

POTATO APPLICATION

FILLERS, BINDERS AND THICKENERS



Potatoes[®]
USA



POTATOES AS INGREDIENTS ARE:

- Gluten free
- Nonallergenic
- Recognizable
- Comply with clean-label expectations
- Mild, neutral flavor
- Grown in the USA



BENEFITS OF POTATOES AS FILLERS, BINDERS AND THICKENING INGREDIENTS

EXCELLENT GLUTEN-FREE OPTION

Potatoes in multiple formats are an excellent alternative to wheat in many applications where breadcrumbs or flour are traditionally used. Dehydrated potatoes allow for creation of moist gluten-free products.

IMPROVED BINDING

Potatoes are a functionally equivalent alternative for wheat flour, specifically for binding. Dehydrated potato flakes hold moisture and improve the texture, so the result is juicier. Additionally, this can allow for longer shelf life by helping to prevent the product from drying out.

ENHANCED TEXTURE

When used as a binder or filler, potato ingredients help to create a moister product, resulting in superior mouthfeel compared to a traditional breadcrumb or wheat-based product.

APPEALING FLAVOR

The flavor of the potato really comes through as a fresh, neutral flavor to allow the herbs, seasonings and other highlighted flavors to shine. This allows for development of products with a wide variety of flavor profiles.

APPEALING APPEARANCE

Potatoes can be used as a filler, providing a uniform appearance and creating browning from the natural sugars found in potatoes. Used as a filler, potatoes add a very clean label and provide a neutral flavor, well suited to enhance the flavors of the other ingredients. By using potatoes as a filler, reduced quantities of more expensive proteins will be needed, thus a cost savings may be achieved.





Meatballs made with potato flakes



Meatloaf made with potato flakes

STANDARD BREADING PROCEDURE

When developing products with high percentages of meat as a component, traditional fillers, binders and extenders are typically used to enhance flavor and texture while helping to reduce cost. Potatoes are a great addition to the traditional list of potential fillers, binders and extenders due to the neutral flavor, great moisture capabilities, allowing for a smooth and even texture and a moist finished product. In this application, potatoes are a great gluten-free solution for moistened bread, breadcrumbs or oatmeal in products like meatloaf or meatballs. A notable benefit is the ability to develop gluten-free products without compromising on flavor or texture.

IDEAL POTATO PRODUCTS

- Standard potato flakes or shreds can be used at a one-to-one ratio to breadcrumbs and other grain alternatives.
- Ground potato flakes and flours can be used at approximately half the volume of breadcrumbs or other grain alternatives.

SAMPLE FORMULATION

CLASSIC MEATBALLS

Ground Beef	45%
Onion, minced	23%
Eggs	12%
Ketchup	8%
Potato Flakes	4%
Roasted Peppers, diced	4%
Seasoning	2%
Garlic, minced	1%
Worcestershire Sauce	1%
	<hr/> 100%

■ Combine and form into balls.

■ Bake until cooked to 165°F.

CLASSIC MEATLOAF

Ground Beef	57%
Ground Pork	29%
Eggs	6%
Potato Flakes	3%
Garlic, minced	1%
Ground Pepper	1%
Kosher Salt	1%
Mustard	1%
Worcestershire Sauce	1%
	<hr/> 100%

■ Combine and form into loaves.

■ Bake until cooked to 165°F.

BINDING FOR NON-ANIMAL PROTEIN BURGERS AND PLANT-BASED PROTEINS

Crusting and crunch on the exterior of fried and baked products are at the heart of the menu. The traditional batters, breadings and coatings tend to require gluten or other flours. Utilizing potatoes in this new and on-trend way allows for increased eye appeal, texture and presentation. Fresh potatoes can be spiralized or shredded. Frozen or dehydrated potatoes can be rehydrated to create new applications that add flavor appeal as well as gluten-free options. Using potato flour as the first step helps with even and improved adhesion of the final crusting by absorbing moisture.

IDEAL POTATO PRODUCTS

- Mashed potatoes (made from fresh, frozen or dehydrated flakes) bind and improve texture.
 - Fresh or frozen mashed potatoes can be added directly to finished product. Moisture of prepared or fresh-made mashed potatoes may impact usage levels.
- Dehydrated potato flakes or granules can be rehydrated or added directly.
- Potato flour works similarly to potato flakes and is used at half the amount of potato flakes.

SAMPLE FORMULATION

VEGAN BURGER

Mashed Potatoes	31.8%
Walnuts, chopped	24.5%
Chickpeas, canned	18.4%
Quinoa, cooked	11%
Potato Flakes	4.9%
Apple Cider Vinegar	3.7%
Chia Seeds	2.4%
Canola Oil	1.8%
Garlic, minced	1%
Cumin, ground	0.5%
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	100%

- Combine all ingredients and blend together in a robot coupe.
- Form into patties. (If desired, coat in additional potato flakes.)
- Sear in oil to brown.
- Bake in oven at 400°F for 15 minutes until firm.



Mashed potato and potato flakes bind and improve texture with additional potato flakes for crust.



Mashed potato and potato flakes bind and improve texture.



Potato flakes replace flour in a roux.



Potato flakes thicken traditional gravy.



Use potato flakes for creamier soup.

THICKENER

As a thickener, potatoes provide a creamy texture that holds moisture and provides a smooth and silky mouthfeel. Similar to a traditional roux, potato flour can be used in place of wheat flour as a thickener to achieve a creamy texture, silky mouthfeel and consistent execution. Dehydrated potato flakes, flours, and fresh or frozen potatoes can be incorporated into sauces, soups and gravies to produce great sheen, smooth texture and excellent flavor. Additionally, it is a great gluten-free alternative.

IDEAL POTATO PRODUCTS

- Potato flakes can be added to thicken and will react when heated.
- Potato flour works similarly to potato flakes and is used at half the amount of potato flakes.
- Fresh or frozen mashed potatoes can be added directly to the finished product. Moisture of prepared or fresh-made mashed potatoes may impact usage level.

SAMPLE FORMULATIONS

PORK GRAVY

Ground Sausage	46%
Milk	50%
Potato Flakes	4%
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	100%

- Brown meat.
- Add potato flakes and milk; heat and stir until smooth.

TRADITIONAL GRAVY

Stock	89%
Butter or Fat	6%
Potato Flakes	5%
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	100%

- Combine butter, potato flakes and stock; heat and stir until smooth.

THICKENING SOUP

Broth Soup	95%
Potato Flakes	5%
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	100%

- Add potato flakes to soup; heat and stir until smooth.

AS A BINDER IN DESSERTS

Traditional binders in desserts include cream, egg, starches and flour. In desserts, potatoes can be an effective substitute for some of the eggs, cream or wheat flour for binding. Potato ingredients hold moisture, producing a creamy texture and smooth mouthfeel. This is especially beneficial in dairy-based desserts when used to partially replace cream or eggs, which may also reduce cost.

IDEAL POTATO PRODUCTS

- Fresh or frozen mashed potatoes can be added directly to the finished product. Moisture of prepared or fresh-made mashed potatoes may impact usage levels.
- Potato flakes can be rehydrated or added directly. The liquid components may need to be adjusted accordingly.

SAMPLE FORMULATION

VANILLA FLAN OR CUSTARD

Sweetened Condensed Milk	25%
Evaporated Milk	24%
Eggs	19%
Mashed Potatoes	8%
Sugar	4%
Vanilla	1%
Sugar for Caramelizing	19%
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	100%

- Combine all ingredients except sugar for caramelizing.
- In ramekins, add caramelized sugar.
- Pour in custard.
- Bake in water bath until firm.
- Cool.



Mashed potato binds and improves texture.



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