

---

## Fish sausage- a ready to eat product

---

Elavarasan, K

---

Fish sausage is an emulsion based fish product. It is prepared by mixing the fish mince with salt to solubilize the protein and mixing with other additives (ingredients including sugar, sodium tri-polyphosphate, spice mix -chilli powder, pepper, ginger garlic paste; monosodium glutamate, starch and oil), stuffing in to the casing (natural/synthetic) and heat processing (90°C for 45 min), chilling (5-8°C) and re-boiling (1 min).

- Heat processing
- Chilling
- Re-boiling
- Cooling
- Packing
- Storage/Distribution
- 

**Note:** Temperature should be maintained below 5° C to obtain good textural properties of product throughout the process (during mixing it may exceed to certain extent)

### Unit operations in fish sausage processing

- Raw material
- Dressing of fish
- Meat picking
- Mincing
- Mixing with additives/ingredients (should be completed within 12-15 min)
- Stuffing
- Clipping

### Sequence of meat mixing

- Fish mince
- Addition of salt
- Addition of sugar
- Addition of STPP
- Addition spice mix (add little water to disperse)
- Addition of starch (simultaneously add water/crushed ice)
- Addition of oil/fat/vanaspathi

**Role of ingredients used in the sausage preparation**

<b>Ingredients</b>	<b>Function</b>	<b>Percentage used</b>
Mince	Gel formation/Texture development	70 %
Salt	Solubilizing the myofibrillar proteins of fish	2.5 %
Sugar	Imparting taste and act as preservative	1.5 %
STPP	Enhance the water holding capacity and act as cryo-protectant	0.2 %
Spice mix (chilli powder Pepper Ginger Garlic Garam masala)	Impart taste and flavour and act as source of natural antioxidants and antimicrobial agents	3.0 %
MSG	Taste enhancer	0.2%
Starch	Aid in gelation and act as a bulking agent	8.7 %
Gur-gum	Gelation enhancer	0.3 %
Oil	Avoid the stickiness of paste with casing Impart flavour, enhance the palatability and taste	5.0 %
Water	Media for gelation	10 %