CHALKY HALIBUT

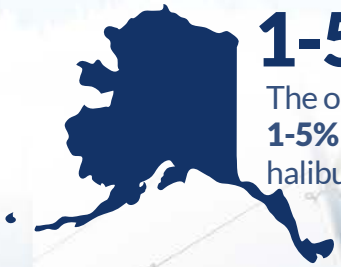
HOW TO IDENTIFY AND BEST UTILIZE CHALKY HALIBUT

The color and texture of halibut flesh are key attributes that affect the perception of quality.

The consumer's perception and market acceptance of these attributes affects the market price and therefore the overall value of the product.

Chalky halibut is a rare and natural condition that affects Atlantic and Pacific halibut, both wild and farmed.

'Chalkiness' in halibut flesh is a post-harvest development that exists on a gradient and evolves over time.



1-5%

The occurrence of chalk is roughly **1-5% of commercially harvested** halibut in Alaska annually.

DETECTING CHALKY HALIBUT

While halibut flesh is typically translucent and firm, chalky halibut flesh is more **OPAQUE** and **DELICATE**.

- **Visually inspect the flesh of the halibut.** Detection is easiest nearer the tail with chalkiness identified by an opaque flesh.
- **Measuring the pH of the halibut flesh.** Measuring roughly 24 hours postmortem can detect the current and estimate the future chalkiness.

pH GRADIENT

LOWER PH	>6.2 NOT CHALKY	ALKALINE
HIGHER ACIDITY	6.0-6.2 SLIGHTLY CHALKY	
CHALKY FLESH	<6.0 CHALKY	ACIDIC

CHALKY HALIBUT PROCESS

1. Halibut is caught
2. High lactic acid accumulates in muscle
3. pH decreases and proteins break down in muscle
4. Chalky appearance after harvest

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CAUSES OF CHALKY HALIBUT

There are many variables that could contribute to the condition of chalky halibut. However, there is not one single variable that has been identified to deter chalkiness from developing in halibut.

Fish behavior

Greater glycogen stores due to a recent feeding and more intense struggle during harvest result in more accumulation of lactic acid.

Seasonality

Research suggests that fall/winter harvest of halibut results in less of an occurrence of chalky flesh.

Male vs Female

Studies have found that males tend to have more frequency of chalky flesh, specifically during the early life stage of male maturation.

Habitat

For wild capture halibut, such as Alaska halibut, there is evidence to support that warmer bottom temperatures are related to increased frequency of chalkiness.

Quality handling

Post-harvest storage at higher temperatures may play a role in increased chalkiness. Bleeding halibut after harvest may decrease the frequency of chalky flesh. Additionally, studies suggest that allowing a rest period (1-2 days) for live halibut after harvest can help clear lactic acid, increase pH, and deter chalky flesh from developing.

RECOMMENDED PREPARATION METHODS FOR CHALKY HALIBUT

- Breading/Frying
- Frying
- High heat/quick sautéing

RECIPES

Alaska Seafood Ceviche (substitute Alaska Halibut)

Alaska Halibut Fish 'n Chips

Alaska Halibut Mandarin

MARKET CONSIDERATIONS

There are differences and similarities of chalky and non-chalky halibut. There are markets for both types of flesh characteristics.

Differences

Appearance

Visually the flesh of chalky halibut is more opaque, or 'cooked' looking in appearance.

Moisture

There is a greater amount of moisture loss during the development of chalky halibut which results in a more delicate, drier fillet.

Texture

Both have large flakes and a firm but tender texture; however, chalky halibut can sometimes become overly soft in certain preparation methods.

Cost

Chalky halibut will most likely be available at a lower cost to the consumer and possibly be more adaptable to different product types at the retail counter or as a menu item at the restaurants.

Similarities

Nutrient Content

The nutrient content of chalky halibut is identical to that of non-chalky halibut.

90	CALORIES
19 G	PROTEIN
1 G	FAT
201 MG	OMEGA-3 (DHA + EPA)

Nutrient Database SR 28, 3.0 oz/85 g serving size

Flavor

The mild, sweet-tasting flavor is similar in both chalky and non-chalky halibut.