

Processed Turkey Products

MTS-02

Benefits of Gelcarin® ME carrageenan:

- Increases processed poultry yields
- Improves texture and sliceability
- Improves moisture retention

Comments

Gelcarin ME carrageenans will help reduce purge (moisture loss) often encountered in the processing of chicken and turkey products. FMC BioPolymer offers a variety of Gelcarin ME carrageenans to match individual processing parameters and finished product requirements. It disperses easily with minimum swelling in cold brine solutions. Low brine viscosities improve flow rates and distribute uniformly within the poultry in injection and tumbling applications.

Brine Formulation:

Ingredients	20% Brine Injection	35% Brine Injection	50% Brine Injection
Water (<40°F/5°C)	80.50%	86.94	89.20
Salt (NaCl)	9.00	5.79	4.50
Sodium tripolyphosphate (STPP)	3.00	1.93	1.50
Dextrose	6.00	3.80	3.00
Gelcarin ME carrageenan*	1.50	1.54	1.80
	<u>(0.25%)</u>	<u>(0.40%)</u>	<u>(0.60%)</u>
(amount in finished product)	100.00%	100.00%	100.00%

* FMC BioPolymer

Processing Guidelines:

- Dissolve sodium tripolyphosphate (STPP) with agitation in brine tank containing 2-5°C (35-40°F) water.
- Dissolve NaCl in the phosphate solution.
- Disperse Gelcarin carrageenan in the STPP/NaCl solution, maintaining temperature at 2-5°C (35-40°F).

Notes: Add carrageenan to the brine after the STPP and NaCl have been dissolved to inhibit swelling, maintaining a low viscosity brine. Low viscosity brine will prevent excess back pressure during stitch pumping and allow the brine to flow more readily throughout the meat.

Calculating the Brine

1. Specify desired level of pump (%). 40.0%

2. Specify % level of ingredients Salt 2.00%
 desired in finished product. STPP 0.50%
 Cure 0.02%
 Carrageenan 0.50%

3. Calculate required concentration of
 each ingredient in the brine.

$$\frac{\text{Wt. of meat} + \% \text{ pump}}{\% \text{ pump}} \times \text{desired ingredient level in finished product} = \% \text{ concentration needed in brine}$$

Calculate for Gelcarin® ME carrageenan at 0.5% in 100 lb. meat.

$$\frac{1 + \% \text{ pump}}{\% \text{ pump}} \times \% \text{ desired level of ingredient in finished product} = \% \text{ concentration needed in brine}$$

$$\frac{1 + 40\%}{40\%} \times 0.5\% = 1.75\% \text{ Gelcarin ME carrageenan in brine}$$

This assumes 100% yield. If yield is less than 100%, multiply the answer by the anticipated yield.

Regulatory Information

All products manufactured by FMC BioPolymer meet all standards of quality as defined by:

- US Code of Federal Regulations (21 CFR)
- Food Chemicals Codex
- J.E.C.F.A. Specifications issued by FAO/WHO
- European Economic Community Directives

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