

# Shellfish Harvesting Areas

The Shellfish Laboratory in Apalachicola analyzes shellfish growing area water samples from 38 classified areas throughout Florida. Samples are collected by field staff located in five district offices.

## **Western Gulf Coast SEAS**

Port Panama City

1832 B Ave

Panama City, FL 32401

(850) 747-5252

## **Central Gulf Coast SEAS**

260 7th Street

Apalachicola, FL 32320

(850) 653-8317

## **Big Bend Gulf Coast SEAS**

11350 Southwest 153rd Ct.

Cedar Key, FL 32625

(352) 543-5181

## **Southern Gulf Coast SEAS**

1378 Malabar Rd. Suite 1

Palm Bay, FL 32909

(321) 984-4890

## **Atlantic Coast SEAS**

1378 Malabar Rd. S-1

Palm Bay, FL 32909

(321) 984-4890

**Charles H. Bronson**

Commissioner of Agriculture and  
Consumer Services

Department of Agriculture and  
Consumer Services

Division of Aquaculture

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**Florida Department  
of Agriculture and  
Consumer Services**

**Charles H. Bronson**  
Commissioner of Agriculture and  
Consumer Services

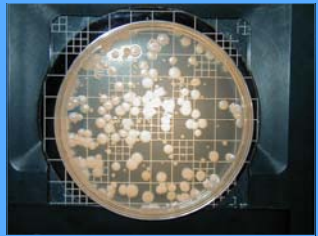
**APALACHICOLA  
SHELLFISH  
LABORATORY**



## Apalachicola Shellfish Center Laboratory

The Apalachicola Shellfish Laboratory is the primary laboratory for the Division of Aquaculture. The lab is a participating analytical laboratory of the National Shellfish Sanitation Program (NSSP), and is certified by the Food and Drug Administration (FDA) to provide bacteriological data for management of Florida's shellfish growing areas. Apalachicola has been the home of the Shellfish Laboratory

since the late 1970's. Annually, the laboratory evaluates approximately 16,000 estuary water samples for the presence of fecal coliform bacteria. Fecal coliform bacteria belong to a



**Bacteria Cultured from Shellfish tissue.**

group of bacteria that are commonly found in the gut tracts of all warm-blooded animals. These bacteria are considered "indicators" for the presence of other more harmful bacteria associated with human sewage. These harmful groups cause diseases such as cholera, typhoid, and gastroenteritis. Along with water samples, oyster and clam samples are analyzed for bacteria.

Growing area water and meat samples are collected by SEAS staff and are sent to the laboratory for sample setup. Prior to sample setup, sample media must be prepared and sterilized. Sample media contains sugars that bacteria use to grow if they are present in water samples.



**Sterilized Bacteria Culture Media.**

Portions of the water samples are inoculated into a series of test tubes containing the sugar media. These tubes are placed in an air incubator that begins to

stimulate growth for three hours and then are transferred to a water bath for an additional 21 hrs, making the total test time 24 hours.

At the completion of the 24 hour period, the samples are removed from the water baths and observed for the presence of gas and effervescence which are produced when the bacteria "ferment" the sugars in the media. Presence of gas indicates a positive tube with fecal coliform bacteria present. The Most Probable Number (MPN) is computed for the five tube/three dilution series and the results are recorded.

Shellfish meat samples (oysters or clams) are also received and analyzed at the laboratory. The samples are collected by field staff and brought to the laboratory. A representative sample of approximately two dozen shellfish are collected, cleaned, placed in containers, and transported on ice.

At the laboratory, the shellfish are cleaned by scrubbing and rinsing using aseptic techniques. The



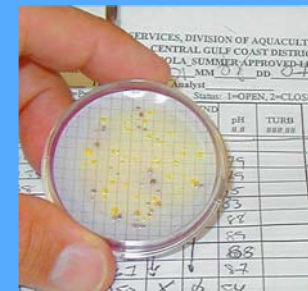
**Samples Incubating in Water Bath.**

shellfish are opened using a sterilized shucking knife, and placed in a blender jar. The shellfish are blended and portions are inoculated into tubes and plates for examination of fecal coliform, total growth plate count, *E. coli*, and *Vibrio* species bacteria.



**Shellfish Meat Sample Preparation.**

The Shellfish Laboratory is actively involved in a number of ongoing studies. The laboratory is investigating the use of membrane filtration by comparing results of this method to the results obtained by the multiple tube method. Also, the Shellfish Laboratory is cooperating with researchers from the University of Florida in the identification of *Vibrio* bacteria in growing waters. Participation in red tide studies with the Florida Marine Research Institute are also ongoing.



**Membrane Filter Sample.**