



What is JECFA?

The Joint Expert Committee on Food Additives (JECFA) is an international expert scientific committee administered jointly by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO).

JECFA independently performs risk assessments and provides recommendations on the use of additives in foods to FAO and WHO. JECFA is one of the most respected scientific advisory groups in the world.

What is an ADI?

According to JECFA, an Acceptable Daily Intake, or ADI, is “An estimate of the amount of a substance in food or drinking water, expressed on a body-weight basis, that can be ingested daily over a lifetime without appreciable risk (standard human = 60 kg).” JECFA assigns an ADI to all additives it reviews.

What is the ADI for carrageenan?

JECFA has historically assigned an ADI for carrageenan of “not specified.” This means that, in the opinion of the Committee, carrageenan does not represent any potential hazard to human health. However, as a general principle, JECFA does not consider an ADI as being applicable to infants under the age of 12 weeks.

Thus, JECFA reviewed the research on carrageenan safety to evaluate its use in products intended for infants under 12 weeks of age. Any questions about the suitability of carrageenan in infant formula are addressed by the recent JECFA recommendation.

Why did JECFA issue its recommendation regarding the use of carrageenan as an ingredient in infant formula?

To address an ADI of “not specified” and questions regarding the safety of an additive for infants under 12 weeks old, specific data is needed to demonstrate the safety of a substance in this very sensitive population.

Carrageenan was one of four food additives reviewed in 2014 by a special JECFA committee for use in infant formula and formula for special medical purposes. While the existing data on carrageenan did not raise concerns, it was the lack of data on the potential impact carrageenan could have on the immature gastrointestinal and immune systems that initiated review of all relevant data by the JECFA. Therefore, the committee reviewed all available literature on carrageenan, including any new and unpublished data, through a call for data.

Why is carrageenan in infant formula?

Carrageenan is added to infant formula as a stabilizing agent. In liquid formula it assures that the ingredients in the formula do not separate, potentially leading to unequal nutrition delivery. This function is critical to ensuring that vital nutrients remain stable and available to infants that may consume infant formula as their sole source of nutrition.

Are JECFA conclusions always followed?

A JECFA conclusion is one of the most important safety testimonials any food additive can receive. JECFA reviews carry significant weight in global regulatory decisions on the use of food additives. Its reports are used to guide food additive regulatory approvals around the world and inform the Codex Alimentarius Committee on Food Additives, which sets international consensus standards on the use of food additives.

What did JECFA base its findings on?

JECFA carefully reviewed the body of available scientific research on carrageenan safety, including any new research since its last recommendation. One of the pivotal studies in JECFA's review of carrageenan was a new, unpublished study of piglets that were fed carrageenan to simulate human infants consuming carrageenan in infant formula. Piglets were picked because they most closely resemble the way humans digest food. It was only after a careful review of all of the scientific evidence that JECFA published its finding.

How can JECFA find that carrageenan is safe for use in infant formula when others say it is not?

Some critics of carrageenan have cited scientific findings in regulatory comments or in social media that refer to animal testing using poligeenan, a substance sometimes improperly referred to as 'degraded carrageenan' that is never used in foods. Other critics have suggested that food-grade carrageenan might break down during digestion into a potentially harmful substance.

Informed, carefully conducted science has consistently shown that food-grade carrageenan is safe and binds so tightly to protein that it cannot be broken down into poligeenan during digestion. Further, the necessary conditions to create poligeenan do not exist in the human digestive tract.

JECFA based its findings on the totality of the evidence and the scientific research that is most applicable to human infants consuming carrageenan in infant formula. Based on its thorough review of this evidence, JECFA found carrageenan to be safe for this important use.

Would Carrageenan be a listed ingredient?

Carrageenan is a listed ingredient in the U.S. and would be subject to labeling requirements as determined by other global regulatory agencies.

Will the JECFA finding end issues regarding carrageenan safety?

One must base his or her opinion on informed science, thorough regulatory reviews and the opinions of the world's most respected research groups. Carrageenan has always been found by such organizations to be a safe and valuable food stabilizer and those who have reviewed carrageenan research most carefully continue to say so. However, it is likely that efforts will continue by detractors to discredit these findings. Despite these efforts, consider this:

- *Every recent regulatory decision on carrageenan has declared carrageenan safe, even in infant formula.*
- *People have been consuming carrageenan in its raw, red seaweed form for hundreds of years. Food-grade carrageenan, with the exception of a trace of a processing agent, is exactly the same as the red seaweed you might buy in a health food store.*
- *Uninformed science that tests degraded carrageenan rather than food-grade carrageenan has been justifiably rejected as irrelevant to the carrageenan used in food as a stabilizer.*
 - *Carrageenan has been repeatedly approved as an ingredient in U.S. foods labeled organic. Some producers have halal and kosher certification for their carrageenan products.*
- *Research has consistently shown that carrageenan binds very tightly to protein and is not digested by humans.*