



FORMULA 01-1071A

Chipotle-spiced black bean burgers with Benecel™ A4M modified cellulose

Consumers are increasingly seeking food products free from meat and animal-sourced ingredients such as cheese and egg. Plant-based protein ingredients such as legumes, including soy, are a basis for formulating nutritional, satisfying meat alternatives. However, they lack the functional proteins that create cohesive, gelled textures typical in ground meat products. As a result, the products lack integrity, particularly when cooked, and have a soft, undesirable eating texture.

Benecel™ modified cellulose products provide cohesive and firm texture, and additional stability during various cooking processes because modified cellulose binds the plant protein ingredients and is unique in providing thermal gelation.

Ingredients	Weight %
Cooked black beans, pureed	63.2
Breadcrumbs, plain	6.8
Textured soy protein	4.9
Whole corn kernels, cooked and frozen	8
Onion, minced (fresh)	3.5
Chili powder	0.6
Chipotle chili powder	0.15
Garlic powder	0.2
Cumin	0.15
Salt	0.5
Benecel™ A4M modified cellulose	0.5
Water	11.5
	100.0

Procedure

1. Combine breadcrumbs, textured soy protein, chili powder, garlic powder, cumin, and Benecel™ A4M modified cellulose.
2. Add black bean puree to dry ingredients. Add minced onion and corn. Mix until combined, adding water slowly to combine all ingredients.
3. Allow mixture to rest at ambient temperature for 10 minutes.
4. Weigh out 80 g portions. Form into patties using round form, 8.9 cm in diameter and 1.3 cm in height.
5. Freeze overnight in a blast freezer set to -40°C.

Cooking Instructions:

1. Lightly spray non-stick skillet with cooking oil.
2. Preheat non-stick skillet over medium heat.
3. Place frozen burgers in skillet.
4. Cook for 10 minutes, turning burgers over halfway through cook time.