

TRYPsin VI

For Food Applications

In food applications, Trypsin VI is ideal for hydrolysis of milk proteins. The endopeptidases in the preparation break down large proteins in milk into just the right size – maximizing solubility and reducing allergenicity, without compromising taste.



Trypsin VI is an enzyme preparation specifically designed for food and OTC pharmaceutical applications. Sourced from government certified pork pancreas, this product mainly contains trypsin and chymotrypsin which are naturally occurring pancreatic proteins that work to digest proteins using the same natural process as the human digestive system. With this enzymatic profile, Trypsin VI works quickly to thoroughly digest proteins making it effective for various applications.

The high purity of Trypsin VI means that it is virtually free of side activities such as amylase. Trypsin VI complies with the recommended purity requirements for food grade enzymes provided by the joint FAO/WHO Expert Committee on Food Additives (JECFA), and the Food Chemical Codex (FCC). All extraction and refining is done at Neova Technologies Inc. facility in Abbotsford, British Columbia, Canada.

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Applications

- Hypoallergenic food production
- Facilitate rapid absorption of nutrients
- Meat and seafood tenderizing

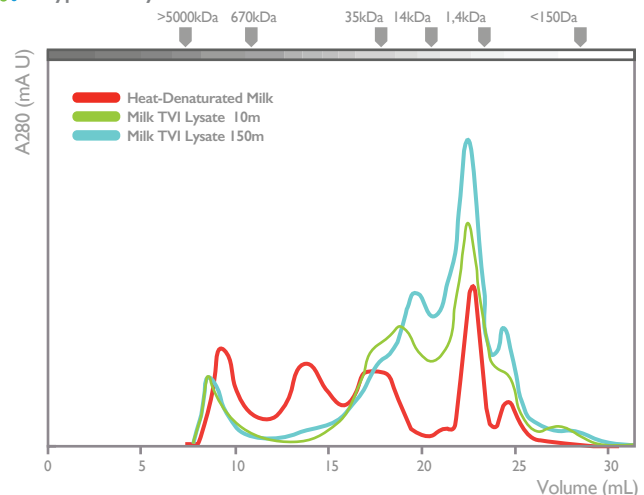
Product Details

Packaging: 5kg boxes, 25kg drums
Form: Off-white to beige, amorphous powder

Ingredient Declaration

Porcine Enzyme
Sugar

Trypsin VI Hydrolysis of Milk



Digestion of milk with Trypsin VI results in a shift towards larger quantities of low molecular weight proteins. Milk protein fragments of lower molecular weight have reduced antigenicity compared to whole milk proteins.

Technical Information

Partial hydrolysis of milk proteins using Neova Technologies Inc. Trypsin VI¹

1. Dissolve whey or casein protein to 5% (w/v) in water.
2. Optional: Heat protein solution to 80C for 30 minutes.
3. Warm protein solution to 40-45°C.
4. pH solution to between 7.5 and 8.5 using calcium hydroxide.
5. Add Trypsin VI as 0.0035% (w/v) of the solution; maintain pH and temperature for up to 4 hours
6. Heat solution to 90°C for 5-10m
7. Cool to 40-45°C and maintain pH between 7.5 and 8.5 with calcium hydroxide or phosphoric acid.
8. Add Trypsin VI as 0.0315% (w/v) of the solution; maintain pH and temperature for up to 3 hours
9. Heat product to 80°C for up to 30 minutes to inactivate enzyme.

At this step, the whey or casein hydrolysate may be sterilized and clarified, ultrafiltered, concentrated, lyophilized, or undergo additional processing.

Efficiency of the enzymatic hydrolysis can be assessed via:

- A. Size exclusion chromatography
- B. SDS-PAGE & Silver Stain
- C. ELISA
- D. Formol Titration

KEY PERFORMANCE PARAMETERS	MIN	MAX	UNITS
Residue on Ignition		3.0	%
Loss on Drying		4.0	%
Protein Content	60.0		%
Trypsin Activity ²	2,565	3,200	USP units/mg
Chymotrypsin Activity ²	300	495	USP units/mg

¹ Results may vary with quality/source of milk | ² Products with various trypsin and chymotrypsin activities are available upon request

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MICROBIOLOGICAL DATA

Enterobacteriaceae	<10	CFU/g
Salmonella	Not Detected	in 25g
Standard Aerobic Plate Count	<1,000	in 25g
Porcine Circovirus (PCV)	Not Detected	CFU/g

SHELF LIFE & STORAGE

2 years from date of manufacture when stored at room temperature in original packaging.

AVOID EXCESSIVE HEAT AND PROTECT FROM MOISTURE AND SUNLIGHT.

PACKAGING

5kg in boxes - **25kg** in drums

ADDITIONAL SIZES AVAILABLE UPON REQUEST

ALLERGEN DATA

Dairy/Dairy Derivatives	Present
Egg/Egg Derivatives	Absent
Soy/Soy Derivatives	Absent
Wheat/Wheat Derivatives	Absent
Peanuts/Peanut Derivatives	Absent
Treenuts/Treenut Derivatives	Absent
Fish/Fish Derivatives	Absent
Shellfish/Shellfish Derivatives	Absent

| Products with various trypsin and chymotrypsin activities are available upon request