CHIMAB®
Food ingredient solutions
A BRENNTAG GROUP COMPANY

STARTER CULTURES

Starter cultures are made of “good” bacteria and they are used for starting a fermentation process of raw materials and for ensuring a good technical outcome of meat-based products. Thanks to the starter cultures it is possible to increase food safety and guarantee a more stable production process, as well as maintain product stability during shelf life.

Consumers pay attention to their health and they choose carefully what to eat and what to buy. CHIMAB work with food industries for developing safe and healthy products, in line with consumers’ needs. Thanks to the wide range of CHIMAB starter cultures is possible to

- Increase food safety
- Standardize the production process
- Increase the product stability during the product life cycle.

CHIMAB solutions are perfect for safe meat-based products, with excellent shelf life: microbial cultures ensure safety, reduce costs and improve colour and taste.

Starter cultures keep the microbiota under control, guaranteeing the development of the typical organoleptic characteristics of the product (colour, aroma). The staphylococci in the crops guarantee an excellent quality and colour maintenance, even in the fast maturation; they make the colour of the meat brighter, preventing oxidation and rancidity, enhancing the aroma. **Lactic acids favour the seasoning** and drying of the product, while the *Pediococcus* guarantee **product safety**, prolonging its shelf life, thanks to the production of bacteriocins against *Listeria Monocytogens*.

The metabolic activities of these microorganisms exploited in fermentation processes are:

- Production of **organic acids** (lactic and acetic acid)
- Production of **hydrolytic enzymes** (proteases and lipases)
- Synthesis of **anti-microbial substances**, useful in the control of pathogenic bacteria that may be present in raw materials.

Thanks to the use of suitable starter cultures the fermentation process effectively increases food safety, ensuring the typical colour and aroma notes of traditional products and their typical sensory characteristics.

Depending on the different applications, CHIMAB developed the best starter culture mix.

FERMENTED PRODUCTS – FAST FERMENTATION

The use of these starter cultures guarantees rapid fermentation, with reduced times but sufficient to guarantee the desired taste and color gradation.

- **CARNIFLORA F-DY94** *(P. Pentosaceus, Lb. Sakei, St. Xylosus, St. Carnosus, Deb. Hansenii)*
  Staphylococcus Xylosus e *Carnosus* reduce nitrates to nitrites and improve the taste and flavor of finished products. Their action gives brightness to the meat color, preventing oxidation and rancidity and enhancing the aroma.

- **CARNIFLORA FB-19** *(St. Xylosus, St. Carnosus, P. Acidilactici, Lac. Curvatus)*
  Recommended for fast maturation products and an excellent slice holding. It ensures safety with biopreservation action.

FERMENTED PRODUCTS – MEDIUM FERMENTATION

- **CARNIFLORA F-PX101** *(P. Pentosaceus, St. Xylosus)*
  Thanks to a short **lag phase**, it guarantees the maturation of the meat product in a short time. Staphylococcus Xylosus and Pediococcus Pentosaceus ensure a uniform and controlled process.

FERMENTED PRODUCTS – LONG FERMENTATION

- **CARNIFLORA T-PX50** *(P. Pentosaceus, St. Xylosus)*
  Suitable for the production of medium-long cured meat products, it guarantees excellent color and a marked aromatic profile for the finished product.

NOT FERMENTED PRODUCTS – WHOLE PIECE

- **CARNIFLORA WM-33 (***St. Xylosus, St. Carnosus)*
  The combination of Staphylococcus Xylosus and Staphylococcus Carnosus guarantees a good color in the production of cured meats like coppa, pancetta, bresaola and speck. It also prevents oxidation reactions.

NOT FERMENTED PRODUCTS – GRINDED

- **CARNIFLORA B-SC 143 (***St. Carnosus, Lb. Sakei)*
  Lactobacillus Sakei works at low temperatures, to suppress the growth of unwanted cultures: it performs for biopreservation and it guarantees safety and shelf life extension. Staphylococcus Carnosus enhances the intensity of the aroma and the color

BIOPRESERVATION

- **CARNIFLORA B-FS 44** *(Pediococcus Acidilactici)*
  Pediococcus Acidilactici is able to produce pediocine and bacteriocins against Listeria Monocytogens. For this reason, the CARNIFLORA B-FS 44 guarantees greater safety to the product, prolonging its shelf life.

EXTERNAL USE

- **CARNIFLORA M-PN52** *(Penicillium Nalgiovense)*
  Freeze-dried mold culture for surface treatment IN cold cuts, with excellent performance even in damp place and with low temperatures. The use of this culture contributes to the formation of a white and slightly visible product coverage. The uniform coverage and powdery appearance at the end of the process, protects against the action of oxygen and light, inhibiting the development of molds, yeasts and unwanted bacteria. CARNIFLORA M-PN 52 metabolizes the lactic acid present obtaining a more delicate aroma and an increase in PH.

CHIMAB R&D labs are at your disposal to identify the best starter culture suited to the different seasoning requirements, to guarantee safety and optimal development of the product organoleptic characteristics, adapting to different production needs.