no more than 3 kg	4-7 months
Soups	Pre-freeze low-fat soups in containers if possible, then wrap in foil	4-6 months



## Thawing made easy.

As a rule, condensation forms in the coolest spots. You are sure to be familiar with the situation when water condenses on the inside of the windows in your home. This is because it is usually the coolest place in the home. In the freezer, water condenses in exactly the same way on the evaporator – a system of pipes through which coolant flows. In older appliances the evaporator pipes are below the drawers in the freezer compartment. This leads to the formation of ice around the aluminium base with the evaporator pipes: Defrosting is required.



## Why is defrosting necessary?

First of all you have to ask why you should defrost a freezer in the first place. Humidity gets into the appliance through the groceries themselves and through regular opening of the door. This humidity then accumulates in the form of ice in the interior of the freezer and inhibits easy sliding of the drawers. What's more, this ice formation increases the amount of energy needed to maintain the desired temperature in the long run. This increases power consumption.

### How often should you defrost your freezer?

It is recommended to defrost the freezer once or twice a year to prevent the build up of ice and to keep energy consumption as low as possible. Depending on the humidity of the ambient air where the appliance is located, it might need to be defrosted more often. Regular defrosting also improves the performance of the freezer in the long term.

### What to do with the frozen foods when defrosting

Before defrosting, you have to clear out the freezer. Wrap frozen food in newspaper and store it in a cool place. You can also store the frozen food together with cold storage accumulators in the removed drawers in the meantime. If you have an appliance with the SuperFrost function, activate this about 24 hours before you start the defrosting process. This will lower the temperature from the usual -18 °C to the lowest possible temperature. This can slow down the thawing of frozen foods.

### How to speed up the defrosting process.

We recommended switching off the appliance and disconnecting the power before defrosting. To initiate defrosting, open the appliance door to let the ice melt slowly. You can speed things up by putting a bowl of hot water in the appliance and closing the door. This causes the ice to melt faster and you can remove ice deposits which have accumulated on the side walls easier. Catch the resulting water and remaining ice with a sponge or a towel. This way, you don't get any water on the floor.

### NoFrost: No more defrosting

If you are not in the mood for time-consuming defrosting, we recommend an appliance with NoFrost technology. Annoying defrosting is a thing of the past. NoFrost technology freezes frozen food with cooled re-circulated air and the air humidity is diverted. This keeps the freezer compartment ice-free at all times, and food is no longer covered in frost.

The NoFrost function automatically does the job so that you never have to. As soon as the evaporator builds up a layer of ice, a sensor initiates the defrosting process. Additionally, the fan switches off, the evaporator tubes are heated and the ice layer melts without increasing the temperature in the freezer compartment. This keeps the appliance ice-free and its energy consumption constant. And you never have to defrost again.



## Climate classes: What do they mean?

To ensure that a refrigerator or freezer always runs optimally everywhere, there is the indication of the climate class. This can be found on the type plate and provides information on the ambient temperatures under which a device can ideally be used.

Depending on their classification, appliances are best suited for various ambient temperature ranges. The classification/identification label shows you, the customer, the ambient temperature range in which the required storage temperatures are maintained.

Some people have a second appliance or freezer on the patio or in the garage. Of course, in these places it can get colder than +10 °C. For this reason the information regarding climate class is very important. This can have a negative impact on the function and life of the your appliance and also the energy efficiency.

If you have an appliance designed for the SN-T climate class, you should not operate it at ambient temperatures below +10 °C. This is because the viscosity of the oil in the compressor is negatively affected. It becomes thick and the optimal flow of oil is no longer guaranteed which, in turn, can damage the compressor.

According to DIN EN ISO 15502, the following classes are therefore mandatory for all refrigerators and freezers:

<b>SN</b>	Subnormal	Suitable for ambient temperatures from 10 °C to 32 °C
<b>N</b>	Normal	Suitable for ambient temperatures from 16 °C to 32 °C
<b>ST</b>	Subtropical	Suitable for ambient temperatures from 16 °C to 38 °C
<b>T</b>	Tropical	Suitable for ambient temperatures from 16 °C to 43 °C

## About us.

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**Top quality refrigerator and freezer appliances as well as digital solutions for more convenience in everyday life.**

Since 1954 Liebherr has developed and produced refrigerator and freezer appliances for a wide variety of customer demands. Our product portfolio extends from fridge-freezers to traditional freezers through to the very latest fully-integrated appliances. Liebherr even has the right appliances for wine and cigar lovers. Alongside a wide array of fridges and freezers for home use, Liebherr also offers top-quality fridges and freezers for professional use. Whether for bakeries and confectioners, laboratories, food retailers, the beverage and frozen food industry or in the hotel and hospitality sector – Liebherr refrigerators and freezers offer the perfect solution for individual storage requirements. Almost all freestanding and fully integrated appliances can be integrated into existing SmartHome networks.