

recipe redux

Thai Chicken Soup With Coconut Milk and Galangal

By Rachel Zemser, CCS

Asian food has long been a popular ethnic cuisine, and many dishes are now as American as hamburgers, pizza, tacos and fried rice. American diners are seeking bold, regionalized Asian flavors, and the industrial availability of these specialized ingredients is on the increase. Admittedly, using kaffir lime flavor or individually quick-frozen (IQF) cilantro may not be “traditional,” but it certainly can help generate an “authentic” product for manufacturing.

Spicy *tom kah gai* is a classic Thai chicken soup infused with lemongrass, kaffir lime leaves, Thai bird chilies and galangal. The coconut milk mellows the heat from the chiles; flavor balance comes from lime juice and fish sauce.

The primary challenges in scaling-up this soup centered on determining the best ingredient forms and manufacturing process. The goal was to keep the product authentic, even if that means a higher price point, limited market and shorter refrigerated shelf life.

The fresh flavors in *tom kah gai* would be destroyed if manufactured via hot fill (195°F) or retort (250°F) for shelf stability. If hot filled, the soup would have to be acidified below pH 4.6 to prevent outgrowth of *Clostridium botulinum*. Retorting would kill off all pathogenic bacteria without acidification, but produce off flavors, such as scorched coconut milk and dulled lime. The best way to authentically recreate this soup would be to manufacture it as a refrigerated product.

The recipe relies on big pieces of galangal, lemongrass and kaffir lime leaf to infuse flavor and add colorful presentation—but they are not meant to be eaten. For the manufactured version, I wanted to keep the flavor, but remove

the large, nonpalatable pieces, so flavors, smaller herb pieces and purées deliver authentic flavor and help maintain the decorative look. Since straw mushrooms are only available canned (not the most-convenient or safest format for the plant), the formula uses dehydrated oyster mushrooms, instead of fresh, because they are easier to store and less expensive to ship. IQF chicken prevents any potential raw chicken cross-contamination and needs less cook time in the industrial kettle, which

will help maintain the fresh coconut and lime flavors (in the recipe, half of the coconut milk is added near the end of cooking to strengthen the coconut flavor—cooking diminishes coconut milk’s flavor). While the small amount of xanthan gum does slightly increase the viscosity compared to the gold standard, it is necessary to prevent separation and uneven particulate distribution during the pouch fill. When held at 40°F or below, this pouched product has a refrigerated shelf life of 60 days. ●

Recipe:

Ingredients

2 cans (14 fl. oz. each) coconut milk
2 cups chicken stock or broth
3 stalks lemongrass, trimmed, sliced on bias into 3-in. lengths, lightly bruised with a blunt object
5 large kaffir lime leaves, bruised slightly
8 slices galangal, about 1/8 in. thick
6 Thai bird chiles, split lengthwise
1/2 lb. chicken thigh meat, cut into bite-size slices, about 1/4 in. thick
1/2 can (15 oz. can) straw mushrooms, drained (liquid discarded), halved
1/4 cup Thai fish sauce (nam pla)
1/4 teaspoon kosher salt
1/4 cup lime juice
1/4 cup cilantro leaves

Procedure: In a large saucepan, combine one can of coconut milk, chicken stock, lemongrass, kaffir lime leaves, galangal and chiles. Bring to a boil; lower heat and simmer 15 minutes. Add chicken; simmer until chicken is cooked (about 2 minutes). Add mushrooms, second can of coconut milk, fish sauce and salt. Bring back up to hot (but not boiling); add lime juice and adjust seasoning with additional fish sauce and lime juice, as desired. Place a few cilantro leaves in each bowl, then ladle in soup. Serve immediately. Yield: 4 to 6 servings.

Source: “Southeast Asian Flavors,” by Robert Danhi

Formula:

Ingredients..... % by Weight

Coconut milk, 24% fat (±2%)	44.98%
Water	30.31%
Chicken, cooked, 1/4-in. dice, IQF	11.96%
Fish sauce, 20° protein	4.19%
Lemongrass, 1/8-in. dice, IQF	3.89%
Galangal purée (25% water), all-natural, 3° Brix, frozen	2.09%
Oyster mushrooms, 1/2-in. dice, dehydrated	1.00%
Thai chile purée, aseptic	0.45%
Lime juice concentrate, 58° Brix (±8°)	0.43%
Chicken flavor broth concentrate, 100X paste, 20% (±2%)	0.28%
Salt	0.21%
Rendered chicken fat	0.11%
Kaffir lime oil, natural	0.05%
Xanthan gum, prehydrated	0.05%

Total:..... 100.00

Procedure: In a steam-jacketed kettle, aggressively combine the coconut milk, water, chicken broth concentrate, rendered chicken fat and xanthan gum until fully incorporated. Add in the chicken, lemongrass, galangal and chile purées, mushrooms, salt, and kaffir lime oil. Combine until fully incorporated while bringing the product up to 195°F; then add the lime juice concentrate and fish sauce. Hold product at 195°F during packaging and chill to 40°F. This pouched product (64 oz. maximum) must be cased and shipped at or below 40°F. End user: Retherm to hot—not boiling—in 180 to 190 °F water bath; garnish with chopped, fresh cilantro before serving.



Photo: Robert Danhi