

By Walter Zuromski, CEC, CCE
and Leah Sarris, Culinary
Nutritionist/Research Chef

Brie-Stuffed Turkey Burgers

This turkey burger stuffed with Brie-flavored cream cheese could be sold as a frozen retail or foodservice item. Two challenges included maintaining a firm cheese filling and getting the burger to keep its shape. Our intent was to keep this application as natural as possible and work with multifunctional ingredients that would deliver great flavor and texture.

We simplified the filling by using a natural Brie flavor instead of fresh cheese. We still used cream cheese as a carrier to make a smoothly textured, lower-cost product, but also added a natural aged-cheese flavor enhancer to increase the umami sensation and craveability. A blend of xanthan, locust bean and guar gums helped the filling hold its shape.

Dried plum purée helped create a moist, stable burger. This natural, multifunctional item known as a fat replacer in baked goods has antimicrobial properties, is a natural humectant, has high fiber and nutrient content, and adds an interesting depth of flavor. In place of egg, iota carrageenan helped bind the meat, while nonfat dry milk solids (NFDMS) replaced the milk. We turned to an all-natural transglutaminase product to “glue” together the uncooked proteins. We simply brushed this around the edges of the patties, pressed them together and chilled, which worked wonders in this application. ●

Formula:

Turkey Burgers

Ingredients	% by Weight
Turkey breast, raw, skin off,	
fat removed.....	73.09
Water	7.29
Celery, 1/8-in. dice, IQF	3.65
Onion, 1/8-in. dice, IQF	5.48
Bread crumbs, plain	3.65
Dried-plum purée.....	2.75
Scallion, 1/8-in. dice, IQF.....	2.51
Iota carrageenan.....	0.65
Kosher salt.....	0.46
NFDMS	0.29
Vegetable base, natural.....	0.14
Black pepper, ground	0.02
Sage, rubbed	0.02
Total:.....	100.00

Brie Filling

Ingredients	% by Weight
Cream cheese, softened.....	87.82
Natural Brie type flavor.....	9.06
Kosher salt	1.76
Black pepper, ground	1.06
Aged cheese flavor enhancer	0.21
Xanthan, locust bean and guar gum blend.....	0.09
Total:.....	100.00

Meat Binder

Ingredients	% by Weight
Water	79.90
Transglutaminase.....	20.10
Total:.....	100.00

Procedure: At least 30 minutes prior to production, blend the water and transglutaminase in a stand-up mixer with a whip attachment until well blended. Store binder covered between 60° to 80°F in order to avoid gelling and oxidation. To make Brie filling, mix all ingredients together on medium in a ribbon blender until smooth and evenly dispersed. Transfer filling to depositing pump set at 0.5-oz. To make turkey burgers, grind the turkey breast through a fine grinding plate at 38° to 40°F into a stainless-steel transportation container. In a V-Mac blender, disperse the carrageenan into the dry turkey burger ingredients. Then add all other turkey burger ingredients, except the ground turkey, and mix on low for 2 minutes to hydrate the gum and evenly disperse spices. Once well blended, add the ground turkey and continue blending for 3 to 4 minutes until fully blended. Extrude the turkey burgers through the patty former set for 2-oz. burgers on a conveyor belt. Set line pump with cheese filling to deposit on every other turkey burger. Spread the transglutaminase solution on each plain patty during the line production. At the end of the line, collect patties and transfer to manual station. Press plain patty and cheese-topped patty together to form a seal around the edges. Package, label and date burgers. Refrigerate for a minimum of 6 hours to allow the transglutaminase to set. Then place in blast chiller and freeze.

Recipe:

Ingredients

Turkey Burgers

- 1 1/4 lbs. ground turkey breast, 7% fat
- 2 tablespoons diced celery
- 1/4 cup diced onion
- 1 teaspoon minced scallion
- 1/2 teaspoon kosher salt
- 1/4 teaspoon coarsely ground black pepper
- 1/4 teaspoon rubbed sage
- 1/4 cup breadcrumbs
- 1 egg
- 1/4 cup milk

Brie Filling

- 6.3 oz. Brie, rind removed
- 6.3 oz. cream cheese
- 1 1/2 teaspoons kosher salt
- 1 teaspoon coarsely ground black pepper
- 2 1/2 teaspoons all-purpose flour
- 2 tablespoons gelatin

Procedure: Grind turkey with fine plate on meat grinder and place into a stainless-steel bowl. Blanch onion and celery and quickly cool; drain well. Add, along with scallions, to the meat mixture. Blend the dry ingredients together with the breadcrumbs and mix with the egg and milk; add to the ground turkey meat. Mix on low speed with paddle attachment until well blended. Form 2-oz. burger patties and chill to 38° to 40°F. For the Brie filling, add all ingredients to a mixer outfitted with paddle attachment; blend well to create a smooth mixture. Spread 1/2 oz. of the Brie filling onto a patty from center to 1/4 in. from the edge. Sprinkle edge with a small amount of gelatin to hold the patties together. Place a plain patty on top of the cheese-topped patty and press the edges together and form a burger with a diameter of about 4 to 6 in. Chill for at least 2 hours. *Serving suggestion:* Grill the stuffed turkey burgers to 150°F; don't press while cooking. Serve on a whole-wheat hamburger bun with lettuce, tomato and onion. Yields six stuffed burgers.