

Start with the capsule shell. It is easy to scan a supplement label for the active ingredients and miss the part you swallow around them—but the shell can determine whether a capsule is suitable for a vegan diet. Pullulan is often used as a plant-based alternative to gelatin, and a pullulan shell is generally vegan. Still, the word “pullulan” alone cannot answer every sourcing and manufacturing question.

For athletes choosing supplements—especially people competing in tested events—the useful question is not just “Is pullulan plant-based?” It is “What is this particular capsule made from, what else is in the product, and what evidence supports the label claim?” Here is how to check.

What Is a Pullulan Capsule?

Pullulan is a polysaccharide, a type of carbohydrate made by fermentation. Manufacturers typically produce it by feeding a microorganism, commonly *Aureobasidium pullulans*, a carbohydrate source such as starch or sugar. The resulting ingredient can form a clear, flexible film, which makes it useful for capsule shells.

That process is why you may see pullulan described as a **starch fermented capsule** or hear about **pullulan fermentation**. The name describes the material and how it is made; it does not, by itself, identify the original crop, the fermentation medium, or every processing aid used along the way.

Is Pullulan Itself Vegan?

Pullulan is generally considered a vegan capsule material because it is produced through microbial fermentation rather than obtained from animal tissue. It is not gelatin, which is typically made from animal collagen. Pullulan is also different from cellulose, another common plant-based capsule material.

That makes a pullulan shell a strong vegan signal—but not a complete guarantee about the finished supplement. The capsule might contain non-vegan ingredients inside, and a company’s sourcing or manufacturing details may need clarification. If you avoid animal-derived processing aids as well as animal ingredients, ask the manufacturer specifically about those practices.

Capsule Shells and Softgels Are Not the Same Thing

Hard capsules and softgels often use different materials. A two-piece hard capsule may be made from gelatin, pullulan, or cellulose. Traditional softgels commonly use gelatin, along with plasticizers such as glycerin or sorbitol. A vegan softgel is possible, but it needs an alternative shell formulation—often involving starches, modified starch, carrageenan, or other non-gelatin materials.

Do not assume a product is vegan because the contents sound plant-based, or because the capsule looks clear. A clear shell is not proof of pullulan. Likewise, “vegetable capsule” is helpful wording, but it does not tell you exactly which material or processing aids were used.

Label wording	What it may indicate	What to verify
Pullulan capsule	A shell made with pullulan, commonly used as a vegan alternative to gelatin	Whether the full product and relevant processing aids meet your standards
Vegetable capsule	A non-gelatin capsule, often cellulose-based	The specific shell material and any additional ingredients
Gelatin capsule	An animal-derived shell	Usually not suitable for a vegan product
Vegan softgel	A softgel designed without gelatin	The alternative shell ingredients and the company’s vegan substantiation

“Vegan” Is Not a Federally Defined Label Term

In the United States, “vegan” is not a federally standardized food or dietary-supplement certification with one universal ingredient checklist. That does not mean companies can make any claim they want: labeling must still comply with applicable rules and cannot be misleading. But the word alone does not tell you which definition a brand follows, whether it considers processing aids, or whether an independent organization has reviewed the product.

That gap matters. One company may use “vegan” to mean that no animal-derived ingredients appear on the ingredient panel. Another may also review processing aids, manufacturing lines, or supplier documentation. If your standard is strict, ask the company what its claim covers instead of relying only on front-label language.

What Does Certified Vegan Mean?

Certified Vegan is a third-party certification and trademark program. A certification mark can provide more assurance than an unsupported “vegan” statement because the product has been reviewed against that program’s criteria. Still, check the actual product and mark: certification may apply to particular products or formulations, not every item a company sells.

A logo is useful evidence, but it is not a substitute for checking the package you are buying. Formulas can change, and a company’s broad “vegan” messaging may not apply to every capsule, softgel, flavor, or product line.

Look Beyond the Shell for Hidden Animal-Derived Ingredients

A pullulan capsule may be vegan while the product inside is not. Review the entire ingredient list, including “other ingredients,” flavor systems, coatings, and allergen statements. A clean-looking front label does not tell you what is in the capsule or how it was made.



- **Gelatin:** Common in capsules and softgels; animal-derived unless a clearly identified alternative is used.
- **Glycerin:** Can come from plant or animal sources. Ask the manufacturer if the source is not stated.
- **Stearates:** Magnesium stearate and stearic acid can have different sources. The ingredient name alone may not settle the question.
- **Vitamin D3:** Often sourced from lanolin, though vegan forms made from lichen are available.

- **Colorants and coatings:** Some, such as carmine, are animal-derived. Check less familiar ingredients rather than guessing from their names.
- **Flavorings:** “Natural flavors” is too vague to confirm vegan status. Ask what they are derived from and whether animal-derived carriers or processing aids are involved.

I keep a running note of ingredients that sound planty but are not necessarily plant-derived. The practical lesson: do not infer an ingredient’s source from a friendly-sounding name. And if a product lists “capsule” without saying what the capsule is made of, ask. The shell material is a basic detail, not a trade secret.

What Organic Certification Does—and Does Not—Tell You

USDA Organic and vegan are separate claims. Organic rules concern how covered agricultural ingredients are produced and handled; they do not certify a product as vegan. An organic supplement may contain animal-derived ingredients, and a vegan supplement may not be organic.

USDA organic labeling also uses specific percentage categories. In general, a product labeled **“organic”** must contain at least 95% organically produced ingredients, excluding water and salt, with the remaining ingredients meeting applicable requirements. A product labeled **“made with organic [specified ingredients or food groups]”** generally must contain at least 70% organic ingredients. Products below 70% may identify specific certified organic ingredients in the ingredient statement, but cannot use the USDA Organic seal or make the “organic” claim on the principal display panel in the same way.

Those percentages are about organic content—not the percentage of the formula that is plant-based, and not a vegan threshold. For dietary supplements, the exact organic claim depends on the product and applicable USDA National Organic Program requirements, so look for the relevant certification and labeling rather than treating “organic” as a synonym for “vegan.”



How to Verify a Pullulan Capsule

1. **Read the full label.** Check the capsule material, active ingredients, other ingredients, flavorings, and allergen statement.

2. **Find product-specific evidence.** Look for a recognized third-party vegan mark, such as Certified Vegan, on that specific product—not just a general statement on the brand website.
3. **Ask targeted questions.** If the label is unclear, ask whether the shell is pullulan, cellulose, gelatin, or another material; whether glycerin or stearates are animal- or plant-derived; and how “natural flavors” are sourced.
4. **Review available documentation.** Batch lab reports and a Certificate of analysis (COA) can help confirm identity, potency, contaminants, or other testing details. However, a standard COA does not automatically verify vegan sourcing. Ask whether the documents address the specific concern you have.
5. **Recheck after formula changes.** Packaging and suppliers can change, so verify the current product rather than relying on an old label photo or a past answer.

When I worked with athletes, I learned that documentation answers different questions depending on what it was designed to test. A batch lab report may be valuable for quality and safety, while a COA may identify measured specifications for a particular batch. Neither should be treated as proof of vegan status unless it explicitly documents the relevant ingredients or sourcing—and even then, understand its scope.

Questions Worth Sending to a Brand

A concise, specific email usually gets a more useful answer than “Is this vegan?” For example:

- What is the capsule shell made from, and is it a pullulan capsule or another material?
- Are glycerin, stearates, flavors, colors, or processing aids animal-derived?
- Does your vegan claim cover the capsule shell, the full formula, and processing aids?
- Do you have product-specific third-party certification or supplier documentation?
- Can you share the current batch lab reports or COA, and explain what those documents do and do not verify?

Brands such as Joy Organics may communicate vegan or other product attributes, but evaluate the specific formula and current product documentation rather than assuming that one claim applies to every item in a catalog. Likewise, editorial coverage from Athleisure Mag may help consumers discover products, but a publication mention is not the same as a certification or an independent ingredient audit.

The Bottom Line

Pullulan is generally a vegan capsule-shell material made through fermentation, often using a starch or sugar feedstock. So if the question is whether pullulan itself is animal-derived, the answer is generally no. But a vegan capsule shell does not automatically make the entire supplement vegan.

Check the shell, the ingredients inside it, and less obvious sources such as glycerin, stearates, and “natural flavors.” Remember that “vegan” [athleisuremag.com](https://www.athleisuremag.com) is not a federally standardized certification term, and USDA Organic percentages address organic ingredients—not vegan status. A credible third-party mark, clear manufacturer answers, and appropriately scoped documentation offer a stronger basis for deciding than a front-label claim alone.