

The background of the entire page is a photograph of a restaurant setting. In the foreground, a dark-colored plate holds several skewers of golden-brown, fried poultry, garnished with fresh green herbs. In the background, other plates of food and a glass of a light-colored beverage are visible, all slightly out of focus.

# FROZEN IS THE NEW FRESH!

**FOOD SAFETY GUIDELINES  
FOR FROZEN POULTRY  
IN SMALL RESTAURANTS & EATERIES**

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# Benefits of Frozen Poultry to Restaurants & Eateries

Freezing is a method of preservation of food. There are several advantages for freezing raw poultry either as a whole or in the form of cuts.

Frozen poultry is properly dressed and cleaned in machines before freezing, therefore there are following advantages of using frozen poultry.

- It takes minimal preparation because poultry meat is already dressed and cleaned.
- There is no concern of wastage because quality of the meat is retained longer, as compared to freezing cooked meat or poultry,
- The cost of food in restaurants can be properly controlled and decided in advance. This helps in proper budgeting in case of bulk orders to price fluctuation in wet markets.
- Customer satisfaction can be high because stocking up on favorite cuts is possible.
- Restaurants can ensure faster and better customer service because of pre-portioned and trimmed poultry meats save preparation time later, and
- Frozen meat provides flexibility because food order on-hand can be adjusted for last minute changes in order and according to meal preparation.
- Freezing reduces enzyme activity in meat and poultry and stops the growth of bacteria and molds. It does not tenderize nor sterilize meat.
- Restaurant owners can decide how much poultry to buy depending on available freezer space, customer needs, budget, and freezer capacity.
- Quality of frozen poultry is pretested and food safety is ensured at the time of production and freezing in the factory.
- All products are thoroughly tested by experts to ensure safe and wholesome poultry products in the packaged form.
- All information about the product is available on the label.



## Why are poultry products important food items?

The relationship between the consumption of meat and health is multifaceted, and it needs to be analyzed in detail, with specific attention to the relevant differences that characterize the effects of the different meat types, as yet considered by only limited literature.

A variable but moderate energy content, highly digestible proteins (with low levels of collagen) of good nutritional quality, unsaturated lipids (mainly found in the skin and easily removed), B-group vitamins (mainly thiamin, vitamin B6, and pantothenic acid), and minerals (like iron, zinc, and copper) make poultry meat a valuable food.

Epidemiological studies performed across the world, in highly diverse populations with different food preferences and nutritional habits, provide solid information on the association between poultry consumption, within a balanced diet, and good health.

Consumption of poultry meat, as part of a vegetable-rich diet, is associated with a risk reduction of developing overweight and obesity, cardiovascular diseases, and type 2 diabetes mellitus.

White meat (and poultry in particular) is considered moderately protective or neutral on cancer risk.

The relevance of poultry meat for humans also has been recognized by the UN Food and Agricultural Organization (FAO), which considers this widely available, relatively inexpensive food to be particularly useful in developing countries, where it can help to meet shortfalls in essential nutrients.

Poultry meat consumption also contributes to the overall quality of the diet in specific ages and conditions (before conception, during pregnancy up to the end of breastfeeding, during growth, and in the geriatric age) and is suitable for those who have an increased need for calorie and protein compared to the general population.

## How Safe Poultry Products are Delivered?

### Inspection of Poultry

All branded poultry products found in retail stores are either inspected by Food Safety authorities or by authorised inspection agencies based on predefined standards as per the approved procedure.

In good factories, each poultry and its internal organs are inspected for various signs of disease. All poultry birds are inspected for wholesomeness to ensure that all the products are produced in compliance with specified regulations. Regulations prohibit the processing of carcasses and parts of carcasses with evidence of disease.

This inspection is mandatory so that only safe poultry birds are used for processing and packaging for the consumers.



### Grading of Poultry

It is important to note that food safety inspection is mandatory, but the grading of the market needs is voluntary. Poultry is graded according to the quality regulations and standards of the market where products are sold.

### Poultry Regulations in India

According to the Food Safety and Standards Authority of India, Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011

**FRESH OR CHILLED OR FROZEN POULTRY MEAT:**

- (1) The standards specified in this clause shall apply to Fresh or Chilled or Frozen Poultry Meat including poultry whole carcasses, pieces, cuts or edible offal that have been packed in any suitable packaging material.
- (2) Under this clause -
  - (a) "poultry meat" means the edible portion of poultry birds (poultry, duck, turkey, geese, guinea fowl, Japanese quail);
  - (b) "fresh poultry meat" means poultry meat that has not been treated in any way to ensure its preservation;
  - (c) "chilled poultry meat" means fresh poultry meat subjected to chilling in such a way that the product attains a temperature of 0°C to 4 °C;
  - (d) "frozen poultry meat" means chilled poultry meat subjected to freezing in the appropriate equipment in such a way that the product attains a temperature of -18° C or lower;
  - (e) "poultry edible offal" means edible by-products derived from slaughtered poultry birds which include gizzard, liver and heart.
- (3) Dressed chicken shall be of the following three types, namely:-
  - (a) fresh or chilled or frozen carcasses
  - (b) fresh or chilled or frozen cuts; bone-in or boneless, true to its type;
  - (c) fresh or chilled or frozen edible offals.
- (4) Boneless meat shall have moisture content between 60% to 74.86%, protein content between 19.50% to 23.20% and fat content between 3.50% to 18%.
- (5) Poultry meat shall be stored at 4°C for short term storage and at -18°C or below for long term storage.
- (6) The chilled poultry meat shall be consumed within two to four days under normal chilling conditions of storage and frozen poultry meat shall be consumed within twelve months.

All the poultry products listed in Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, shall comply with the following requirements:

- (a) Notifications or advisories issued under the Drugs and Cosmetics Rules, 1945 as well as by the Department of Animal Husbandry, Dairying and Fisheries concerning use in or consumption of veterinary drugs (antibiotics and growth promoters) by food-producing animals or poultry

birds must be complied with by the producers or marketers of meat and poultry products.

- (b) Use of genetically modified techniques is prohibited for the production of meat of animals or poultry birds.
- (c) Meat producing animals except poultry shall not be fed with feed containing meat or bone meal including internal organs, blood meal and tissues of bovine or porcine origin materials except milk and milk products.
- (d) Production, slaughtering or processing of animals for the production of meat of porcine origin in the same production facilities where animals of bovine or ovine or caprine origin are produced or slaughtered or processed is prohibited.
- (e) Where eligible meat products are intended to be imported, there should be appropriate inspection and certification procedures in place to ensure all the above compliances before granting of market access.”;

**Frozen Poultry for Restaurants**

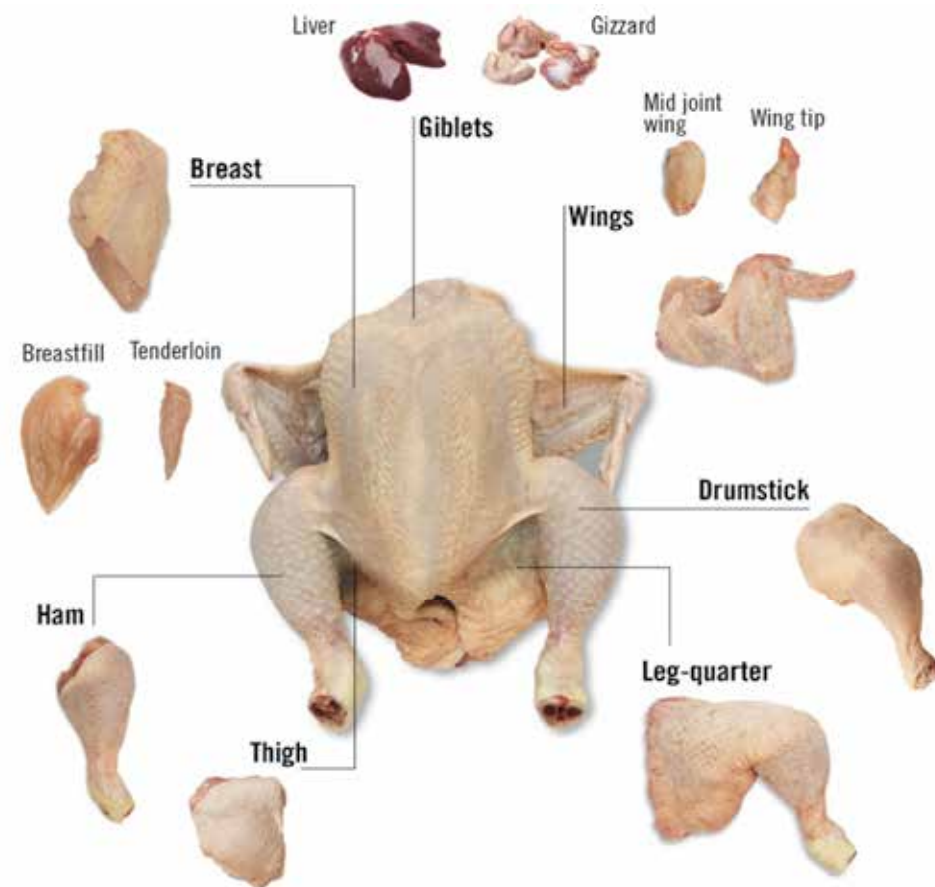
There are many options for frozen poultry products. The following options are available for restaurants.

1. Frozen Poultry
2. Frozen Poultry Cuts
3. Frozen Stuffed Poultry
4. Frozen Ready-to-cook poultry products

**Type of Cuts**

As per the need of the customer to suit the market demand.

Preparations various cuts are available.



## How to Buy Frozen Poultry?

It is important to keep the following facts in mind before you buy frozen poultry.

### Buying Frozen Poultry

Nowadays people also buy poultry from supermarkets or departmental stores. It is common knowledge that poultry is kept cold during distribution to retail stores to prevent the growth of bacteria and to increase its shelf life.

Poultry should feel cold to the touch when purchased at the store. It is avoidable to put packages of poultry in disposable plastic bags to contain any leakage that could cross-contaminate other food items or fresh produce in the grocery cart or shopping bags.



### While shopping frozen poultry

While shopping for frozen poultry, it is advisable, in your shopping cart, to always keep raw meat, frozen poultry, seafood, and eggs separated from other foods.

Always place packages of raw meat, frozen poultry, and seafood in separate plastic bags, if available. When you check out at the shopping counter, always place raw meat, frozen poultry, and seafood in separate bags from other foods.

At restaurants and eateries, place raw meat, poultry, and seafood in containers or sealed plastic bags.

Keep the frozen poultry in freeze, if you're not planning to use them within a few days. Even in the fridge keep foods apart to avoid cross-contamination.





### Handling Frozen Poultry at Restaurant

At a restaurant, immediately place poultry in a refrigerator that maintains a temperature of 4°C or below. Use it within 1 or 2 days, or freeze it at -18°C. If kept frozen continuously, it will be safe indefinitely. The quality of the poultry may diminish the longer it is frozen.

Poultry may be frozen in its original packaging or repackaged. If you plan to freeze poultry longer than 2 months, overwrap the porous store plastic packages with airtight heavy-duty foil, plastic wrap, or freezer paper, or place the package inside a freezer bag.

Use these materials or airtight freezer containers to freeze the poultry from opened packages or repackage family packs of poultry into smaller amounts.

Proper wrapping prevents "freezer burn," which appears as grayish-brown leathery spots and is caused by air reaching the surface of the food. Cut freezer-burned portions away either before or after cooking the poultry. Heavily freezer-burned products may have to be discarded because they may be too dry or tasteless.

**Ready-Prepared poultry:** When purchasing fully cooked rotisserie or fast food poultry, be sure to eat or refrigerate it within 2 hours. If Poultry is hot or warm at the time of purchase and won't be used within 2 hours, cut it into several pieces and refrigerate in shallow, covered containers. Eat within 3 to 4 days, either cold or reheated to 85°F. It is safe to freeze ready-prepared poultry. For best quality, flavour, and texture, use it within 4 months.

### Important Food Safety Steps for every Restaurant and Eatery

Safe poultry handling and proper cooking will help keep you and your customers safe from bacteria. Following the four simple steps - clean, separate, cook and, chill – given below can help keep your customers safe from food poisoning at restaurants.

Always follow the following four food safety steps of the Food Safety Campaign.

- 1. Always Clean:** Wash hands and surfaces often.
- 2. Always Separate:** Separate raw meats and poultry from other foods.
- 3. Always Cook:** Cook all poultry to 80°C.
- 4. Always Chill:** Refrigerate promptly.



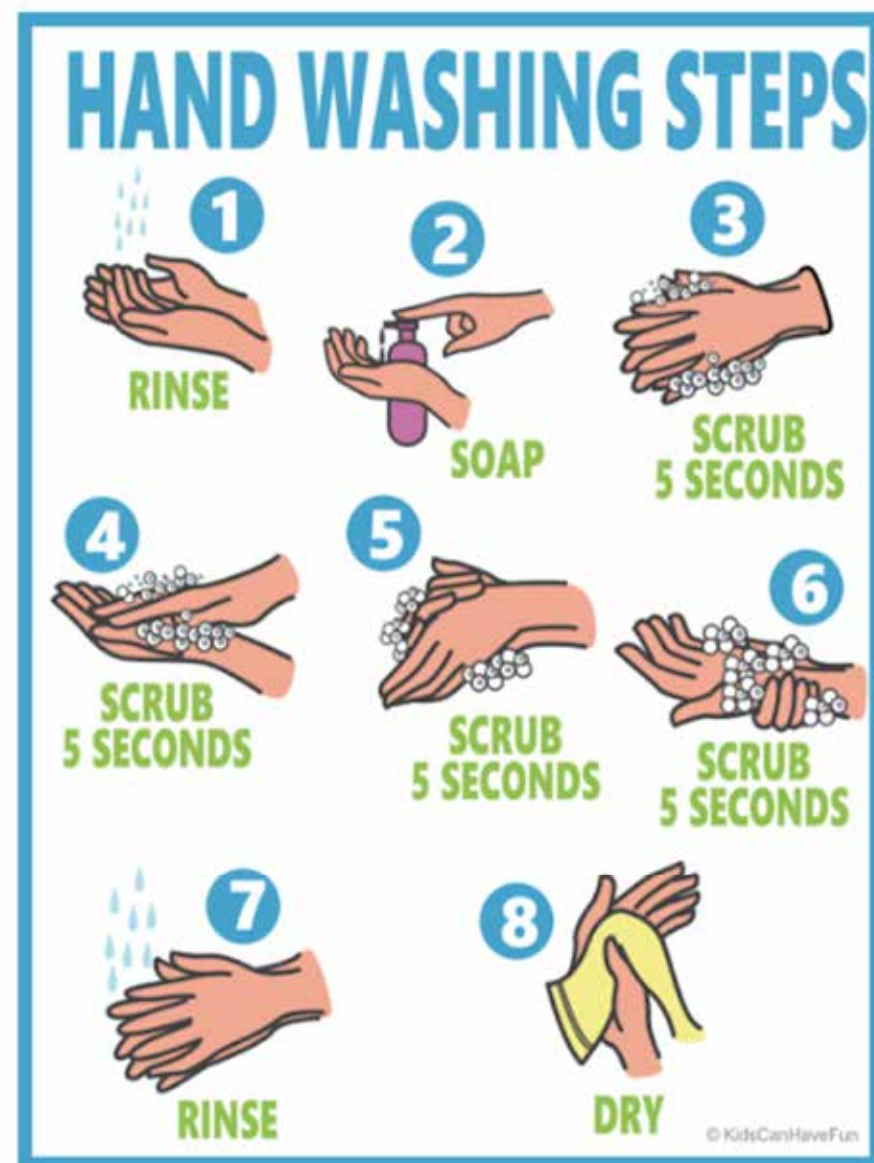
### Always Clean and Wash Hands, Utensils, and Surfaces Often

Illness-causing microbes like bacteria and pathogens can survive in many places including contact surfaces around your kitchen, including your food, hands, utensils, and cutting boards.



**Always wash your hands the right way:**

Use plain soap and water—avoid the antibacterial soap—and scrub the backs of your hands, between your fingers, and under your nails for at least 20 seconds. The best way to ensure 20 seconds is to remember the name of your family members slowly and thank God for allowing you to serve the people.

**Always Rinse hands properly, then dry with a clean towel:**

Wash your hands often, especially during these key times when contamination or germs can spread. The handwashing is to be done just before and after the following activities:

- Before, during, and after preparing food
- After handling raw meat, poultry, seafood, or their juices, or uncooked eggs
- Before eating
- After using the toilet
- After touching garbage
- Before and after caring for someone who is sick
- Before and after treating a cut or wound
- After blowing your nose, coughing, or sneezing

**Wash surfaces and utensils after each use:**

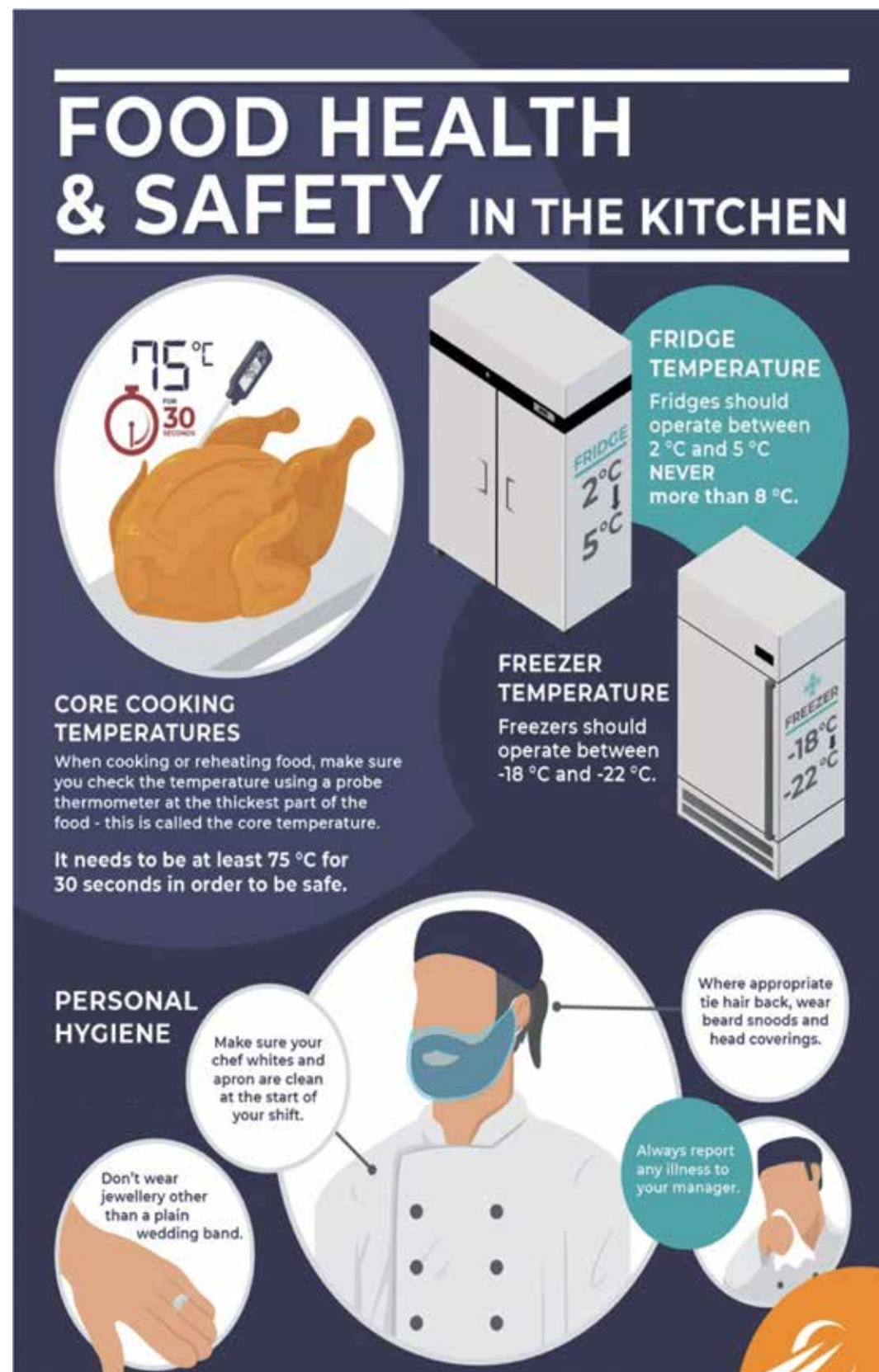
- Wash cutting boards, dishes, utensils, and countertops with hot, soapy water especially after they've held raw meat, poultry, seafood, or eggs.
- Wash dishcloths often in the hot cycle of your washing machine.

**Wash fruits and vegetables, but not meat, poultry, or eggs:**

- Don't wash meat, poultry, eggs, or bagged produce marked "pre-washed".
- Fruits and vegetables can be a source of cross contamination. therefore, cut away any damaged or bruised areas, then rinse fruits and vegetables under running water without soap, bleach, or commercial produce washes.
- The scrub firm produces melons or cucumbers with a clean produce brush.
- Dry produce with a paper towel or clean cloth towel.

**Always Keep poultry separate to avoid Cross Contaminate**

- Use separate cutting boards and plates for produce, meat, poultry, seafood, and eggs:
- Use one cutting board for fresh produce or other foods that won't be cooked before they're eaten, and another for raw meat, poultry, or seafood. Replace them when they are worn.
- Use separate plates and utensils for cooked and raw foods.
- Wash thoroughly all plates, utensils, and cutting boards that touched raw meat, poultry, seafood, or eggs before using them again. Use hot, soapy water.
- Keep certain types of food separate.



### Always Cook to the Right Temperature

According to food science, food is safely cooked when the internal temperature is high enough to kill bacteria and pathogens that can make you customers sick.

Always use a food thermometer to be sure your food is safe. When you think your food is done, place the food thermometer in the thickest part of the food, making sure not to touch bone, fat, or gristle.

Please refer to the minimum Cooking Temperatures Chart, as given in annexure, to be sure that foods have reached a safe temperature. It is recommended to keep food hot i.e. 60°C or above after cooking.

If you're not serving food right after cooking, keep it out of the temperature danger zone by using a heat source like a chafing dish, warming tray, or slow cooker.

### Ensure to Microwave food thoroughly (at 75°C or above):

Chef should always read package directions for cooking and follow them exactly to make sure food is thoroughly cooked.

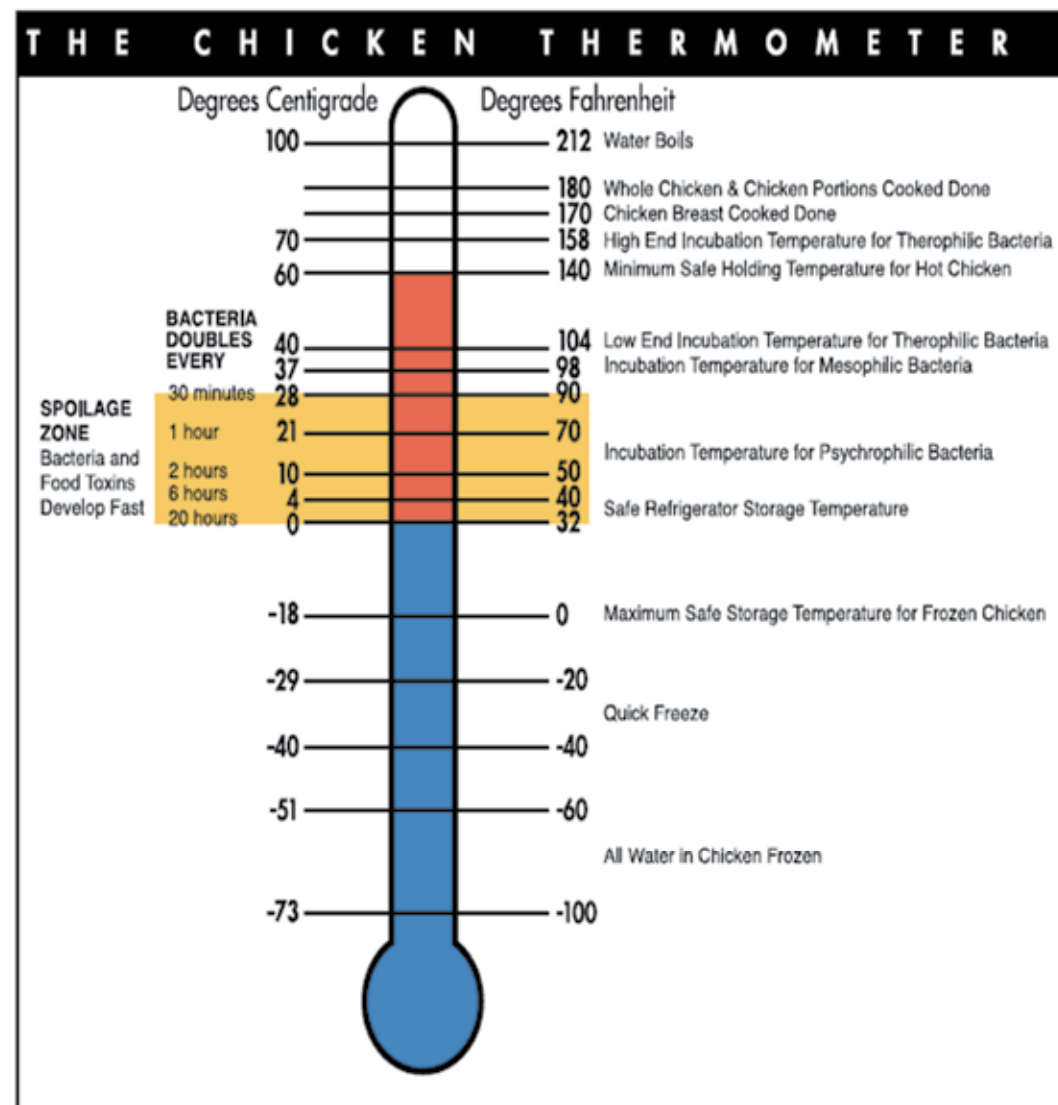
If the food label says, "Let stand for X minutes after cooking," follow the directions — letting microwaved food sit for a few minutes enables colder areas to absorb heat from hotter areas.

It is advisable to stir food in the middle of heating. Always follow package directions for commercially prepared frozen food; some are not designed to be stirred while heating.

Follow special guidelines for barbecues and special preparations to ensure safe food preparation.

### Always Refrigerate and Freeze Food Properly

- Refrigerate perishable foods within 2 hours.
- Bacteria that cause food poisoning to multiply quickest between 4°C and 60°C.
- Your refrigerator should be set to 4°C or below and your freezer to -18°C or below. Use an appliance thermometer to be sure of this.



Never leave perishable foods out of refrigeration or at room temperature for more than 2 hours. If the food is exposed to temperatures above 25°C (like a hot car or summer picnic), refrigerate it within 1 hour.

Leftovers should be placed in shallow containers and refrigerated promptly to allow quick cooling.

Never thaw or marinate foods on the counter. The safest way to thaw or marinate meat, poultry, and seafood is in the refrigerator.

Freezing does not destroy harmful germs, but it does keep food safe until you can cook it.

Know when to throw out food by checking our Safe Storage Times chart. Be sure you throw food out before harmful bacteria grow.

### Rinsing or Soaking Poultry Needs Careful Handling:

Washing raw poultry before cooking is not recommended because bacteria in raw meat and poultry juices can spread to other foods, utensils, and surfaces. This is called cross-contamination.

Many studies have shown how easily bacteria can spread when surfaces are not effectively cleaned and sanitized after washing poultry.

Rinsing or soaking poultry does not destroy bacteria.

Only cooking will destroy any bacteria that might be present on fresh poultry.

### The liquid in the Package of Frozen Poultry

Many people think the pink liquid in packaged fresh poultry is blood; however, it is mostly water that was absorbed by the poultry during the chilling process.

Blood is removed from poultry during slaughter and only a small amount remains in the muscle tissue.

An improperly bled poultry has cherry red skin and is discarded by the inspection personnel at the plant.

## Storage requirements of Frozen Poultry

Product dates aren't a guide for the safe use of a product or how long the consumer can store the food and still use it at top quality. Instead, follow these tips:

- Purchase the product before the date expires.
- Follow handling recommendations on the product.
- Keep poultry in its package until it's ready to be used.
- Freeze poultry in its original packaging; overwrap or re-wrap it according to directions given on the label.

## How to Handle Poultry Safely?

Most people have experience of handling fresh poultry.

### Personal Hygiene of the Restaurant Staff

All staff members must ensure personal hygiene at all the time in restaurants.



## Hand washing

Hand washing guidelines of WHO should be followed:

Hand scrubbing

**RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED**

**Duration of the entire procedure: 20-30 seconds**

**1a**  **1b** 

Apply a palmful of the product in a cupped hand, covering all surfaces;

**2** 

Rub hands palm to palm;

**3**  **4**  **5** 

Right palm over left dorsum with interlaced fingers and vice versa;

Palm to palm with fingers interlaced;

Backs of fingers to opposing palms with fingers interlocked;

**6**  **7**  **8** 

Rotational rubbing of left thumb clasped in right palm and vice versa;

Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

Once dry, your hands are safe.

**WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB**

**Duration of the entire procedure: 40-60 seconds**

**0**  **1**  **2** 

Wet hands with water;

Apply enough soap to cover all hand surfaces;

Rub hands palm to palm;

**3**  **4**  **5** 

Right palm over left dorsum with interlaced fingers and vice versa;

Palm to palm with fingers interlaced;

Backs of fingers to opposing palms with fingers interlocked;

**6**  **7**  **8** 

Rotational rubbing of left thumb clasped in right palm and vice versa;

Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

Rinse hands with water;

**9**  **10**  **11** 

Dry hands thoroughly with a single use towel;

Use towel to turn off faucet;

Your hands are now safe.

### Hand care

- Take care of your hands by regularly using a protective hand cream or lotion, at least daily.
- Do not routinely wash hands with soap and water immediately before or after using an alcohol-based handrub.
- Do not use hot water to rinse your hands.
- After handrubbing or handwashing, let your hands dry completely before putting on gloves.

### Please remember

- Do not wear artificial fingernails or extenders when in direct contact with patients.
- Keep natural nails short.

## Storage of Poultry for Cooking in Restaurant

How and how long one can store poultry is very important to know to keep their food safe. When handling poultry in frozen condition, always label it so you know how long it's been in your freezer.

### Storing in the refrigerator

- Whole poultry: 2-3 days
- poultry pieces: 2-3 days
- Cooked poultry: 3-4 days
- Ground poultry: 1-2 days

### Storing in the freezer

- Whole poultry: 12 months
- poultry pieces: 6 months
- Cooked poultry: 3 months
- Ground poultry: 3 months

## Safe Thawing Methods & Time Required for Frozen Poultry

Never thaw poultry at room temperature or on the counter, as it provides the ideal environment for bacteria growth, and be sure to cook thawed poultry **within 48 hours**.

According to Food safety experts, plan your poultry requirement and thaw your poultry according to your need to ensure freshness. There are three easy ways to thaw frozen poultry:

1. In the refrigerator,
2. In cold water, and
3. In the microwave.

**Caution:** Restaurant owners must ensure that cooks never thaw poultry on the counter or in any other locations.

### Thawing in the refrigerator

Thawing in the refrigerator is the safest method of preparing frozen poultry but it also takes the longest. Poultry in the refrigerator should be wrapped and placed on a large

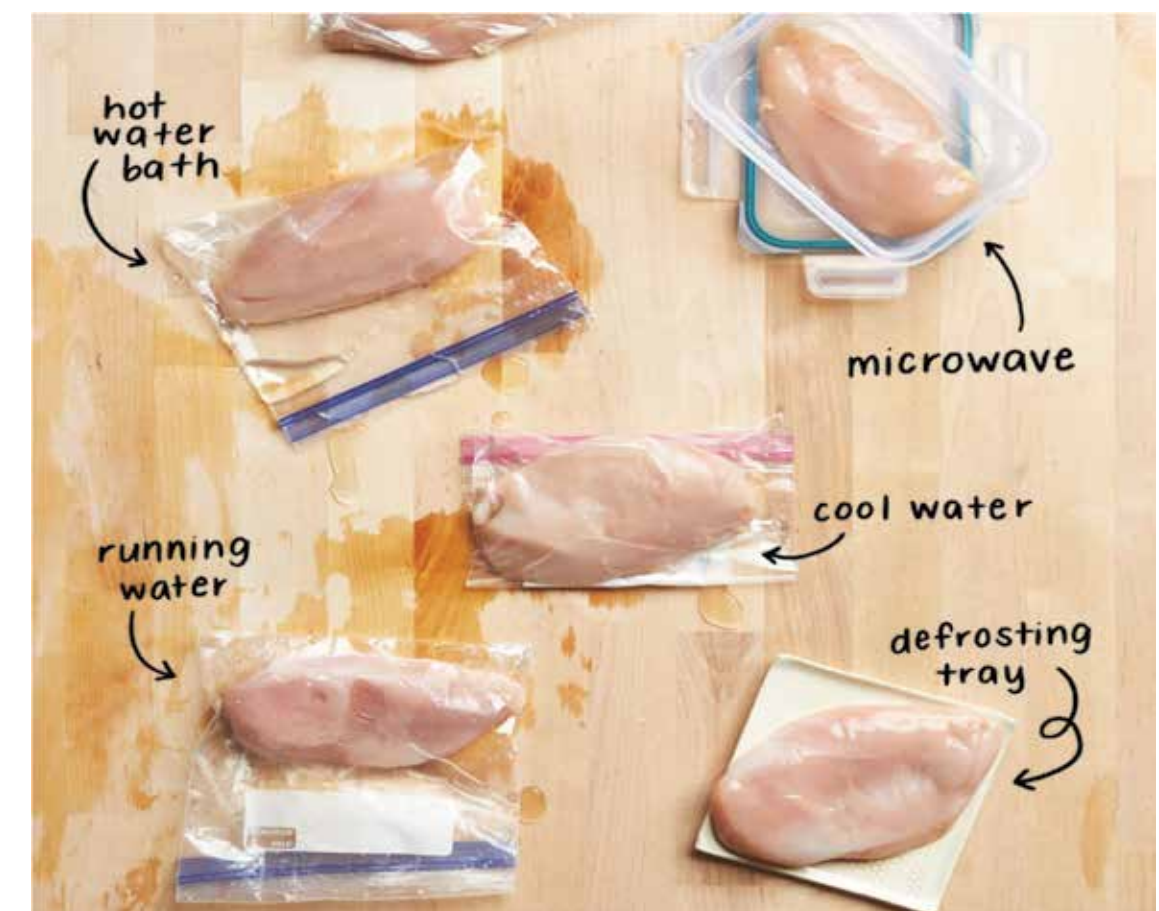
plate in the bottom of the fridge to avoid dripping on other food when thawing. For this method, you should plan on approximately 10 hours per kilogram of poultry.

It's best to plan for slow, safe thawing in the refrigerator. Boneless poultry breasts, bone-in parts, and whole poultry may take 1 to 2 days or longer to thaw.

Once the raw poultry thaws, it can be kept in the refrigerator for an additional day or two before cooking. During this time, if poultry thawed in the refrigerator is not used, it can safely be refrozen without cooking it first.

### Thawing in the Cold Water

Poultry may be thawed in cold water in its airtight packaging or a leak-proof bag. To thaw poultry faster, place it wrapped in a bowl of cold water in the sink. The water must be cold, as warm water can encourage bacteria growth. Additionally, the water must be changed every 30 minutes to maintain the temperature of the water. This method typically takes 2 hours per kilogram, but exercise caution when using this method. Make sure that the sink and the surrounding area you are thawing it is cleaned immediately with a mild bleach solution when you've finished.





### Thawing in the microwave

Though it can sometimes dry out the edges of poultry, when you're in a hurry and you're preparing poultry pieces, microwave thawing is the best way to go. When defrosting in a microwave, poultry should be loosely covered and the pieces turned, separated and rotated several times during thawing to ensure even penetration.

It's also important to defrost poultry on a low setting, otherwise, the outside may cook while the inside stays frozen. Most microwaves have a poultry defrost setting, so use that if you have it. If not, a general rule to use is about 10 – 15 minutes per kilogram or 5 minutes per pound. Be sure to check your poultry often to ensure that it is thawing evenly and not overcooking or drying out.



Poultry that was thawed in the microwave should be cooked immediately after thawing because some areas of the food may become warm and begin to cook during microwaving. Holding partially cooked food is not recommended because any bacteria present wouldn't have been destroyed. Foods defrosted in the microwave or by the cold-water method should be cooked before refreezing.

### How to cook poultry without thawing?

Do not cook frozen poultry in a slow cooker or the microwave; thaw it before cooking. However, poultry can be cooked from the frozen state in the oven or on the stove. The cooking time may be about 50 percent longer. Be sure that the poultry is cooked to a safe minimum internal temperature of 75 C to 80 C as measured with a food thermometer.

## How to Choose a Cutting Board?

1. Choosing the Right Material
2. Using Different Boards for Different Foods
3. Considering Other Factors

Cutting boards come in a variety of materials—including glass, plastic, wood, and bamboo—but not all of these materials are created equal. For you to select the best cutting board, you must first choose the right material. You may even want to select two different cutting boards to use for different foods. Besides, there are some other factors to consider, such as size, type of grain, and level of maintenance required. By reviewing all of these options, you can select the perfect cutting board for your kitchen.

### Choosing the Right Material

**Avoid glass:** Glass cutting boards are a popular choice because they look nice in your kitchen. However, glass-cutting boards have been shown to dull brand-new kitchen knives in as little as 10 strokes. If you happen to have a glass cutting board, use it as a serving platter or cheese tray instead. Other hard cutting board materials—like marble, granite, ceramic, and composite—can do similar damage to your knives, and should be avoided.

**Choose the right kind of plastic.** Plastic cutting boards can be a great option. They are affordable, easy to clean, and safe for knives. However, not all plastic boards are the same! Avoid slick or smooth plastic, as this can cause knives to slip.

- Acrylic plastic boards can do almost as much damage to your knives as glass.
- Plastic cutting boards made of polyethylene or polypropylene are the best choice.

**Opt for wood.** Wooden cutting boards are the classic choice. These are far and away from the most popular cutting boards for chefs and amateurs alike. Wooden cutting boards are lovely, they last a long time, and they are great for your knives. Wooden cutting boards are available in many types of wood, including oak, maple, and teak.

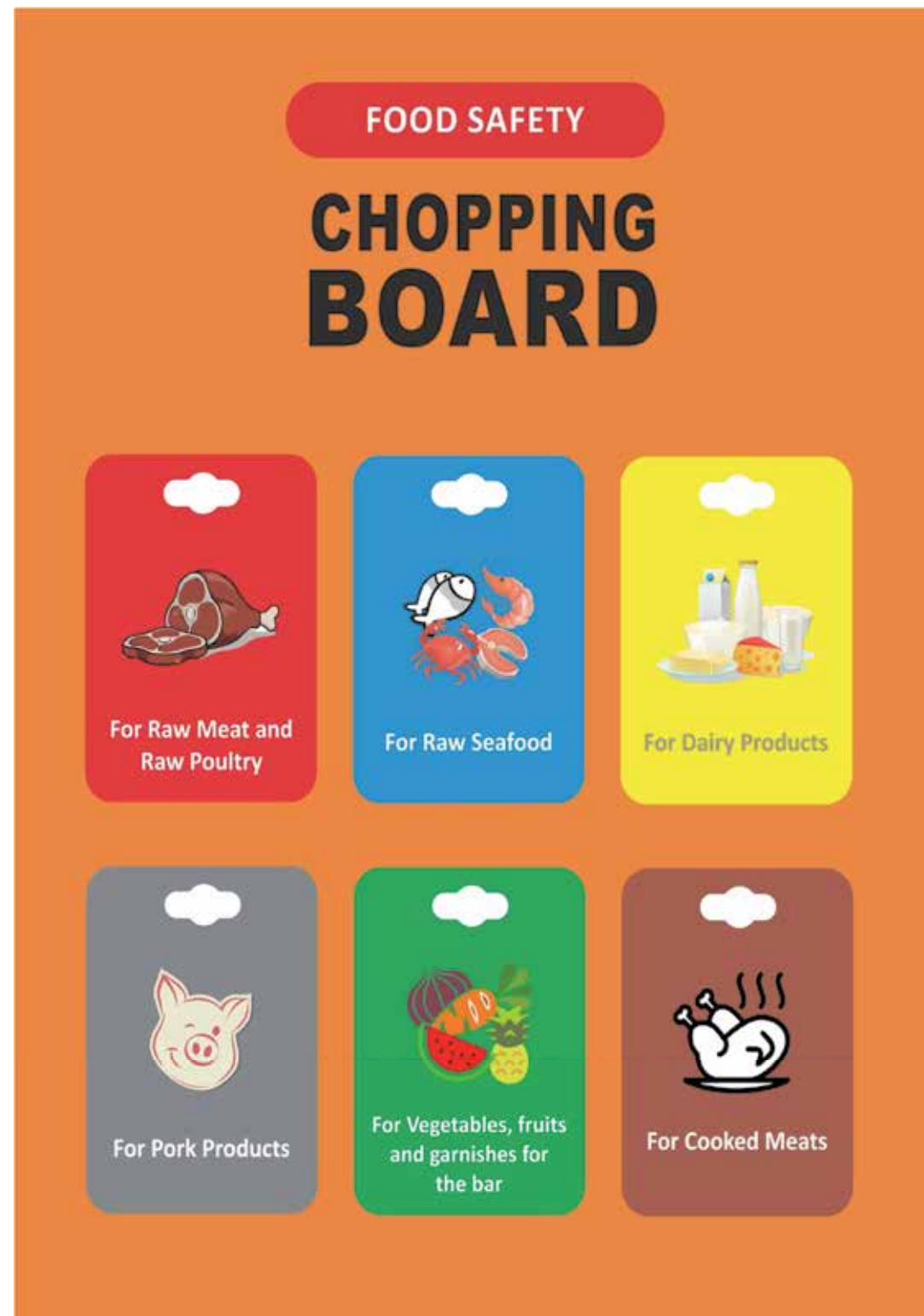
A teak is a great option because it absorbs very little liquid, so it will take longer for the board to wear out.

**Choose a bamboo board for sustainability:** Bamboo cutting boards are very similar to wood boards. They last a long time, they are wonderful for your knives, and they are lovely to have in your home. Additionally, bamboo boards are a sustainable, environmentally friendly choice, since bamboo is a fast-growing, highly renewable resource.

- Bamboo boards are lighter in weight than wood boards
- Bamboo boards don't need to be oiled as often as wood boards.



### Using Different Boards for Different Foods:



**Select two cutting boards:** Most chefs advocate keeping at least two cutting boards at home: one wood and one plastic. This enables you to keep raw protein away from fruits and vegetables and maintain a sanitary work environment.

**Use plastic boards for meat or fish.** Bacteria from raw meat are best kept away from your fruits and vegetables. As such, it is best to use a separate cutting board for these foods. Additionally, the oils from fish can sometimes seep into wood fibres and leave a lasting smell on your wood cutting boards. Consider keeping a plastic cutting board at home to use for meat and fish.

A thin plastic cutting board can be placed on top of the wood board for ease of use.

**Select wood or bamboo for produce:** Wood (or bamboo) cutting boards are the best choice for fruits and vegetables. These boards are built to last, and will also help extend the life of your knives.

Cooked meats are also safe to carve on your wood (or bamboo) cutting board.

### Considering Other Factors

**Avoid cutting boards with "feet.":** You want to get the most out of your cutting board, and this means being about to use both sides. Stay away from cutting boards that have "feet" on the bottom, or are otherwise not reversible. By using both sides, you essentially get two cutting boards in one. [7]

**Select the right size:** Experts chefs suggest choosing a cutting board that is 15 by 20 inches (38 to 50 cm) in size. This gives you plenty of room to work safely and effectively as you cut.

**Choose between end-grain and edge-grain:** When opting for a wood or bamboo cutting board, you will have the opportunity to choose end-grain (meaning the board is grafted from many small pieces of wood in a checkerboard pattern) or edge-grain (meaning the strips of wood are laid side-by-side).

- In bamboo boards, edge-grain boards are sturdier and have been shown to last longer.
- In wooden boards, end-grain boards are a bit easier on knives.
- Ultimately, choosing end-grain or edge-grain will come down to the look you want for your kitchen.

**Consider the level of maintenance required:** By and large, wood cutting boards are the best choice for durability, beauty, and protection of your knives (with bamboo as a close second). However, wood (or bamboo) cutting boards can be cumbersome to wash, and they need to be oiled regularly. Plastic cutting boards, on the other hand, are often dishwasher safe and require no additional maintenance. If you do not have the time to regularly maintain your cutting board, plastic may be a better choice for you.

## Proper Cleaning of Chopping Boards - Critical Food Safety Point

Chopping poultry meat is a common chore that every non-vegetarian restaurant has to do. While you might be meticulous and scrub your kitchen counter and your utensils clean, there is one small detail that always seems to get missed on your cutting board.

This board that is either made of wood or plastic is often used to cut everything from vegetables to meat and often they tend to leave a stain or small pieces that collect in its crevices. While you might think that you clean your cutting board thoroughly, the small crevices created on the board due to using a sharp knife is a breeding ground for various harmful bacteria. When food and meat get stuck in these crevices they tend to spoil and can harbour dangerous organisms which may lead to food poisonings like *E.coli*, *Salmonella* and *staphylococcus* bacteria. These bacteria are bad for your health and can cause various illnesses like food poisoning, vomiting, diarrhoea, etc. So, to help to get rid of all the residue from your cutting board, here are some simple remedies that you can use before you start our meal preparation.

**Use Vinegar to Clean the chopping board:** Poultry is rich in protein and fat. Acid is a good cleaning agent. White vinegar is a potent anti-bacterial and bleaching agent. Not only is it very effective against harmful bacteria like *E.coli*, *Salmonella*, and *Staphylococcus*, but it is also very effective in getting rid of stubborn stains. To use this tip, wipe down your cutting board with vinegar before the start of the food preparation and at the end of every day. Leave it for about half an hour and then wash it off using a sponge to scrub off the debris.

**Use of Baking soda and white vinegar:** This remedy is very useful against stubborn stains and smells. Ensuring the complete removal of stains, this mixture is great to effectively clean your cutting board so it sparkles. All you need to do is spread some baking soda all over your board and spray undiluted white vinegar over it. Now, allow it to bubble and foam making sure you spread the mixture all over the board. Remember this mixture can be corrosive on the skin of your hands, so use a sponge to spread the mixture. Next, allow it to sit for about fifteen to twenty minutes, and wipe off the mixture with a sponge. Remember to rinse off the excess with water.

**Lemons:** If you do not have vinegar, lemons are a very handy disinfecting tool. They not only get rid of foul odour but also help bleach the board back to its normal colour. To use this remedy all you need to do is rub the surface of your cutting board with half a lemon and rub the board with the inner side of the lemon peel. Use the skin of the lemon as a natural scrub and allow the lemon juice to stay on the board for about half-an-hour. Next, rinse off the juice with normal water.

**Or, Salt and lemon juice:** This tip is especially effective on deep-seated dirt and can get rid of even the most stubborn stains on your cutting board. All you need is some salt and half a lemon. Sprinkle some salt on your cutting board (the coarser the better)

and use the lemon as a scrub to spread the salt evenly. As you scrub with the lemon press it down gently to release some of its juices. Make sure the mixture is spread well all over the board. Now allow this mixture to stay for about forty-five minutes and then scrape off the layer of food residues using a blunt knife. Repeat the process if all the grime has not been removed. Now, rinse off your cutting board with plain water.

**Important:** Always clean your chopping board before food preparation is started, even if it was cleaned before last preparation. This will avoid cross-contamination and also avoid the chances of food poisoning bacteria in food.

## Knife for poultry preparation

Proper tools are important for good and presentable poultry preparation. Dirty and damaged knives can be a food safety risk.

It is advisable to use heavy, well-balanced knives with secure handles, and get them sharpened regularly.

Many kitchen-supply stores will either provide sharpening services on-site or be able to tell you where to get your knives sharpened.

### Know the knife and its purpose for proper preparation

For example, smaller “paring” knives are good for peeling vegetables, while serrated knives are good for slicing bread. Don’t try to make a knife do more than it can – such as cutting through bones – the blade may snap.

A guide to the different kinds of knives for various applications is given below.

- Bread knife: A knife with a serrated blade for cutting bread
- Boning knife: A knife used for removing the bones of poultry, meat, and fish.
- Butcher's Knife: A knife designed and used primarily for the butchering and/or dressing of animals.
- Carving knife: A knife for carving large cooked meats such as poultry, roasts, hams, and other large cooked meats.
- Chef's knife: Also known as a French knife, a cutting tool used in preparing food
- Cleaver: A large knife that varies in its shape but usually resembles a rectangular-bladed hatchet. It is used mostly for hacking through bones as a kitchen knife or butcher knife, and can also be used for crushing via its broad side, typically garlic.

- Electric knife: An electrical device consisting of two serrated blades that are clipped together, providing a sawing action when powered on
- Kitchen knife: Any knife, including the chef's knife, that is intended to be used in food preparation
- Oyster knife: Has a short, thick blade for prying open oyster shells
- Mezzaluna: A two-handled arc-shaped knife used in a rocking motion as a herb chopper or for cutting other foods
- Paring or Coring Knife: A knife with a small but sharp blade used for cutting out the cores from fruit.
- Table knife or Case knife: A piece of cutlery, either a butter knife, steak knife, or both, that is part of a table setting, accompanying the fork and spoon



### Know how to use your knife

- Always use a cutting board – never use the kitchen counter, plates, or steel surfaces for poultry preparation.
- Choose a cutting board that is large and solid with plenty of space for cutting.
- Place a damp towel beneath the cutting board to keep it from sliding while you chop.
- Protect your fingers while you work with a knife.
- While making portions, curl your fingers under and position them on top of the item that you are working on. As you slice, the knife should follow your knuckles.
- Never try to catch a falling knife or cut anything in your hand.
- Store knives in a knife holder, never loose in a drawer.
- Clean your knives immediately after using them to keep them sharp. Dirty knives are a source of cross-contamination and can lead to food poisoning.
- Know how to treat minor cuts.
- Keep a first aid kit on hand in the kitchen in the case of minor cuts. If you are at all concerned about a cut – if it is deep, very painful or if pieces of the knife are embedded in the cut – visit your local emergency room immediately.

**Caution:** Workers with bleeding or exposed wounds should not be allowed in the kitchen and should not be allowed to handle food items or any items related to food and utensils.

### Safe Cooking of frozen poultry

According to food science, whole poultry should be cooked to at least 75 to 80 C for safe minimum internal temperature as measured with a food thermometer.

**Important:** Always check the internal temperature in the innermost part of the thigh and wing and the thickest part of the breast. For reasons of personal preference or as per the need of the recipes, consumers may choose to cook poultry to higher temperatures.

### Precautions while cooking in Microwave:

Microwave on medium-high or say 70 per cent power:

- Whole poultry: 9 to 10 minutes per 500 gms;



- Bone-in parts: 8 to 10 minutes per 500 gms;
- Boneless breasts halves: 7 to 9 minutes per 500 gms;

Place the whole poultry in an oven cooking bag or a covered microwavable pot.

**Caution:** Do not microwave stuffed poultry. Stuffed poultry products in composition and texture than plain poultry, therefore, have different cooking behaviour in the microwave. One component of the food cooks quickly in a microwave oven and the stuffing might not have enough time to reach the safe minimum internal temperature needed to destroy harmful bacteria. This may result in unsafe products or improperly cooked food.

### How to Arrange Poultry Pieces in a Microwave Rack or Tray?

1. When microwaving poultry parts, arrange in a dish or on a rack so that the thick parts of the poultry are towards the outside of the dish and thin or bony parts of the poultry are in the centre.
2. For boneless breast halves, place in a dish with 1/4 cup water; cover with plastic wrap. Allow 10 minutes standing time for bone-in poultry; 5 minutes for a boneless breast.

Food science recommends cooking whole poultry to a safe minimum internal temperature of 75°C as measured using a food thermometer.

Check the internal temperature in the innermost part of the thigh and wing and the thickest part of the breast. When cooking pieces, breasts, drumsticks, thighs, and wings should be cooked until they reach a safe minimum internal temperature of 75°C. For reasons of personal preference, consumers may choose to cook poultry to higher temperatures.

### Cooking Stuffed Poultry Products:

Many restaurants prepare various poultry items according to their proprietary recipes and as per the demand of the consumers.

**Restaurants should not pre-stuff whole poultry to cook at a later time:** poultry can be stuffed immediately before cooking. It is not recommended to buy a whole, uncooked poultry stuffed at the grocery store because of the highly perishable nature of a previously stuffed item.

Frozen stuffed whole poultry **MUST** be cooked from the frozen state to ensure a safely cooked product.

**Follow preparation directions on the label:** To stuff a whole poultry at a restaurant, properly cook any raw material including poultry, or other ingredients for the stuffing to reduce the risk of foodborne illness from bacteria that may be found in raw ingredients.

**Wet ingredients for stuffing:** The wet ingredients for stuffing can be prepared ahead of time and refrigerated. However, do not mix wet and dry ingredients until just before spooning the stuffing mixture into the poultry cavity. Immediately cook the stuffed, raw poultry in an oven set no lower than 160°C.

**Do not microwave the stuffed poultry product:** Food cooks quickly in a microwave oven and the stuffing might not have enough time to reach the safe minimum internal temperature needed to destroy harmful bacteria.



### Cooking Marinated products

Many famous Indian poultry dishes are made from marinated products.

- Proper marination needs time.
- Poultry may be kept marinated in the refrigerator for up to 2 days.
- Bring marinade to a full boil before applying or brushing it on cooked poultry before keeping it for longer duration in the refrigerator.
- Discard any uncooked leftover marinade, if not required immediately.

Caution: Marination is not done on frozen poultry.

## Partial Cooking

To save time in peak hours at restaurants, cooks may try to partially cook the poultry product for use later in the day.

- Storing partially cooked poultry is not safe. In partially cooked foods including poultry, bacteria survives.
- Never store partially cooked poultry in the refrigerator to give a finishing cooking touch later because any bacteria present wouldn't have been destroyed.
- It is safe to partially precook or microwave poultry for immediate use like transferring it to the hot grill to finish cooking.

## Regularly use a Food Thermometer

For most of the chefs, using frozen poultry may be a new experience. Even for experienced chefs, it's good to have a reliable tool to ensure that the recipe is properly cooked.

One secret to becoming a master chef is regularly using a food thermometer to know when your meal is ready. Not only does using a food thermometer take out the guesswork of knowing when your poultry is cooked, but it's also a must-do for food safety as well.

### Types of meat thermometers:

There are a few types of meat thermometers.

- Oven-going
- Instant-read.






Within those categories there are:

- digital and
- non-digital thermometers.

The basic difference between oven-going and instant-read is oven-going thermometers go in the oven and they stay in the meat while it cooks, whereas instant-read thermometers are used after or during cooking to check for doneness or the status of the temperature inside the meat portions.

## How to use Meat Thermometers?

No matter what type you use, you want to insert the food thermometer into the thickest part of the poultry meat. When using an oven-going thermometer, it's a good idea to push it in just a little further after you take the poultry out of the oven, to double-check that the meat is cooked evenly.

Food Thermometers and Temperature Indicators	
	<b>Dial Oven-Safe (Bimetal)</b> <ul style="list-style-type: none"> <li>• Reads in 1 to 2 minutes</li> <li>• Place 2 to 2½" deep in thickest part of food</li> <li>• Best used in roasts, whole poultry, casseroles, and soups</li> </ul>
	<b>Digital Instant-Read (Thermistor)</b> <ul style="list-style-type: none"> <li>• Reads in 10 seconds</li> <li>• Place at least ½" deep</li> <li>• Use in thin <i>and</i> thick food</li> </ul>
	<b>Dial Instant-Read (Bimetal)</b> <ul style="list-style-type: none"> <li>• Reads in 15 to 20 seconds</li> <li>• Place 2 to 2½" deep in thickest part of food</li> </ul>
	<b>Disposable Temperature Indicators (Single-use)</b> <ul style="list-style-type: none"> <li>• Reads in 5 to 10 seconds</li> <li>• Place approximately ½" deep (follow manufacturer's directions)</li> </ul>
	<b>Pop-Up</b> <ul style="list-style-type: none"> <li>• Commonly used in turkeys and roasting chickens</li> <li>• Pops up when food reaches final temperature for safety and doneness</li> <li>• Recommendation: Use an additional food thermometer to check temperature in other parts of the food.</li> </ul>

Food thermometers are particularly great when cooking for restaurants where there is a rush and crowd and you don't want to ruin the meal's presentation by repeatedly cutting into the meat to check if it's cooked.

These small tools give you peace of mind that your meal won't be under or overcooked, and they help prevent food-borne illness in consumers.

A basic food thermometer has two parts: a long needle stem and a round head that displays the temperature. Taking the internal temperature of poultry is just as easy as it is important for food safety. Simply insert your food thermometer into the thickest part of the poultry (for a whole poultry, that would be the breast).

The basic rule of thumb is to cook whole poultry to an internal temperature of 80 to 82°C and poultry cuts like poultry breast to 75°C. However, cooking times vary depending on the method (i.e. roasting, grilling, skillet).

Keep poultry cooking times chart handy or paste it at an appropriate place for reference to the recommended internal temperatures and cooking times for different cuts and cooking methods.

**Caution:** Remember, it's safe to bite when the temperature's right!

## How to know when Poultry is Safely Cooked?

Every tandoor, oven, BBQ and stove top is slightly different. This makes cooking times always a bit of a guessing game, especially when it comes to poultry. But there's an easy way to know when your meal is ready, and it doesn't involve having to repeatedly cut into an otherwise perfect piece of meat to check for doneness.

Using a food thermometer is the best way to tell when your poultry is cooked.



Knowing when your poultry is cooked is not only important for the taste of your meal—no one likes over-cooked poultry—it's also important for your customers' health as it reduces the risk of food-borne illness.

## Important points for customer satisfaction

Consumers are sensitive about hygiene in the place of eating. There are many signals which discourage customers from entering your restaurant. Very often after entering the restaurant, the customer/consumer witnesses unhealthy practices or unhygienic conditions, and realises he or she has come to the wrong restaurant. This is one of the reasons that many restaurants suffer in business or lose customer footfalls even after having the right location and right price points.

Following are the few major points which every owner or manager of the restaurant should keep in mind to ensure happy customers and better sales.

### Ensure proper personal hygiene and sanitation

One of the most common causes of food contamination is the lack of proper hygiene and sanitation during food processing and preparation. As microbes including pathogens can be easily transmitted to meat, fruits, vegetables and other food items, it is important to ensure that every contact surface is properly cleaned including hands. Please wash your hands properly before and after handling foodstuffs including poultry.

Some of the commonly observed mistakes that restaurant staff make:

- Skip washing hands and handling food products after washing utensils, visiting a washroom, touching body parts, handling garbage cans, cleaning up tables, spills or handling non-food items and other items like raw vegetables, carry bags, raw meat, etc.
- Handle food even if they smoke, touch beard, hairs, sneeze, suffer from any viral infections like hepatitis A, have cuts, skin infection or open sores on the skin
- Touching contaminated surfaces, coughing into a gloved hand and also not wearing gloves while handling food, not cutting nails, etc.

### Prevent Cross-contamination of Food

Cross-contamination means the transfer of bacteria or virus from one food, place, person or object to another. It can occur when the cutting board used for raw meat comes in contact with other foods thereby adding in the transfer of harmful bacteria. This type of contamination normally causes a food-borne illness, which if left untreated in the poultry and other food items can turn into severe health complications over time.



Here are some of the simple tips to prevent cross-contamination:

- Use separate plates, knives and cutting boards for raw and uncooked meat, fish, poultry or eggs and vegetables and fruits.
- Always keep raw material and cooked food separately
- Wash cutting boards with hot water and disinfectant regularly

### **Improper cooking of the food**

Always cook the food including poultry at the right temperature, not less than 80 deg. C. Cooking at the right temperature is of great significance to prevent food contamination by the bacteria or other microbes. Hence, it is important to cook your food at the right temperature, which is dependent on the food to kill the bacteria and lower your chance of being infected. Apart from this, always eat your food when warm and avoid eating leftovers.

### **Always store food including poultry the right way**

Never keep the poultry meat outside the freezer if not required for immediate preparation. After thawing use the poultry meat immediately for the preparation.

When stored at room temperature most of the fruits and vegetables and even cooked food tend to get spoiled easily. This is why storing these foods in the refrigerator is important. Moreover, store vegetarian and non-vegetarian foods in separate containers or sections to avoid contamination and thus, spoiling of the products.







However, if you refrigerate your food, then warm your food slightly before meals and quickly put the leftover food into the refrigerator (do not keep refrigerated food outside at room temperature for long hours).







### **Ensure a clean kitchen to avoid unsafe food and bad smell**

Just as storing the food at the right place and the right temperature is important, cleaning your kitchen regularly is equally important. Always clean your kitchen after you are done with your food preparation to avoid food contamination by insects like ants, cockroaches, lizards or even rats. It is a known fact that unsanitary places, especially your kitchen can act as a hotspot for the entry of these insects. This will not only lead to unsafe food and also off-smell in the restaurant. This is bad for business.

# Annexures

Annexure - A: Various Cuts of the Poultry

Full Poultry	Half Poultry
	
Poultry Wings	Poultry Quarters
	
Drum Sticks	Cut Portions
	

Thighs	Thighs Fillets
	
Breast	Wings
	
Tenderloin	Breast
	

Annexure-B: Suggested Cooking times for the Cuts of the Poultry  
(Example - Graphics can be changed to neutral source)

## HOW TO Perfectly Roast Chicken

### 1 SEASON

### 2 ROAST

### 3 CHECK FOR DONENESS

170° FOR WHITE MEAT 180° FOR DARK MEAT

Ensure doneness with a meat thermometer.

### 4 SERVE

	CHICKEN	TEMPERATURE	ROAST TIME
BREASTS		350°	30-40 MINUTES
LEGS		350°	35-45 MINUTES
THIGHS		350°	40-50 MINUTES
WINGS		350°	40-50 MINUTES
WHOLE BIRD		350°	25 MINUTES PER LB.

### WHOLE CHICKEN ROASTING VARIATIONS

	CLASSIC	SPEEDY	CRISPY	ROTISSERIE	OVEN READY
STYLE	Easy main event—best for stuffed birds	Cut cooking time in half with a butterflied bird	Start high for darker, crispier skin	Juicy low and slow technique	Cook-in-bag, set it and forget it
TEMP	350°F	450°F	450°F for 15 min Lower to 350°F	250°F	Preheat at 400°F Lower to 350°F to cook
MIN/LB	25 min/lb If stuffed, roast for an additional 20 minutes	12 min/lb	20 min/lb	75 min/lb	N/A
TIME	4 lb stuffed bird 2 hrs	4 lb bird 48 min	4 lb bird 80 min	4 lb bird 5 hrs	6 lb bird 2 hrs 10 min (fresh) 6 lb bird 4 hrs (frozen)
BASTE	Baste every 30-45 min	Baste after 15 min and at finish	Baste every 30 min	Baste every 45 min	No basting necessary

Annexure-C: A Simple Guide for Kitchen - Safe Defrosting of Meat

## DEFROST MEAT SAFELY

A Simple Guide for Your Kitchen

### Why Defrost Food?

All food should be thoroughly defrosted before cooking unless otherwise instructed. Food not properly defrosted may not cook through to the centre and harmful bacteria may remain.

### When is food defrosted?

The accepted temperature at which food is properly defrosted and will not contain ice crystals is 5°C (41°F).

### Chicken and other poultry

Should be kept separate from other foods when defrosting to avoid cross contamination of bacteria. Once defrosted it should be cooked immediately.

### Fridge Defrosting is Best

While a little slower than other methods, defrosting in the fridge prevents bacteria growth on the outside of food while the inside is still defrosting.

### Cold Water Thawing?

The food should be in a leakproof package or plastic bag. If the bag leaks, bacteria from the surrounding environment could be introduced into the food.

### After Defrosting

As soon as meat thaws and becomes warmer than 5°C (41°F), bacteria that may have been present before freezing can begin to multiply.





