Salmon

Ingredient of the Month

Presented by ACF Chef & Child Foundation and Clemson University
Salmon are anadromous, which means they migrate from their normal saltwater habitat to reproduce in a freshwater environment. While there are several varieties of North American salmon, all but one are found off the Pacific coast, and approximately 90 percent come from Alaskan waters. Early summer through fall is the best time for the Pacific varieties of fresh salmon. Once abundant, Atlantic salmon has diminished greatly over the years. Canada provides most of the Atlantic salmon, with a season that spans from summer through early winter. There is also an increased volume of farmed salmon being imported into the United States, especially from areas such as Norway and Chile.

Varieties and uses
- **Farm-raised** salmon generally contain more calories, more fat and, consequently, more omega-3 fatty acids than wild fish (2.15 grams versus 1.06). Farm-raised flavors tend to be milder.
- **Wild-caught** salmon, especially from saltwater, tend to have a more assertive flavor. Chinook, or king salmon, is considered by many to be the superior of the Pacific salmon varieties and can reach up to 120 pounds. It’s known for its high-fat content and soft-textured flesh that ranges from off-white to bright red. Coho, or silver salmon, is another high-fat variety that has a firm texture and ranges from pink to red-orange flesh. Less fatty varieties with lighter flavors are pink or humpback salmon.
- **Canned** salmon is commonly made from pink and sockeye salmon. While the red-hued, firm sockeye tends to win in the flavor department, the cheaper pink variety has slightly higher omega-3 content (1.65 grams versus 1.15).
- **Smoked** salmon preserves the salmon by exposing it to high heat, creating a smoky, flaky fish. To get the smooth texture associated with lox, salmon is dunked in salt brine and then cold smoked at a lower temperature for a longer time. Both smoking processes degrade protein, fat and omega-3 values from fresh fish, while also increasing the salt content.

Storage
- The length of time salmon can stay fresh stored depends on when it was caught. Fish that was caught the day before you purchased it can be stored for about four days, while fish that was caught the week before can only be stored for about one or two days. To extend the shelf life of salmon, wrap it well in plastic and place it in the coldest part of the freezer, where it will keep for about two to three weeks.

Healthy ingredient contribution
- **OMEGA-3 FATTY ACIDS**: Also known as polyunsaturated fatty acids (PUFAs), omega-3 fatty acids play a crucial role in brain function as well as normal growth and development. They have shown to reduce the risk of heart disease and can reduce inflammation with respect to cancer and arthritis. The American Heart Association recommends eating salmon or other fatty fish twice a week (1 serving = 3.5 ounces or 85 grams) for the heart-protective benefits associated with omega-3 fatty acids found in their fish oils.
- **VITAMIN A**: While vitamin A plays many important roles in the body, the best known and most clearly understood is its supportive role in vision.
- **B VITAMINS**: Essential for growth, development and a variety of other bodily functions, B vitamins play a major role in the activities of enzymes, proteins that regulate chemical reactions in the body, which are important in turning food into energy and other needed substances.
- **VITAMIN D**: A major function of vitamin D is to regulate calcium and bone metabolism. Just 3.5 ounces of cooked salmon supplies about 90 percent of your daily vitamin D needs.
- **PROTEIN**: All varieties of salmon provide protein.

Serving size
3.5 oz. of wild salmon = 140 calories, 6 grams total fat, 1.56 grams omega-3’s, 20 grams protein
SOUS VIDE CITRUS SALMON

Yield: 4 servings
(serving size: 3.5 oz.)

Ingredients:

- ½ cup nectarine juice
- 1 orange, zested and juiced
- 1 lemon, zested and juiced
- 1 lime, zested and juiced
- 2 T. raspberry wine vinegar
- 1 T. fennel fronds
- 2 t. honey
- 1 t. fresh thyme
- 1 lb. salmon fillets
- 2 t. olive oil
- Freshly ground pepper, to taste

Method:

1. Using a thermal circulating bath, preheat sous vide water to 60°C (140°F).*

2. Combine nectarine juice, orange, lemon, lime, raspberry wine vinegar, fennel, honey and thyme (juice through thyme) in a mixing bowl, stirring well with whisk. Place salmon in large zip-top plastic bag. Add juice mixture to bag. Seal; shake well. Let stand in refrigerator for 20 minutes, turning frequently.

3. Place salmon with marinade in vacuum pouch; seal it using vacuum sealer.

4. Place salmon pouch in heated water bath; cook for 6-8 minutes. Remove salmon from pouch; sprinkle with pepper.

5. Heat olive oil in sauté pan over high heat. Cook salmon 2 minutes on each side; serve immediately.

*Follow manufacturer’s instructions for thermal circulating bath units.

Nutrition Information

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Nutrition Facts based on pouch ingredients only.

This recipe was tested by Clemson University’s Culinary Nutrition Undergraduate Student Research Group.