

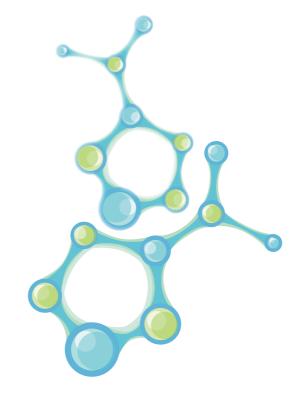




Generation

OF FRESHWATER COLLAGEN PEPTIDES & GELATIN

PURE, SUSTAINABLE, TRACEABLE







Story

Aquaculture is already playing a vital role in the global economy and holds vast potential as a source of sustainable nutrition and wellness products. Developing that potential has always been Vinh Hoan's focus. As an international leader in sustainable aquaculture, Vinh Hoan leads by example with our products and education with our research division.

Our strategic development is based on the circular economy model, enabling optimization of the value chain, waste minimization, and adding value for by-products. Vinh Wellness, a division of Vinh Hoan, has successfully produced high-value collagen peptides and gelatin products from pangasius skin which is one significant breakthrough.



To affirm our market-leading position and contribute to sustainable aquaculture globally by continuous innovation, environmental protection, and efficiency improvement business aspects.



To be a global aquaculture leader providing safe, sum and healthy food solutions in a sustainable and environmentally friendly manner.

1997

Established as Vinh Hoan Limited Company in Sa Dec, Dong Thap, Viet Nam

2007

Listed on the Ho Chi Minh Stock Exchange

2010

Became the world's largest exporter of Pangasius fish according to the Vietnam Association of Seafood Exporters and Producers

2011

- Collagen Peptides and Gelatin were extracted successfully from Pangasius skin in the laboratory via research collaboration with universities and institutes.
- Vinh Wellness Division was established to produce and market single-sourced Collagen and Gelatin.

2012

Pilot workshop was established Awarded the high technology certificate from Ministry of Science and Technology

2013

The construction of factory started

2014

Factory has been completed and put into operation

2015

Achieved ISO 9001, ISO 14001, GMP WHO, Halal Jakim Certificates

2016

- Achieved Halal Mui
- Started to export to Japan, Korea,...

2017

- Approved for export to EU
- Release the clinical study on skin beauty
- Global sales growth

06/2018

Full load of gelatin capacity production

2020

Installed an additional gelatin line to increase the total collagen & gelatin capacity to 3,500 MT



THE Single-sourced FRESHWATER COLLAGEN PEPTIDES AND GELATIN

Vinh Wellness collagen peptides and gelatin are sourced from our own sustainably-raised, tropical, freshwater fish (pangasius hypophthalmus) — a highly stable, fully traceable, single source. As a result, our products are consistent with exceptional quality and ideally suited to the most demanding applications.

THE SINGLE-SOURCED ADVANTAGE

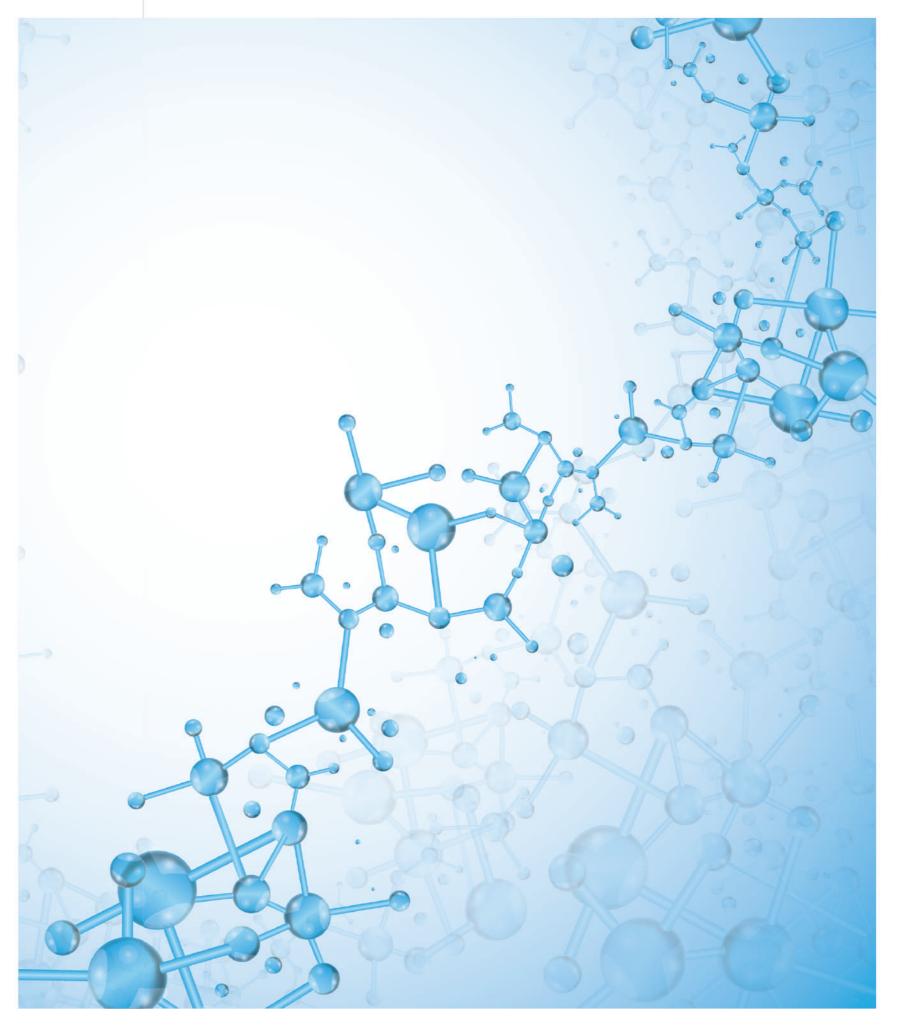
Single-sourced production offers complete transparency that addresses consumers' growing desire for safety, purity, environmental responsibility, and traceability. Single source also means complete quality control of the raw ingredients as well as the final products. All Vinh Wellness collagen peptides and gelatin are produced this way. In the following pages, we will explain the other unique advantages our single-sourced products offer to your consumers.

MARINE-DERIVED COLLAGEN

DELIVERS A WIDE RANGE OF BENEFITS OVER PORCINE, BOVINE, AND OTHER SOURCES.

With the low molecular weight, collagen peptides derived from fish skin, scale or bones offer superior absorption and bioavailability compared with porcine and bovine collagen. Plus, the risk of illness is minimized with marine collagen — unlike other animal sources, which have been associated with disease transfer to humans.

Additionally, marine collagen peptides and gelatin contain no porcine or bovine products. This makes them widely accepted across cultures and religions. At Vinh Wellness, all collagen products are Halal certified.



Freshwater: THE NEXT GENERATION MARINE COLLAGEN

FOUR UNIQUE ADVANTAGES OF TROPICAL FRESHWATER COLLAGEN.



While marine collagen from saltwater species offers clear advantages over other animal sources, collagen derived from tropical freshwater fish provides even more significant benefits. Here are the top four advantages of tropical freshwater fish collagen.

1. Compatibility: more of the right building blocks are delivered to cells

It is a fact that marine collagen has superior absorption and bioavailability compared to bovine and porcine collagen. But, how many of the fish collagen peptides that reach cells are actually useful? That, of course, depends on what amino acids are present in the collagen. And the source of the collagen. Our tropical freshwater collagen offers a unique advantage in this aspect over all other marine sources. At the molecular level, the collagen structure in an animal's skin is heavily influenced by the temperature in which it lives. An animal that lives at room temperature will develop collagen similar to that of other species living at the same temperature, including humans. The more similar marine collagen is to human collagen, the better.

While ocean fish may seem like a good source of collagen, their skin is adapted to cold saltwater, resulting in collagen that is quite different from that found in terrestrial species. By contrast, our farm-raised Pangasius (Pangasius Hypophthalmus) spend their entire lives in fresh, room-temperature water, The result is collagen that more closely resembles the amino acid profile of human skin compared to other marine sources. This means that more amino acids delivered to the cells are viable and can be metabolized through various anabolic processes.

2. Purity: exceptional purity with no heavy metals

Collagen peptides and gelatin sourced from tropical freshwater fish offer unmatched purity. Studies have shown that marine collagen from ocean dwelling-fish can be contaminated with heavy metals and other contaminants. Our freshwater, farm-raised fish minimize this risk. And, because Vinh Wellness collagen is single-sourced, you get a level of product uniformity batch-to-batch and year-to-year-that would otherwise be impossible to match.

3. Scent: freshwater imparts less odor and taste

Collagen peptides and gelatin sourced from sea fish contain higher sodium levels, which can influence taste. Since Vinh Wellness collagen peptide and gelatin products are sourced from freshwater fish, they are naturally low in sodium. Also, marine collagen made from ocean-dwelling fish is often produced by blending the skins of a wide variety of species. In addition to the lack of traceability and uniformity, this practice is more likely to add unwanted odors and favors to the collagen. This is not an issue with our highly controlled, single-sourced, freshwater production.

4. Efficacy: unique beneficial amino acid chains

Vinh Wellness collagen peptides and gelatin contain a unique amino acid profile. Our single-sourced Pangasius fish is an excellent source of branched-chain amino acids (BCAA), isoleucine, leucine, and valine. Compared to other marine sources, Vinh Wellness collagen also contains higher concentrations of proline, hydroxyproline, lysine, and phenylalanine. In addition to providing specific health benefits, our single-sourced processing means Vinh Wellness can deliver this unique amino acid profile consistently, batch-to-batch and year-to-year.

HOW Single-sourced PRODUCTION BENEFITS YOUR BUSINESS, YOUR CUSTOMERS, AND OUR PLANET.

A NEW STANDARD FOR COLLAGEN PEPTIDES AND GELATIN

When producing collagen peptides and gelatin, the raw ingredients affect the purity efficacy and safety of the end products. Raw ingredients are mainly derived from the refuse of food processing operations. While most producers try to maintain a quality standard for these raw ingredients, there is only so much that can be controlled. That's because the raw ingredients are sourced from third-party slaughterhouses or fish processing plants

Marine collagen faces even greater hurdles in this regard. That's because each fish species has a different amino acid profile, which affects the chemical composition of the collagen peptide and gelatin produced from them. Marine collagen from ocean-dwelling fish is often made from blends of different species. Only single-sourced collagen can deliver the same unique amino acid profile consistently, time after time.

At Vinh Wellness, we exercise total control of production as well as over our raw ingredients. Our ASC-certified aquaculture unit controls every aspect of the fish's life cycle from breeding and feeding to harvesting and processing. Collagen and gelatin derived from a single source in this unique manner have the dual advantages of uniformity and traceability. Buyers know that the resulting product is verifiably safe, pure, and produced in an ethical and environmentally-sustainable manner from the start.

Four benefits of our single-sourced production

1. Traceability: The World's most traceable collagen peptides and gelatin

How can you be sure that your wild-caught fish were not tainted with plastics or heavy metals, or captured with non-sustainable fishing methods?

2. Purity: You know exactly what you're getting, every time.

Different fish have different amino acid profiles in their skin and bones that define the amino acid profile of the collagen or gelatin product.

3. Sustainability: Certified sustainable by the world's toughest regulatory bodies.

The raw ingredients used in Vinh Wellness's collagen peptides and gelatin undergo more rigorous certification than most producers' end products.

4. Responsibility: A truly transparent organization provides greater clarity for you and your customers.

Our ethical, transparent business that is socially responsible and consistently exceeds quality requirements adds value to your brand and every product you sell.

The same outstanding amino acid profile every order

Because we control the whole process using only one species of fish, the characteristics of our product vary very little. The table below compares the composition of Vinh Wellness collagen peptides to porcine sources, as well as fish-based sources. Note that our collagen shares many of the qualities of terrestrial-sources along with all the benefits of conventional marine sources.

Amino acid content in Vinh Wellness gelatin compared other fishes, pork and calf gelatins (Residues Per 1000 Total Amino Acid Residues)

	COD	HAKE	ALASKA POLLOCK	TILAPIA	TUNA BL	ACK CARP	VINH WELLNESS PANGASIUS FISH SKIN	PORK SKIN	CALF SKIN
Glycine (Gly)	344	331	358	347	336	314	225	330	313
Basic groups	99	97	91	86	90	88	132	86	101
Lysine (Lys)	29	28	26	25	25	29	29	27	34
Hydroxylysine(Hyl)	6	5	6	8	6	2	6	6	11
Histidine (His)	8	10	8	6	7	4	6	4	5
Arginine (Arg)	56	54	51	47	52	53	91	49	51
Carboxylic groups	130	123	125	117	115	126	138	118	116
Aspartic acid (Asp)	52	49	51	48	44	48	37	46	45
Glutamic acid (Glu)	78	74	74	69	71	78	101	72	71
Hydroxylic groups	142	134	146	140	150	131	177	147	144
Serine (Ser)	64	49	63	35	48	37	19	35	37
Threonine (Thr)	25	22	25	24	21	25	18	18	18
Hydroxyproline (Hyp)	50	59	55	79	78	69	136	91	86
Tyrosine (Tyr)	3	4	3	2	3	0	4	3	3
Hydrophobic groups	286	314	280	309	321	336	326	322	326
Alanine (Ala)	96	119	108	122	119	119	111	112	114
Valine (Val)	18	19	18	15	28	22	23	26	22
Leucine (Leu)	22	23	20	23	21	22	34	24	25
Isoleucine (IIe)	11	9	11	8	7	12	15	10	11
Proline (Pro)	106	114	95	119	117	133	109	132	135
Phenylalanine (Phe)	16	15	12	13	13	14	20	14	13
Methionine (Met)	17	15	16	9	16	14	14	4	6

Reference: Derkach, S.R., Voron'ko, N.G, Kuchina, Y.A. and Kolotova, D.S. (2020). "Modified Fish Gelatin as an Alternative to Mammalian Gelatin in Modern Food Technologies".

Retrieved from https://www.researchgate.n et/publication/347552133_ Polymers_Modified_Fish_Ge latin_as_an_Alternative_to_ Mammalian_Gelatin_in_Mod ern_Food_Technologies

REDEFINING Freshwater Collagen FOR TODAY'S CONSUMER.

SUSTAINABLY PRODUCED, SINGLE-SOURCED FRESHWATER COLLAGEN PEPTIDES.



Vinh Wellness collagen is a pure, derived from our own sustainably farmed, tropical, freshwater fish — an extremely stable, fully traceable source. As a result, our products are consistent with exceptional quality and ideally suited to the most demanding applications in pharmaceutical-grade and food-grade.

Unique medicinal properties:

Vinh Wellness collagen is derived from one species of tropical freshwater fish called Pangasius. That gives Vinh Wellness collagen a unique and highly beneficial amino acid profile. Vinh Wellness collagen is characterized by high concentrations of glycine, proline, and hydroxyproline, which represent 50% of total amino acids.

Additional benefits of Vinh Wellness collagen

Vinh Wellness collagen is highly soluble and 100% natural, containing no artificial colors, flavors, additives, or preservatives. It is also free of fat, carbs, sugar, and cholesterol. Unlike collagen from ocean fish, Vinh Wellness collagen is low in sodium. In addition, our collagen is Halal certified and free of pork or beef products. That means Vinh Wellness collagen is widely accepted across cultures and religions.

Request a sample

Visit **vinhwellness.com** to learn more and request a sample.

Suitable applications

1. Health and wellness

Vinh Wellness collagen is easily absorbed by the body, and helps:

- Maintain connective tissues
- Build muscle
- Enhance joint structure

2. Nutraceuticals

For nutritional and dietary products, Vinh Wellness collagen is well suited for:

- Amino acid supplements
- Weight management products
- Any product aimed at preventing wrinkles and promoting healthy, smoother, younger-looking skin

3. Cosmeceutical

For beauty care and anti-aging products, Vinh Wellness collagen:

- Improve skin elasticity
- Enhance water absorption capacity

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Aid in wrinkle reduction



REDEFINING Freshwater Collagen FOR TODAY'S CONSUMER.

SUSTAINABLY PRODUCED, SINGLE-SOURCED FRESHWATER GELATIN.



Vinh Wellness gelatin is pure, pharmaceutical - grade freshwater gelatin derived from our own sustainably-farmed, food-grade, tropical, freshwater fish - an extremely stable, fully traceable source.

Unique characteristics

Vinh Wellness gelatin delivers a unique amino acid profile, characterized by a high content of glycine, proline, and hydroxyproline, accounting for about half of total amino acids. Vinh Wellness gelatin is derived from one species of freshwater, tropical fish called pangasius hypophthalmus. That gives us a unique and highly beneficial amino acid profile. Vinh Wellness gelatin contains high concentrations of glycine, proline, and hydroxyproline, which represent 50% of total amino acids.

Additional benefits of Vinh Wellness gelatin

Vinh Wellness gelatin meets the most stringent demands of the pharmaceutical industry. This also makes our gelatin a good choice for use in high-end food and beverage applications. And, because it contains no pork or beef products, Vinh Wellness gelatin is widely accepted across cultures and religions.

Request a sample

Visit **vinhwellness.com** to learn more and request a sample.

Suitable applications

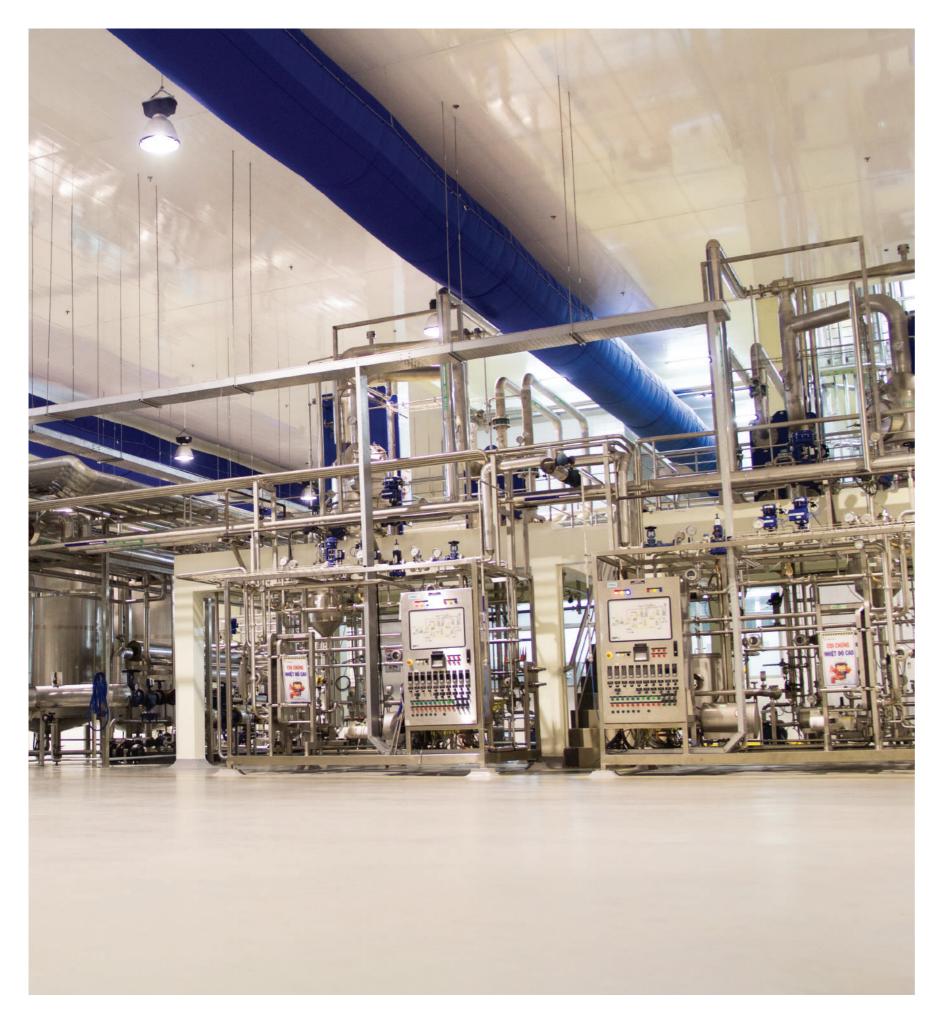
1. Pharmaceutical

- Soft capsules
- Companies seeking to enhance their brand's environmental or social responsibility profile.
- Products with international or cross-cultural distribution.

2. Food & beverage

- High-end food and beverage applications
- Companies seeking to enhance their brand's environmental or social responsibility profile
- Products with international or cross-cultural distribution.





MODERN AND SOPHISTICATED FACILITIES

With our state of the art processing plant in Dong Thap, we are able to provide the highest-grade, freshwater collagen and gelatin using the latest machinery. Our modern processing plant meets European standards using a closed-loop, clean-in-place system for high levels of hygiene that is certified by WHO-GMP, HACCP and ISO.

A MULTI-LEVEL APPROACH **TO SERVICE**

Vinh Wellness believes that manufacturing premium products is just one element of our success. Our accompanying service ensures that we equally match our high quality products. Our premium support includes:

- Formulation support, research, manufacturing under our clients' brands
- Customization for special requests or technical questions
 Extensive quality control checks on all products
- Highly personalized support before, during, and after sales



CERTIFIED SAFE, SUSTAINABLE, AND RESPONSIBLE



Sustainability is progressively growing on the minds of consumers. While plenty of companies are scrambling to make their operations more sustainable, Vinh Wellness has never done it any other way. Sustainability is a key principle on which our business was founded. We can provide complete traceability because we control every aspect of production and processing from the moment our fish are hatched until they are packaged as Vinh Wellness collagen peptides and gelatin.

From the beginning, we were determined to not just to meet the most rigorous global requirements, but to exceed them in every area, including food safety, labeling, traceability, environmental protection, and social responsibility. It is not just talk you can see it in our accomplishments. Our production process has earned every major international certification in our industry.



Good Manufacturing Practices (GMP)

Vinh Wellness conforms to the requirements of Good Manufacturing Practices, of Good Laboratory Practices and Good Storage Practices for manufacturing collagen and gelatin used in pharmaceutical products as recommended by the World Health Organization (WHO)



ISO 9001: Quality Management

The most widely recognized international certification in the aquaculture industry, it assures our production adheres to tough standards for environmental protection, community factors, food safety, and traceability.



Best Aquaculture Practices (BAP)

Certification ensures food safety, environmental protection, traceability, animal welfare, and social responsibility. In 2015, we became the first organization in the world to be certified BAP 4 Stars.



Aquaculture Stewardship Council (ASC)

The most widely recognized international certification in the aquaculture industry, it assures our production adheres to tough standards for environmental protection, community factors, food safety, and traceability.





Halal Certification

Halal Certification is an assurance that Vinh Wellness products have been investigated and conform to the Islamic Sharia laws, and are suitable for consumption by Muslims.



ISO 14001: Environmental Management

Specifies requirements for an environmental management system. Demonstrates the presence of an effective environmental management system. The focus for Vinh Hoan is on our wastewater management systems.



Global Good Aquaculture Practices (GLOBAL GAP)

Established to set standards for agricultural products all over the world with the aim of building customer confidence, it covers food safety, traceability, staff safety and health, and environmental protection.



Aquaculture Stewardship Council for Chain of Custody (ASC-CoC)

Chain of Custody (CoC) certification ensures that every body trading in ASC certified sustainable products has effective traceability systems in place. This assures consumers that the ASC labeled products they buy have been sourced legally from a certified sustainably responsible source, has been separated from non-certified products, and can be traced along the supply chain from farm to the final sale.

VINH WELLNESS

Contact us



- Facebook.com/vinhwellness
- in Linkedin/vinh wellness
- Youtube/vinh wellness

If you have any questions about our products, would like to talk to a sales representative or just want to learn more about what we're up to, we'd love to hear from you.

Please visit our website vinhwellness.com to learn more about our company and products. There you can also have samples sent, sign up for our newsletter, find materials to download, or drop us an email to simply raise a request at wellness@vinhhoan.com.

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