

Shrimp plant-based: Benecel™ MX modified cellulose helps overcome this challenge!

There has been a growing popularity of plant-based foods for not only meat alternatives but also seafood alternatives. Motivations for eating plant-based proteins include seeking a diet with variety, concern for animal welfare, allergen avoidance, and health improvement. This variety of needs has increased innovation in end applications, ingredients, and textures.

Proteins serve a functional as well as a nutritional purpose in the end applications. Replacing animal-based proteins with plant-based proteins is not always easy but can be achieved with the use of hydrocolloids.

Benecel™ MX modified cellulose is specially formulated for meat alternative, seafood alternative, and vegetable-based applications.

Typically, formulations of plant-based foods are made from vegetables, soy, peas, beans, or mushroom. Those ingredients tend to release water and can become mushy during cooking. As a result, the finished product becomes crumbly in texture and looks unappetizing. Sometimes, egg white, which is a protein binder is used in formulas. But egg whites are not suitable for all formulations like vegan or egg free foods.

To imitate the sensorial properties and firm texture characteristic of seafood, we require effective binder with good gelling property to integrate plant proteins concentrates and simulate firmness level in seafood analogs products.

Benecel MX modified cellulose provide texture and function as effective binder help to overcome these challenges.

We can make a plant-based shrimp!

Tests using 3.2% of Benecel™ MX modified cellulose presented shrimp-like texture, firm and elastic bite, increased springiness and chewiness, reduced gumminess and sogginess, shape and moisture retention after cooking and reheating. The appearance of plant-based shrimps made from Benecel™ MX showed a firmer and elastic bite with juicy texture than those of control. The control without modified cellulose appeared shrunken and was very dry after cooling.

Have questions about how Benecel™ MX can help you overcome your plant-based protein challenges?

Contact our solvers to learn more about the benefits of our Benecel™ MX modified cellulose and explore our solutions to your developments!

contato.nutrition@ashland.com