

National Organic Standards Board (NOSB)
Handling Subcommittee (HS)
Agar-Agar Reclassification Discussion Document
Fall 2026

Summary of Issue

Agar-agar is currently listed at 7 CFR 205.605(a) as an allowed nonsynthetic substance for use in organic handling. However, the 2025 TR concluded that the most widely used form of agar-agar is synthetic because it is alkali extracted. To resolve confusion and ensure consistency in use of this material, the Handling Subcommittee is considering adding synthetic agar-agar at § 205.605(b). This change would align the regulations with current practice.

Background

In 2011, the Handling Subcommittee voted unanimously to add agar-agar to the list of allowed synthetics at § 205.605(b), while retaining the nonsynthetic listing at § 205.605(a). However, based on public comments, the Subcommittee ultimately determined that the classification determination should be made after the NOP Guidance 5033-1, Decision Tree for Classification of Materials as Synthetic or Nonsynthetic, was finalized. That Guidance has been completed, and the 2025 TR concludes that the most widely used form of agar-agar – alkali-extracted – is synthetic [2025 TR, line 472].

Agar-agar is a mixture of polysaccharides derived from the cell walls of red algae (seaweed) that live in marine environments, mainly from the cultivated genus *Gracilaria*. The amount and composition of agar-agar produced is highly variable within and across individuals, species, locations, and time of year [2025 TR, lines 169-170]. Specific manufacturing processes are generally confidential.

Algae are cultivated on floating rafts, bottom cultivation or in tanks or ponds. Algae that washes ashore may also be gathered. Algae are harvested, washed, and dried by sun or in ovens.

Prior to extraction, the *Gracilaria* species are usually subjected to alkaline pretreatment (heated in a sodium hydroxide solution); others may receive mild acidic pretreatments. Alkaline pretreatment is used to bring about a chemical change in the polysaccharides that produce agar-agar with increased gel strength. Without this pretreatment, the gels extracted from *Gracilaria* species would be too weak for most commercial production [2025 TR, lines 138-142]. Other algal species (*Gelidium* and *Pterocladia*) have a more active natural process that results in higher gel strength and lower gelling temperatures, but these species are much more difficult to cultivate; demand for the agar-agar from these species is high for use in pharmacology and microbiology applications, and shortages have occurred [2025 TR, lines 146-151].

After pretreatment, the agar-agar is extracted with boiling or hot water, followed by filtration. Water is removed from the gel through a freeze-thaw process or by mechanical pressure. The gel is then dried with hot air and may be shredded or milled, resulting in a finished product of flakes, strips, or powder.

Discussion

There appears to be general consensus that the agar-agar currently in use by many organic processors is classified as “synthetic.” In the sunset review process for agar-agar, the NOSB has repeatedly determined that agar-agar produced from *Gracilaria* through the alkaline process meets the criteria in 7 USC 6517(c)(1). In addition, this material meets the criteria for synthetic processing aids and adjuvants in 7 CFR 205.600(b). For accuracy, if its use should continue, it should be listed at § 205.605(b). Comments that informed the Spring 2026 NOSB meeting indicated that agar-agar is in use, is necessary, and there does not appear to be

adequate supply of the nonsynthetic version to meet the needs of organic producers. Accordingly, based on current practice and need, it appears appropriate to add agar-agar to § 205.605(b), while retaining the current listing at § 205.605(a).

Questions for Stakeholders

None

Subcommittee Vote:

Motion to accept the discussion document on 1) classifying agar-agar produced using a synthetic pretreatment that brings about a chemical change in the polysaccharides as synthetic, and 2) adding agar-agar to 7 CFR 205.605(b).

Motioned by: Allison Johnson

Seconded by: Amanda Felder

Yes: 4 No: 0 Abstain: 0 Recuse: 0 Absent: 0