



1.

## **FREQUENTLY ASKED QUESTIONS**

### **1. What is the role of salt in meat curing?**

Ans) Salt is the basic ingredient in all curing brines and dry mixes. Originally it served as a preservative by dehydration and osmotic pressure which inhibits bacterial growth.

### **2. What is the lethal dose of nitrite?**

Ans) The lethal nitrite dose is 300mg/kg of body weight.

### **3. What is the role of nitrite in fermented sausages?**

Ans) The use of nitrite is considered essential because of its antimicrobial, colour forming, and antioxidant and flavouring properties.

### **4. Name different curing adjuncts?**

Ans) The meat processors in the curing process commonly includes several adjuncts e.g., ascorbates and erythorbates, phosphates, starches, and hydrocolloids.

### **5. What is the role of nitrate/nitrite in meat preservation against bacteria?**

Ans) The nitrate/nitrite in the curing process was found to inhibit



growth of *Clostridium*. Recent evidence indicates that they may also inhibit *E. coli*, *Salmonella*, and *Campylobacter* if in sufficient quantities.

**6. Name different classic meat curing ingredients.**

Ans) The classic meat cure ingredients are NaCl, nitrite or nitrate, and sugar (sucrose or glucose), with NaCl being the major ingredient.

**7. What is the role of sweeteners in meat curing?**

Ans) Sweeteners function to counteract the harshness of salt and provide roundness and enrichment of flavor. Sucrose also functions as a preservative, but the levels required to provide this effect would probably render most cured meats too sweet.

**8. Name different phosphates approved for use in curing pickles.**

Ans) The following phosphates are approved for use in curing pickles: disodium phosphate, monosodium phosphate, sodium metaphosphate, sodium polyphosphate, sodium triphosphate, sodium pyrophosphate, sodium acid pyrophosphate, sodium hexametaphosphate, dipotassium phosphate, monopotassium phosphate, potassium triphosphate, and potassium



pyrophosphate.

**9. Why nitrite is preferred than nitrate in meat curing?**

Ans) Both nitrite and nitrate are used in meat curing for colour stabilization. The end result is the same in either case, although the pathway for stabilization of colour by nitrite is more direct.

**10. What are the mechanisms by which nitrite inhibits *C. botulinum*?**

Ans) Nitrite inhibits *C. botulinum* by different mechanisms which includes: (a) formation of an inhibitory substance from nitrite and other meat components, (b) nitrite or intermediates acting as an oxidant or reductant on intracellular enzymes or nucleic acids, (c) restriction of iron or other metals essential to *C. botulinum* by nitrite, thereby interfering with the organisms metabolism or biological repair system, and (d) reaction of nitrite with cell membranes to limit metabolic exchanges or substrate transport.

**11. Name different methods of curing.**

Ans) There are two basic procedures of meat curing: dry salt curing and pickle curing.

**12. Define brine soaking in meat curing?**

Ans) Brine soaking is a process in which meat pieces are placed



in curing brine, and the cure is allowed to penetrate the entire portion.

13. **What is the significance of ascorbic acid in meat curing?**

Ans) The benefits of using ascorbic acid in cured processed meats are: (a) curing time can be substantially reduced, (b) a more uniform colour will result throughout the product, and (c) better colour and flavor can be maintained during storage, distribution, and display.

14. **What is the importance of massaging, tumbling and mixing in curing?**

Ans) Massaging, tumbling and mixing are employed to extract salt soluble protein and improve and accelerate the distribution of cure throughout the product.

15. **Define curing pickle injection?**

Ans) The curing pickle injection is injection of curing pickle directly into meat pieces. Internal injection of curing ingredients enhances efficiency and promotes a more rapid and uniform distribution of the cure throughout the product.