



# Pickling of Meat



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## What is pickling?

- **Pickling** is the preservation method of foods with the help of organic acids (acetic acid, vinegar), edible oils, salts, spices and condiments.
- Pickling most commonly used for **fruits and vegetables**.
- **Meat pickling** is rare now a days and was done in pre-refrigeration era.
- If the raw material has **sufficient moisture content**, then the brine solution is produced just by the addition of dry salt.
- During pickling, the **brine solution** penetrates into the tissues of vegetables and soluble material present in them diffuses into the brine by osmosis

## Why pickling is done?

Pickling is done for the following reasons:

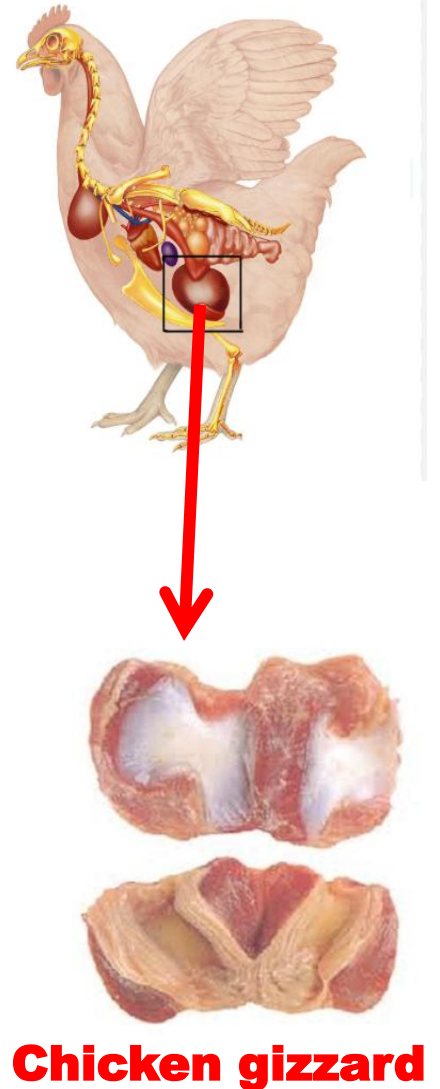
1. To elongate the **shelf life** of the foods thereby reducing the post harvest losses.
2. To improve the nutritional value along with **sensory properties** such as flavour, aroma, taste.

## Some common Pickled Products worldwide

Pickle Name	Type of food Used	Belonging Country
Vegetable Pickles	Mango, Lemon, Onion, Garlic, Carrot, Radish, others	India
Dill Pickles	Cucumber	America, Canada
Gherkin	Cucumber	Brittain, Ireland, South Africa, Australia, New zealand
Sauerkraut	Cabbage	Germany
Mostarda	Fruit syrup, Mustard seeds	Italy
Kimchi	Napa cabbage, Korean radish	South Korea
Gari	Ginger	Japan
Pickled Herring	Forage fish	Sweden
Pickled Kielbasa	Type of sausage	Poland
Pickled Bologna	Type of sausage	European countries
Pickled Sausages	Buffalo meat, Pork meat, Poultry, Fish etc.	European countries
Pickled Bacon	Salt cured pork cuts	Britain

## What is Meat Pickle?

- **Meat pickle** is the ready to eat, highly acceptable convenient meat products of indigenous origin.
- Meat pickles have long shelf life from **3 months to 1 year**.
- Meat pickle can be made by any kind of meat i.e. **mutton, buffalo meat, goat meat, beef, pork meat, chicken meat** etc. with or without bone as per the requirement.
- Even the **meat organs** are also used for pickle making such as **gizzard from poultry carcass**.



## Contd...

- Meat is a **nutrient dense** food. But due to its perishable nature, meat and meat products require considerable input for chilling or freezing during storage and marketing.
- Meat provides a suitable environment for proliferation of **meat spoilage microorganisms** and common food-borne pathogens, therefore adequate preservation technologies must be applied in order to preserve its safety and quality.
- Preservation of meat either in fresh or in processed form **requires considerable energy**.

## Contd...

- **High perishability** of meat and meat products is serious problem in tropical countries.
- Now days there is **need to develop the foods** which are shelf-stable so that can be distributed in various locations without aid of refrigeration.
- **Pickling** is one of the alternatives to develop such kind of products.

## Recipe of meat pickle

Ingredients	Quantity
Meat	1 Kg
Salt	4%
Dry spice mix	4%
Green condiments	10%
Meat broth	20%
Acetic acid	1%
Mustard oil	20%

## **Methods of pickling**

- Pickling can be done by 3 ways:

1. **Dry salted pickles**

2. **Preservation with vinegar**

3. **Preservation with oils and spices**

## Common meat pickles

Type of pickle	Commonly used Ingredients	Safe condition
Chicken pickles	Meaty part used i.e. Breast part, thigh, drumstick, Vinegar and oil based spent chicken (Chatterjee et al., 1969)	
Quail pickles	25% vinegar used	
Guinea fowl pickles		Safe for 3 months at 29-30 C Temperature (Rana and Shukla, 2003)
Gizzard pickles	10% vinegar and 0.5% citric acid	safe for consumption up to 45 and 75 days of storage in summer-rainy and winter (Sachdev et al., 1994)
Mutton/Chevon Pickles	1% acetic acid and 4% salt	acceptable up to 60 days at room temperature (Pal and Agnihotri 1994)
Buffalo meat pickles	4% salt and 1% acetic acid and specialty buffalo meat pickle of Nagaland using 2.4 % salt and 0.2 acetic acid used	
Pork pickles	25% and 50% back fat cubes and 10% vinegar, BHT is used due to higher fat content	
Rabbit pickle	1% acetic acid and 4% salt from deboned meat and liver of male rabbits	