

**Ham** is one of the highly valued pork products. Further processed boneless ham is made by grinding or sizing meat trimmings from pork and/or chicken and then blend with spices, ice chips, salt, phosphate, binding and curing ingredients using a vacuum tumbler to extract protein and to speed up curing. The mixture is then filled into a casing, followed by cooking or smoking, chilling and packaging.

Today's consumers are increasingly health conscious and seek healthier and environmental friendly alternatives to traditional ham without sacrificing on appearance, taste and texture. This is often achieved by replacing animal-based protein with plant-based proteins, such as soy and wheat-gluten. Due to structural differences between protein types and lack of fat in plant-based proteins, plant-based ham often has softer and more crumbly texture, lack desirable meaty flavour and more susceptible to purge and syneresis.

Hydrocolloids, such as carrageenan, and konjac gum are excellent solutions from natural sources to stabilize meat analogues, such as plant-based ham by controlling purge or syneresis, and as an extender to enhance desirable texture resembling traditional analogues. Cooking losses are minimized as carrageenan and konjac hydrate during up cycle and gels during down cycle, further locking in free moisture; resulting in juicier and tenderer texture.

**Suggested Application Recipe:** *Plant-Based Ham*

**Recommended Dosage Level:** 1.00% to 3.00% by total weight in the finished product

Ingredients	Composition (%)
Water (Tap or Softened)	82.50
Vital Wheat Gluten	5.00
Vegetable Oil	5.00
Soy Protein Isolate	3.00
<b>GPI 2425</b>	<b>2.00</b>
Salt	1.50
Ham Seasoning / Flavour	1.00
Colour	As desired
<b>Total</b>	<b>100</b>

### Procedure

1. Weigh all the ingredients and pre-blend **GPI 2425**, gluten and soy proteins.
2. Disperse **GPI 2425** and protein blend into water in a bowl cutter and chop at low speed for 1 minute.
3. Continue chopping at high speed for 3 minutes or until a homogeneous paste is achieved.
4. Add salt, seasoning and colour. Continue mixing at high speed for 1 minute.
5. Add oil and chop at high speed for another 3 minutes.
6. Stuff emulsion into plastic or impermeable casings (100 to 150mm stuffing diameter).
7. Cook at 95°C (203°F) or with steam for 2 to 3 hours.
8. Chill in cold running water or shower for 30 minutes then transfer into chiller to allow analogue to set firmly.

### Description

*GPI 2425 is a food grade blend of Carrageenan and Konjac gum designed for optimum binding in meat analogues.*



### Benefits of GPI 2425

<b>Functional</b>	Impart hardness or firmness in plant-based meat analogues.
	Enhance texture or bite
	As a stabilizer, to control purge or syneresis
<b>Nutritional</b>	Suitable for plant-based diets
<b>Economic</b>	Formulation cost reduction

### Food Safety and Quality System Information

GPI is certified Grade AA in BRC Global Standard for Food Safety Issue 8.



### Recommended Regulatory Information

- Canada's Food and Drugs Act and Regulations
- Health Canada
- Kashruth Council of Canada (COR)
- IFANCC: Islamic Food and Nutrition Council of Canada
- US Code of Federal Regulations (21CFR)
- European Economic Community Directives
- Food Chemicals Codex
- JECFA Specifications issued by FAO/WHO

### Product Suitability & Disclaimer

The information contained in this document, as well as any advice and/or assistance are provided by GPI as a courtesy and is intended to be general in nature. Any uses suggested by GPI are presented only to assist our customers in exploring possible applications. GPI cannot anticipate or control the various conditions under which this information and product may be used, therefore GPI does not guarantee the applicability or suitability of the product in any individual situation. It is the customer's sole responsibility to determine the suitability of GPI's products for their intended use and obtain any necessary government documentations and approvals for the production, sale, marketing, use and/or transportation of finished goods containing GPI's products. Unless expressly provided to the customer, any information or instruction herein pertaining to the use of this product shall be regarded solely as non-binding suggestions and customers assume full liability and responsibility when using GPI's products. Furthermore, the product discussed herein is sold without warranty unless expressed. Statements concerning the possible use of this product are not intended as an infringement of any patent.

*GPI reserves the right to change specifications at any time.*