



## MECHANICALLY SEPARATED MEAT - VPP\*

\*VIANDE - POISSON - PETFOOD

**MSM, Mechanically Separated Meat, is defined by European regulations (853/2004) as " the product obtained by removing meat from flesh-bearing bones after boning or from poultry carcasses, using mechanical means resulting in the loss or modification of the muscle fiber structure".**

Obtained after boning, MSM may contain residues of bone, cartilage or bone unlike the minced meat.

The production of MSM will generally be from poultry bones (around 90%) and pig (10%). MSM from specified risk material (SRM), and the bones, or bone-in-cuts, of cattle, sheep and goats is prohibited under the Community TSE Regulation (Transmissible Spongiform Encephalopathies).

The sale of MSM as "**meat**" is banned in Europe. If MSM is used as an ingredient in a product, it **must be labeled on the ingredients statement** as "mechanically separated meat".

### » APPLICATIONS :

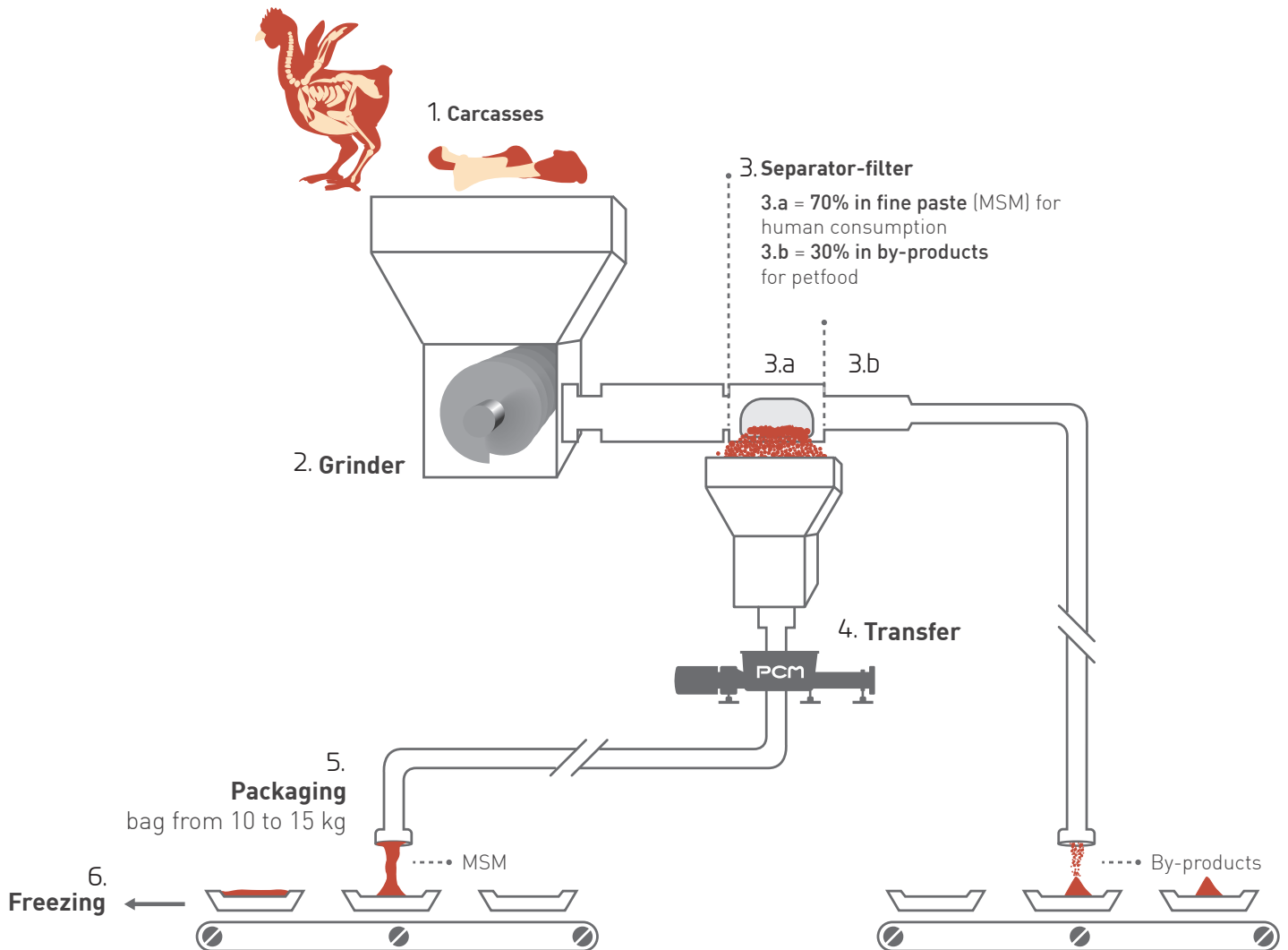
- MSM transfer from grinding and refining to packaging workshop (bag from 10 to 15 kg).



## 1 ACTIVITY AND MANUFACTURING PROCESS

There are two types of mechanically separated meat (MSM), depending on the manufacturing process.

- **Conventional methods** produce a fine paste (80% of the production). The separation takes place under the action of pressure on raw material previously crushed through a filter with small holes dimension (generally much less than 1 mm). This process allows the recovery of 70% of the matter.
- **Low-pressure processes** (20% of the production) give a product which can sometimes look like minced meat but has higher production costs.





## 2 TECHNICAL DATA & PROCESSING RESTRICTIONS

### MSM OR LEAN FINELY TEXTURED MEAT :

**Viscosity:** from 80 000 to 100 000 cPo

**Particules size:** 1 mm

**Discharge pressure:** from 5 to 10 bars

**Suction pressure:** flooded (below tank)

**Flow rate:** 5m<sup>3</sup>

**Temperature:** 4°C (European regulation)



### PROCESSING RESTRICTIONS :

- **Important product viscosity**
- **Average abrasion:** possibility of very small pieces of bones
- **Lean manufacturing process:** use of machinery 6 days/7 & 24h/24. This is due to the continuous arrival of truckloads from slaughterhouses and butcheries and should be treated quickly to prevent the growth of pathogenic bacteria and odor problem.



## 3 EQUIPMENT & PROCESSING RECOMMENDATIONS

- The high viscosity and sticky texture of the "pink slime" requires the installation of a pump with hopper and feed screw.
- Choosing a chrome rotor is necessary to deal with the potential abrasion and systematic use under pressure.
- The Lean process requires the installation of a continuous flow technology as the Moineau technology.





## 4 PRODUCT RECOMMENDATIONS

25IVA10 / 40IVA10 / 60IVA10



IVA pumps have a suction hopper and a feed screw. The hopper allows the fluid to flow freely, while the screw pushes the fluid in the rotor/stator.

**Flow rate recorded at 8 bars:**

- 25IVA10: 4m<sup>3</sup>/h
- 40IVA10: 7m<sup>3</sup>/h
- 60IVA10: 15m<sup>3</sup>/h

**Maximum pressure:**

- 10 bars

**Recommended speed:**

- Between 100 and 150 rpm for an effective feeding (and to avoid the phenomenon of arching or bridge on the screw).