Paralytic Shellfish Poisoning (PSP)

Disease Name: Paralytic shellfish poisoning syndrome

Organism: Saxitoxins produced by *Alexandrium* species and other dinoflagellates present in shellfish especially during algal blooms known as red tides; however, may occur without red tides.

Incubation period: 5 min - 12 hours after consumption of shellfish.

Infectious period: No secondary transmission documented.

Transmission routes: Foodborne. In Alaska, all documented cases associated with consumption of cockles, clams, mussels, and crab (toxin found in crab viscera).

Treatment for patient: There is no antidote for the toxin. Individuals who experience the first symptoms of PSP should seek immediate medical attention. In severe cases, dyspnea, dysphagia, muscle weakness or frank paralysis, ataxia and respiratory insufficiency may occur. Symptomatic treatment, including ventilatory support, is crucial for successful outcomes. Recovery is usually complete, symptoms usually resolve within hours to days after shellfish ingestion.

Information Needed for the Investigation

Verify the Diagnosis

- Interview ill person or others who shared meal for symptoms: paresthesias (mouth, lips, face, extremities), nausea, vomiting, floating sensation.
- Symptoms, coupled with history of eating shellfish from Alaska beaches equals probable PSP, a public health emergency.

Determine the Extent of Illness

- Obtain list of persons who shared meal from ill patient if possible. Contact local health care provider, PHN, or family member.
- Interview all who shared meal for symptoms, using PSP interview form.

Laboratory Specimens

Patient

- Obtain 25 ml urine within 7 days of consumption of suspect food; ideally as soon as possible. Urine should be labeled with the patient name, DOB, the date and time collected. **Freeze urine until it can be shipped to ASPHL.** Include an ASPHL lab slip with "PSP testing" and date collected written on the upper right-hand corner of the lab slip (see example; form available on-line: http://www.dhss.alaska.gov/dph/Labs/Documents/publications/AncSupplyReq.pdf). ASPHL will forward to CDC for testing (see below).

- Shipping to CDC:
  - Send official Epi email (from Joe or Michael) to CDC (contacts below) to request saxitoxin testing.
  - Contact ASPHL (Dave Verbrugge 334-2156). ASPHL will send urine to CDC lab.
    - Jerry D. Thomas, MD, FACEP, FACMT
      Medical Toxicologist
      Senior Medical Officer
      Centers for Disease Control and Prevention
      National Center for Environmental Health
      Division of Laboratory Sciences
      Emergency Response and Air Toxicants
      Phone : 770-488-7279
      Email: ciq1@cdc.gov ; Cell: 404-518-9438; Fax: 770-488-0181
    - Other CDC contact: Rudolph Johnson Cell: 678-983-8311
      Email: rmj6@cdc.gov

Food

- Obtain suspect shellfish or crabs. Contact DEC, PHN, CHAs or family and ask to save suspect food in refrigerator until notified by state for further instructions.
- Notify DEC Environmental Health Officer who will usually work with you to obtain package, and send food to DEC Environmental Health Lab (EHL) for testing.
- Notify EHL (main number 375-8200 or Matt Forester 375-8204) regarding anticipated delivery of shellfish specimens. Environmental Health Officer may do this.
- Protocol for specimen collection:
  - Collect portions of the meal (15 animals is an adequate number for testing) and store it in a Ziploc® freezer bag.
  - If the shellfish is still in the shell and can be sent immediately to EHL, refrigerate, do not freeze.
  - If any delay is anticipated, freeze the samples.
  - Animals are the preferred specimen. If broth is the only specimen that is available, this may be collected and sent for testing, but will likely have a lower yield for saxitoxin detection.
- Fill out Marine Toxins Form: http://dec.alaska.gov/eh/docs/lab/Forms/Shellfish&SeafoodSubmission.pdf . Document the date, time, and exact location where the shellfish were collected. Don't worry about the commercial info such as permit #, expected sales etc.; just give as much other information as possible (date/time/ type of shellfish (butter clam, cockle, etc).
- Note: Gastric contents are acceptable for saxitoxin testing at the Environmental Health Lab (EHL) **only** if the gastric contents contain whole animals.

Contact and Control Measures

- Identify and evaluate all who shared suspect meal. Anyone with symptoms should be advised to seek medical care immediately.
- Advise all involved not to eat any of suspect food nor food collected from same area.

- Notify DEC Seafood (George Scanlan, 269-7638), DEC Food Safety program Mgr (Kim Stryker 269-7583) and HSS PIO (Dawnell Smith 269-4541) to discuss issuance of PSP alert press release. They will want to know the beach area name and number of cases.

Important Information

- PSP is a public health emergency. The goal is to identify others at risk and evaluate for symptoms of PSP. Notify the regional PHN of a possible outbreak.
- Shellfish sold commercially are routinely tested and safe for consumption. PSP occurs widely in Alaska in connection with ingestion of non-commercial shellfish. Recreational beaches are not considered safe for shellfish gathering and consumption.
- Urine testing by CDC is not considered strict diagnostic testing. There are no standards, i.e., reference ranges, for results; a detection of any STX is considered abnormal, although data do not exist about what if any level might be found in an asymptomatic person or a regular shellfish consumer, etc.

Reporting Requirements

- FTR: write up all confirmed and probable cases.
- Write up case summary and file for all suspected negative cases.
- AK-STARS: enter all suspected, probable and confirmed cases.
- Track saxitoxin results and scan these documents to append to the specific patient in AK-STARS

References

"Paralytic Shellfish Poisoning: The Alaska Problem", UAF School of Fisheries and Ocean Sciences, 1996. http://seagrant.uaf.edu/features/PSP/PSP.pdf.

Section of Epidemiology PSP website:
http://dhss.alaska.gov/dph/Epi/id/Pages/dod/psp/default.aspx

DEC Shellfish website: http://dec.alaska.gov/eh/fss/seafood/Shellfish_Home.html

Case Definition: Saxitoxin

Clinical description

Exposure to saxitoxin most commonly occurs following ingestion of certain fish that contain it in their tissues. Ingestion of saxitoxin can cause numbness of the oral mucosa as quickly as 30 minutes after exposure. In severe poisoning, illness typically progresses rapidly and may include gastrointestinal (nausea, vomiting) and neurological (cranial nerve dysfunction, a floating sensation, headache, muscle weakness, parasthesias and vertigo) signs and symptoms. Respiratory failure and death can occur from paralysis (1-5).

Laboratory criteria for diagnosis

- *Biologic*: A case in which saxitoxin in urine is detected, as determined by the CDC laboratory. (1-5)

- OR-

- *Environmental*: Detection of saxitoxin in ingested compounds or seafood. (7-10)

Case classification

- *Suspected*: A case in which a potentially exposed person is being evaluated by health-care workers or public health officials for poisoning by a particular chemical agent, but no specific credible threat exists.
- *Probable*: A clinically compatible case in which a high index of suspicion (credible threat or patient history regarding location and time) exists for saxitoxin exposure, or an epidemiologic link exists between this case and a laboratory-confirmed case.
- *Confirmed*: A clinically compatible case in which laboratory tests have confirmed exposure.

The case can be confirmed if laboratory testing was not performed because either a predominant amount of clinical and nonspecific laboratory evidence of a particular chemical was present or the etiology of the agent is known with 100% certainty.

Additional resources

1. Gessner BD, Middaugh JP, Doucette GJ. Paralytic shellfish poisoning in Kodiak, Alaska. West J Med 1997:67:351-3.
2. Janiszewski L. The action of toxins on the voltage-gated sodium channel. Pol J Pharmacol Pharm 1990;42:581-8.
3. Rodrigue DC, Etzel RA, Hall S, et al. Lethal paralytic shellfish poisoning in Guatemala. Am J Trop Med Hyg 1990;42:267-71.
4. Shoff WH, Shepherd SM. Scombroid, ciguatera, and other seafood intoxications. In: Ford MD, Delaney KA, Ling LJ, Erickson T, eds. Clinical toxicology. Philadelphia, PA: W.B. Saunders; 2001:959-69.

5. Tunik MG. Chapter 45: Food Poisoning. In: Nelson LS, Lewin NA, Howland MA, Hoffman RS, Goldfrank LR, Flomenbaum NE, eds. Goldfrank's Toxicologic Emergencies. 9th ed. New York, NY: McGraw-Hill; 2011: 668-81.
6. Etheridge SM. Paralytic shellfish poisoning: seafood safety and human health perspectives. Toxicon. 2010 Aug 15; 56(2): 108-22.
7. NIOSH. NIOSH manual of analytical methods [online]. 2003. [cited 2013 Apr 5]. Available from URL: http://www.cdc.gov/niosh/docs/2003-154/.
8. OSHA. Sampling and analytical methods [online]. 2010. [cited 2013 Apr 5]. Available from URL: http://www.osha.gov/dts/sltc/methods/index.html.
9. FDA. Food: Laboratory methods [online]. 2013. [cited 2013 Apr 5]. Available from URL: http://www.fda.gov/Food/FoodScienceResearch/LaboratoryMethods/default.htm.
10. EPA. Selected analytical methods: chemical methods query [online]. 2013. [cited 2013 Apr 5]. Available from URL: http://www.epa.gov/sam/searchchem.htm.

http://www.bt.cdc.gov/agent/saxitoxin/casedef.asp (11/15/2013)

Paralytic Shellfish Poisoning Outbreak Questionnaire

Date ____/____/_____ Time_____

Healthcare provider reporting _____ Phone ( ) _____

Name of patient_____ Phone ( ) _____

Address_____ City_____ State_____

DOB ____/____/_____ Sex: M ☐ F ☐ Race_____

If caller is not a healthcare provider and reports PSP symptoms, was the caller advised to seek immediate medical evaluation? Yes_____ No_____ Comments_____

Symptoms:				**Date/time on onset:**	**Duration:**
Paresthesias	☐ Yes	☐ No	☐ Unk	__/___/_____ ____AM/PM	
(mouth, lips, face, extremities)					
Nausea	☐ Yes	☐ No	☐ Unk	__/___/_____ ____AM/PM	
Vomiting	☐ Yes	☐ No	☐ Unk	__/___/_____ ____AM/PM	
Weakness	☐ Yes	☐ No	☐ Unk	__/___/_____ ____AM/PM	
Ataxia	☐ Yes	☐ No	☐ Unk	__/___/_____ ____AM/PM	
Shortness of breath	☐ Yes	☐ No	☐ Unk	__/___/_____ ____AM/PM	
Difficulty with speech (dysarthria)	☐ Yes	☐ No	☐ Unk	__/___/_____ ____AM/PM	
Dysphagia	☐ Yes	☐ No	☐Unk	__/___/_____ ____AM/PM	
Dizzy	☐ Yes	☐ No	☐Unk	__/___/_____ ____AM/PM	
Headache	☐ Yes	☐ No	☐Unk	__/___/_____ ____AM/PM	
Floating sensation	☐ Yes	☐ No	☐Unk	__/___/_____ ____AM/PM	

Location of beach where shellfish were gathered_____

Date shellfish gathered ____/____/_____ Date shellfish consumed ____/____/_____

Time shellfish consumed _____AM/PM Number of shellfish eaten _____

Type of shellfish: Butter clams Mussels Cockles Razor clams Little Neck clams Crabmeat

Cooked: Yes ☐ No ☐ Method_____

If boiled, was shellfish juice consumed separately? Yes ☐ No ☐

Were siphons or viscera removed prior to eating shellfish? Yes ☐ No ☐

If crabmeat, were any of the intestines eaten? Yes ☐ No ☐

Specimens collected for shipping? Yes ☐ No ☐

How many other people consumed the shellfish? _____ How many became ill? _____

Protocol for specimen collection

Collect portions of the meal and store it in a Ziploc® freezer bag.
If shellfish is still in the shell and can be sent immediately to DEC laboratory, refrigerate. If any delay anticipated, freeze the samples.
If shellfish were steamed or boiled, collect and store the broth separately.
Document the date, time of day, and exact the location where shellfish were collected.
If gastric contents have been collected, freeze and save (only if gastric contents contain whole animals).
If onset of patient symptoms occurred within past 7 days, collect urine and immediately freeze. Shipfrozen to ASPHL.

Environmental Health Laboratory shellfish submission instructions for saxitoxin testing in suspected PSP outbreaks

Please send the frozen shellfish to the Environmental Health Laboratory (EHL) along with the completed Marine Toxins submission form. Packing instructions are as follows:

- Place shellfish and submission form in a sturdy, leak-proof box. A Coleman cooler, fish box (or equivalent) works well for this purpose. Bag the shellfish and add newspaper or other absorbent material in the shipping container for sweating of ice packs or any leaking. Packaging shellfish in envelopes or other non-sturdy, non-leak-proof containers is not acceptable (or legal!) and will result in the samples being rejected by the laboratory.

- Add sufficient frozen gel packs or gel ice to keep samples cool during transport, even if samples are packed frozen. Assemble frozen gel-packs along the bottom and against the sides of the cooler/insulated shipping container. Samples received >10°C interfere with the integrity of the analysis and will be rejected.

- Place completed Marine Toxins Submission Form in a separate Ziploc® bag.

All samples submitted to the EHL are received by microbiologists and laboratory technicians within the EHL Shipping & Receiving department. Our technicians require the following information as soon as your samples are shipped so they may arrange for courier or staff to pick-up and deliver to the lab:

- Date shipped
- Your name and contact telephone number
- Number of pieces (coolers, boxes, etc.)
- Content of shipment
- Test(s) requested
- Freight carrier
    - Name of carrier
    - The waybill number (or other carrier tracking number)
    - Flight number, if available
- Date and time delivery is expected for delivery in Anchorage

Please notify EHL Shipping & Receiving by phone, (907) 375-8231, or email the above information to: DEC.EH-Lab-ShippingReceiving@alaska.gov.

NOTE this phone is not staffed 24 hours a day; please leave a detailed message.

Address all sample shipping labels as follows:

ADEC – EH Laboratory
5251 Dr Martin Luther King Jr Ave
(or 5251 Dr MLK Jr Ave) Anchorage, AK 99507-1293
NOA 375-8231

You can also call the Section of Epidemiology (907-269-8000, or after hours at 800-478-0084) with the air-bill number, airline and arrival time. DO NOT ship specimens on the weekend without prior notification or arrangements.

The EHL Sample Submission Manual is available at:
http://dec.alaska.gov/eh/docs/lab/Lab%20Sample%20Submission%20Manual.pdf

Anchorage
Alaska State Public Health Laboratory
PO Box 196093
Anchorage, AK 99507
Phone: (907) 334-2100
HIPAA Compliant Fax: (907) 334-2161

Anchorage Lab Request Form *v05/08/15*

PSP test

Patient Information: Preprinted Labels are Recommended

Identifiers on the specimen itself should match the Lab Request exactly.
At a minimum, the specimen should be labeled with:
The patient's first and last name OR unique ID
The patient's date of birth (DOB) OR Medical Record #

☐ Non-Human Sample

Unique Patient ID (Chart #, Prison #):

Collection Date

Collection Time

Last Name:

First Name:

MI:

DOB (MM/DD/YYYY):

Gender:

Race:

DOD (Date of Death):

City/Village:

Medicare #:

Medicaid #:

Submitter Information

Ordering Clinician:

Physician UPIN:

Facility Name: (Hospital/Clinic/Corrections, etc.)

HIPAA Compliant Fax #:

Mailing Address:

Phone Number:

City:

State:

Zip:

ICD9/ICD10 Diagnosis Codes:

Special Project Code:

Chlamydia, Gonorrhea & Trichomonas (NAAT)

☐ Chlamydia & Gonorrhea ☐ Trichomonas, female only ($25 fee)

Specimen Source:

☐ Urine ☐ Urethral ☐ Rectal

☐ Endocervical ☐ Oropharyngeal ☐ Vaginal

Syphilis

Specimen Source: Serum

☐ Syphilis Screen (RPR) with Confirmation (FTA-ABS) if Positive ☐ Syphilis Contact Investigation

Mycobacteriology (TB)

Specimen Source:

☐ Culture/AFB Smear for Mycobacteria (Sensitivities performed on positive TB Only)

☐ AFB Smear Only

☐ Contacted TB Control for TB PCR (907-269-8000)

Parasitology

Specimen Source:

☐ Ova & Parasite Exam ☐ Blood Parasites

☐ *Giardia/Cryptosporidium* by DFA ☐ Pinworm Exam

☐ Ectoparasites

☐ Acid Fast Stain for *Isospora, Cyclospora,* and *Cryptosporidium* Oocysts

Chemistry

☐ Toxic Alcohols and Glycols (Source: whole blood - Gray Top preferred No SST)

☐ Blood Lead (Pb) (Indicate Source: Capillary or venous blood)

☐ Drugs of Abuse Panel (Source: Urine)

Other: **Source:**

****Only approved submitters can request Chemistry testing****

Bacteriology

Specimen Source:

☐ Enteric Stool Culture (*Salmonella, Shigella, Campylobacter, Escherichia coli* O157)

Additional organisms: ☐ *Vibrio* ☐ *Yersinia* ☐ *Aeromonas/Pleisiomonas*

☐ Enteric confirmation testing. **Organism:** was detected using the following culture independent method: Please attach instrument report.

☐ PFGE and Serotyping

☐ *Campylobacter* ☐ *E. coli* O157 ☐ *Salmonella* ☐ *Shigella*

☐ *Listeria monocytogenes* ☐ *Vibrio parahaemolyticus*

☐ Reference Isolate **Organism suspected:**

☐ Aerobic Bacterial Culture ID

☐ Anaerobic Bacterial Culture ID

☐ Diphtheria Culture

☐ *Neisseria gonorrhoeae* Culture

☐ Culture/Serotyping:(circle) *Neisseria meningitidis* or *Haemophilus influenzae*

Pertussis

Specimen Source: Nasopharyngeal (NP) Swab

Swab must be Dacron or Polyester

☐ Pertussis PCR

Pertussis PCR testing is not recommended for patients on antibiotics for ≥ to 5 days due to potential false negative results.

Botulism

☐ Contacted Epidemiology prior to requesting Botulism testing (907-269-8000)

☐ Contacted Laboratory prior to requesting shipping specimen (907-334-2100)

Date & Time HBAT administered:

Specimen Source:

☐ Pre-Antitoxin Serum ☐ Stool ☐ Gastric/Vomit

☐ Other/Food

Special Pathogens/Biological/Chemical Terrorism Agents

☐ Contacted laboratory prior to requesting testing (1-855-222-9918)

Suspected Agent:

Specimen Source:

If the desired test is not on this form, please review the Fairbanks Public Health Lab Request Form

PSP Talking Points

- Paralytic shellfish poisoning (PSP) is a foodborne illness that is most commonly caused by consumption of shellfish that contain saxitoxin, a potent neurotoxin produced by dinoflagellate algae.
- Bivalve shellfish that consume these algae accumulate saxitoxin in their tissue.
- The incubation period for PSP ranges from minutes to hours.
- Symptoms:
    - Patients typically present with mild symptoms such as paraesthesias (e.g., perioral and extremity numbness and tingling), and gastrointestinal symptoms (e.g., nausea and vomiting).
    - More severe cases may involve dyspnea, muscle weakness or frank paralysis, ataxia and respiratory insufficiency.
    - PSP toxins can, in high doses, affect cardiac tissue and lead to cardiovascular failure.
- Treatment:
    - Seek medical care as soon as possible if symptoms arise.
    - If the patient is unconscious, monitor their airway, breathing and heartbeat.
    - Perform CPR if needed and continue until help arrives.
- Symptomatic treatment, including respiratory support, is crucial for successful outcomes.
- Recovery is typically complete with symptom resolution within hours to days after onset.
- Personal harvest of shellfish is not safe.
- Commercially harvested product is safe.
    - DEC performs testing of shellfish from commercial beaches to determine safe levels of saxitoxin.
    - Alaska regulations require each commercially harvested batch of shellfish to pass the PSP test prior to market.
- Saxitoxin is 1,000 times more lethal than cyanide.
    - A single shellfish can contain enough toxin to make up to 200 people sick.
- Cooking shellfish prior to consumption does not make it safe to eat.
- Because other persons who shared the suspected food or who collected shellfish from the same public area may be at risk for illness, every case of PSP is considered a public health emergency and must be reported immediately to SOE.
- Background:
    - Many cases of PSP poisoning likely go unreported to health care providers and public health agencies.
    - Probable and confirmed PSP outbreaks in AK have been reported every month.
    - PSP outbreaks have occurred on Kodiak Island, the southern edge of the eastern half of the Aleutian Islands, and Southeast, but outbreaks have occurred throughout AK population centers south of 60º north latitude.
    - Outbreaks have involved consumption of butter clams, mussels, and cockles, but outbreaks have also been associated with consumption of many other species of shellfish as well as consumption of crab viscera.
- There is always some risk of PSP in recreationally-harvested shellfish.

Alaska Division of Public Health
Prevention Promotion Protection

Paralytic Shellfish Poisoning Fact Sheet

What is paralytic shellfish poisoning?
Paralytic shellfish poisoning (PSP) is a serious illness caused by eating shellfish contaminated with dinoflagellate algae that produce harmful toxins. Some of these toxins are 1,000 times more potent than cyanide, and toxin levels contained in a single shellfish can be fatal to humans.

What are the symptoms of PSP?
Early symptoms of PSP include tingling of the lips and tongue, which may begin within minutes of eating toxic shellfish or may take an hour or two to develop. Symptoms may progress to tingling of fingers and toes and then the loss of muscle control in the arms and legs, followed by difficulty in breathing. Some people have experienced a sense of floating or nausea. Muscles of the chest and abdomen may become paralyzed. With high toxin exposures, death can occur in as little as 2 hours from paralysis of the breathing muscles.

How do PSP toxins cause paralysis in humans?
PSP toxins cause paralysis in humans by blocking sodium channels in neurons, thereby preventing neurons from functioning normally.

What causes unsafe levels of PSP?
The amount of toxins increases when water conditions are favorable. However, the exact combination of conditions that cause "blooms" of toxin-producing algae is not known. *Colder months (or months with an "R") are <u>not</u> free from PSP risk.*

Which seafoods pose a PSP risk to humans?
All bivalve molluscan shellfish including clams, mussels, oysters, geoducks, and scallops can contain PSP toxins. While crabmeat has not been found to contain PSP toxins, the guts/butter of crabs has been found to contain PSP toxins; therefore, consumers of noncommercially harvested crab should clean the meat thoroughly, discard the guts/butter before boiling, and avoid drinking the broth in which the crab was boiled. Predatory gastropods such as moon snails can also become toxic and thereby pose a risk to humans.

Is the shellfish safe to eat if I cook it?
No! Cooking shellfish doesn't make them safe to eat because the *PSP toxins are <u>not</u> destroyed by heating or freezing*.

If someone else eats shellfish harvested from a certain beach and doesn't get sick, does that mean the beach is safe?
No, never assume a beach is safe even if someone has eaten shellfish without getting sick. Toxins can be present in varying amounts in shellfish on the same beach.

Who is most at risk?
Anyone who eats noncommercially harvested shellfish is at risk for PSP.

If the water looks dirty or red, does that mean that shellfish will contain PSP toxins?
No, paralytic shellfish toxins are rarely associated with a red tinge to the water; reddish coloration of the water is more commonly caused by non-toxic organisms.

If the water is not red, does that mean that shellfish are <u>not</u> contaminated?
No, PSP can be present in large amounts even if the water looks clear. Also, the toxin can remain in shellfish long after the algae bloom is over.

Can I tell if it's safe to gather shellfish by how they look?
No, only laboratories can reliably test shellfish for PSP. Toxins can be present with no visible signs.

Can I safely harvest in colder months?
No, there have been cases of PSP in Alaska year-round. There may be some seasonality associated with the level of PSP risk, but it is never completely safe to consume noncommercially harvested shellfish.

How can I protect my family and myself from paralytic shellfish poisoning?
The only way to protect your family and yourself from PSP is by not eating noncommercial shellfish collected from beaches in Alaska. Commercial shellfish in Alaska are routinely tested and are considered safe to eat.

What should I do if I think that I have paralytic shellfish poisoning?
Seek medical care immediately. Call 911 or have someone take you to the emergency room.

What is the treatment?
Unfortunately, there is no antidote for PSP toxins; however, supportive medical care can be life saving. For example, persons whose breathing muscles become paralyzed can be put on a mechanical respirator and given oxygen to help them breath, and people who develop a cardiac arrhythmia (abnormal heart rhythm) can be given medications to stabilize their heart rhythm.

Are there any other illnesses associated with shellfish?
Yes, a person may have an allergic reaction to shellfish or become ill due to bacteria or viruses in shellfish.

What else can be done to prevent these diseases?
It is important to notify public health departments about even one person with PSP or any other illness caused by consumption of shellfish. Public health departments can then investigate to determine the source of the problem to help prevent additional illness. Any suspected cases of PSP should be reported to the State of Alaska Section of Epidemiology at 907-269-8000 or after hours at 1-800-478-0084.

What if I choose to eat noncommercially harvested shellfish despite these risks?
The Alaska Division of Public Health strongly recommends against eating noncommercial shellfish from Alaska waters. We know collecting and eating shellfish is a long held traditional practice, but encourage people to know their risks.

Environmental Health Laboratory
5251 Dr. MLK JR. AVE.
Anchorage, AK 99507
PH: 907-375-8200

MARINE TOXINS

EHL WO#

SAMPLE SUBMISSION FORM

Business Name	Business or Diver DEC Permit Number
Business Contact Number	Processor or Vessel Name
Type of Preservation	Processor or Vessel DEC Permit Number
Latitude	Longitude
Harvest Site (AK DF&G District)	Harvest Area (AK DF&G Subdistrict)
Collected By (Printed)	Date & Time Collected
Collected By (Signature)	Expected Sales (if applicable)

I certify under penalty of perjury that the information provided on this form is true.

Sample Type:

☐ Pre-Harvest ☐ Post-Harvest ☐ Surveillance/Research ☐ Other: _____

Test(s) Requested:

☐ Paralytic Shellfish Toxin (PST) ☐ Domoic Acid ☐ Other: _____

CHECK EACH SAMPLE TYPE TO BE TESTED	Lot Number	**LAB USE ONLY**
☐ BLUE MUSSELS		LAB ID#
☐ RAZOR CLAMS		LAB ID#
☐ LITTLE NECKS		LAB ID#
☐ OYSTERS		LAB ID#
☐ GEODUCKS		LAB ID#
☐ CRABS Type:_____		LAB ID#
☐ OTHER:		LAB ID#

Comments: