

<b>Proposal Subject:</b>	Update PSP Laboratory Evaluation Checklist
<b>Specific NSSP Guide Reference:</b>	2009 NSSP Section IV. Guidance Documents Chapter II. Growing Areas .11 Evaluation of Laboratories By State Shellfish Laboratory Evaluation Officers Including Laboratory Evaluation Checklists-Laboratory Evaluation Checklist - PSP
<b>Text of Proposal/ Requested Action</b>	<p>Update PSP Laboratory Evaluation Checklist. Please find the updated PSP Laboratory Checklist attached - word document titled "Revised PSP Cecklist 11-08-2010.doc". A summary of the changes is:</p> <ul style="list-style-type: none"> <li>• Added the checklist items for Jellett Rapid Test for PSP</li> <li>• Renumbered checklist items to accommodate proposed additions and deletions and to better identify each checklist item.</li> <li>• Added, deleted or changed language for checklist items to be consistent with the microbiology laboratory evaluation checklist including added laboratory education and experience requirements</li> <li>• Deleted the requirement for metals testing on reagent water</li> <li>• Clarified and defined requirements for laboratory equipment, reagents and the mouse bioassay method.</li> </ul>
<b>Public Health Significance:</b>	<p>The current PSP laboratory checklist was last revised in 2005. Since that time the Jellett Rapid Test has received approval and is not in the checklist. Deficiencies have been identified while using the PSP checklist in evaluation of laboratories and the PSP checklist is inconsistent with some requirements in the microbiology checklist which has more recently been revised . It is important that the checklist items and quality assurance requirements are clear and understandable. It is important that quality assurance requirements among the different laboratory evaluation checklists remain as consistent as possible since many monitoring laboratories perform multiple types of tests and are evaluated using multiple checklists; inconsistencies among the checklist cause confusion, extra expense and work for the laboratories.</p>
<b>Cost Information (if available):</b>	None
<b>Action by 2011 Laboratory Methods Review Committee</b>	Recommended referral of Proposal 11-109 to the appropriate committee as determined by the Conference Chairman.
<b>Action by 2011 Task Force I</b>	Recommended adoption of Laboratory Methods Review Committee recommendation on Proposal 11-109.
<b>Action by 2011 General Assembly</b>	Adopted recommendation of 2011 Task Force I on Proposal 11-109.
<b>Action by FDA February 26, 2012</b>	Concurred with Conference action on Proposal 11-109.

Laboratory Evaluation Checklist - PSP

<b>PUBLIC HEALTH SERVICE          U.S. FOOD AND DRUG ADMINISTRATION          OFFICE OF FOOD SAFETY          SHELLFISH AND AQUACULTURE POLICY BRANCH          5100 PAINT BRANCH PARKWAY          COLLEGE PARK, MD 20740-3835          TEL. 240-402-2151/2055 FAX 240-402-2601</b>		
<b>SHELLFISH LABORATORY EVALUATION CHECKLIST</b>		
<b>LABORATORY:</b>		
<b>ADDRESS:</b>		
<b>TELEPHONE:</b>	<b>FAX:</b>	
<b>EMAIL:</b>		
<b>DATE OF EVALUATION:</b>	<b>DATE OF REPORT:</b>	<b>LAST EVALUATION:</b>
<b>LABORATORY REPRESENTED BY:</b>	<b>TITLE:</b>	
<b>LABORATORY EVALUATION OFFICER:</b>	<b>SHELLFISH SPECIALIST:</b>	
	<b>REGION:</b>	
<b>OTHER OFFICIALS PRESENT:</b>	<b>TITLE:</b>	
<b>Items which do not conform are noted by:</b>		
C- Critical K - Key O - Other NA - Not Applicable Conformity is noted by a "√"		
<u>Check the applicable assays performed:</u>		
	<u>Mouse Bioassay (MBA)</u>	
	<u>Jellett Rapid Test (JRT)</u>	
<b>PART I – QUALITY ASSURANCE</b>		
<b>ITEM</b>		
<b>CODE</b>		
		<u>1.1 Quality Assurance (QA) Plan</u>
K	<input type="checkbox"/>	1. <u>1.1</u> Written plan adequately covers all the following [check (√) those that apply]
		a. Organization of the laboratory.
		b. Staff training requirements.
		c. Standard operating procedures ( <u>SOPs</u> ).

		d. Internal quality control measures for equipment, calibration, maintenance repair <del>and</del> , performance <u>and rejection criteria established.</u>
		e. Laboratory safety.
		f. <u>Quality assessment-Internal performance assessment.</u>
		g. <del>Proper animal care.</del> <u>External performance assessment.</u>
		<u>h. Animal care.</u>
C	<input type="checkbox"/>	<del>2- 1.1.2</del> QA plan implemented.
		<b><u>1.2 Educational/Experience Requirements</u></b>
<u>C</u>	<input type="checkbox"/>	<u>1.2.1 In state/county laboratories, the supervisor meets the state/county educational and experience requirements for managing a public health laboratory.</u>
<u>K</u>	<input type="checkbox"/>	<u>1.2.2 In state/county laboratories, the analysts meet the state/county educational and experience requirements for processing samples in a public health laboratory.</u>
<u>C</u>	<input type="checkbox"/>	<u>1.2.3 In commercial laboratories, the supervisor must have at least a bachelor's degree in microbiology, biology or an equivalent discipline with at least two years of laboratory experience.</u>
<u>K</u>	<input type="checkbox"/>	<u>1.2.4 In commercial laboratories, the analysts must have at least a high school diploma and shall have at least three months of experience in laboratory science.</u>
		<b><u>1.23 Work Area</u></b>
O	<input type="checkbox"/>	<del>1- 1.3.1</del> Adequate for workload and storage.
O	<input type="checkbox"/>	<del>2- 1.3.2</del> Clean and well lighted.
O	<input type="checkbox"/>	<del>3- 1.3.3</del> Adequate temperature control.
O	<input type="checkbox"/>	<del>4- 1.3.4</del> All work surfaces are nonporous and easily cleaned.
C	<input type="checkbox"/>	<del>5- 1.3.5</del> A separate, quiet area with adequate temperature control for mice acclimation and injection is maintained.
		<b><u>1.34 Laboratory Equipment</u></b>
O	<input type="checkbox"/>	<del>4- 1.4.1</del> The pH meter has a standard accuracy of 0.1 pH unit.
K	<input type="checkbox"/>	<del>1- 4.2</del> pH paper in the appropriate range (i.e. 1-4) is used with minimum accuracy of 0.5 pH units. <del>2- 1.4.2</del> pH paper in the appropriate range (i.e., pH <2 to >4.5) having a minimum accuracy of 0.5 units is used.
K	<input type="checkbox"/>	<del>3- 1.4.3</del> The pH electrodes <u>being used</u> consist of a pH half cell and reference half cell or equivalent combination electrode/ <u>triode</u> free from <u>silver/silver chloride</u> (Ag/AgCl) or contains an ion exchange barrier to prevent <u>the</u> passage of <u>silver</u> (Ag) ions into the <del>medium that may result in inaccurate pH readings</del> <u>substance being measured.</u>
K	<input type="checkbox"/>	<del>4- 1.4.4</del> pH meter is calibrated daily or with each use. <u>Results are recorded and records maintained.</u>
K	<input type="checkbox"/>	<del>5- 1.4.5</del> Effect of temperature has been compensated for by an ATC probe, <u>use of a triode</u> or by manual adjustment.
K	<input type="checkbox"/>	<del>6- 1.4.6</del> A minimum of two standard buffer solutions (pH 2 & pH 7) is used to calibrate the pH meter. Standard buffer solutions are used once and discarded.
K	<input type="checkbox"/>	<del>7- 1.4.7</del> Electrode <u>efficiency/acceptability</u> is determined daily or with each use <del>following either slope or by the</del> millivolt procedure <u>or through determination of the slope.</u> (circle the method used.)
K	<input type="checkbox"/>	<del>8-</del> The balance provides a sensitivity of at least 0.1g at a load of 150 grams. <u>1.4.8 The differing sensitivities in weight measurements required by the various steps in the assay are met by the balance/balances being used.</u> a. <u>To prepare the reference solution, the balance used must have a sensitivity of at least 0.1 gram at a load of 1 gram.</u> b. <u>For sample extraction, the balance used must have a sensitivity of at least 0.1 gram at a load of 100 grams.</u> c. <u>For gravimetric extract volume adjustment, the balance used must have a sensitivity of at least 0.1 gram at a load of 200 grams.</u>

		<u>d. To determine the weight of the mice, the balance must have a sensitivity of at least 0.1 gram at a load of 20 grams.</u>
K	<input type="checkbox"/>	<del>9. The balance calibration is checked monthly using NIST Class S or ASTM Class 1 or 2 weights or equivalent. Records maintained.</del> <u>1.4.9 Balance calibrations are checked monthly according to manufacturer's specifications using NIST Class S or ASTM Class 1 or 2 weights or equivalent. The accuracy of the balance is verified at the weight range of use. Results are recorded and records maintained.</u>
K	<input type="checkbox"/>	<del>10-1.4.10 Refrigerator temperatures <u>is are</u> maintained between 0 and 4°C.</del>
O	<input type="checkbox"/>	<del>11-1.4.11 Refrigerator temperatures <u>is are</u> monitored at least once daily <u>on workdays</u>. Results are recorded and records maintained.</del>
K	<input type="checkbox"/>	<del>12-1.4.12 Freezer temperatures <u>is are</u> maintained at 20°C or below -15°C.</del>
O	<input type="checkbox"/>	<del>13-1.4.13 Freezer temperatures <u>is are</u> monitored at least once daily <u>on workdays</u>. Results are recorded and records maintained.</del>
O	<input type="checkbox"/>	<del>14-1.4.14 All glassware is clean.</del>
<u>OC</u>	<input type="checkbox"/>	<del>15. Once during each day of washing, several pieces of glassware from each batch washed are tested for residual detergent with aqueous 0.04% bromthymol blue solution. Records are maintained.</del> <u>1.4.15 With each load of labware/glassware washed, the contact surface of several dry pieces from each load are tested for residual detergent (acid or alkali) with aqueous 0.04% bromthymol blue (BTB) solution. Results are recorded and records maintained.</u>
<u>C</u>	<input type="checkbox"/>	<u>1.4.16 An alkaline or acid based detergent is used for washing glassware/labware</u>
		<b><u>1.4.1.5 Reagent and Reference Solution Preparation and Storage</u></b>
C	<input type="checkbox"/>	<u>1.5.1 Opened PSP <del>reference</del> standard solution (100µg/mL) is not stored.</u>
K	<input type="checkbox"/>	<del>2. PSP working standard solution (1 µg/ml) and all dilutions are prepared with dilute HCl, pH 3 water, using 'Class A' volumetric glassware (flasks and pipettes) or prepared gravimetrically.</del> <u>1.5.2 PSP reference solution (1µg/mL) is prepared by weight (gravimetrically) with dilute HCl, pH 3 water.</u>
K	<input type="checkbox"/>	<del>3. Refrigerated storage of PSP working standard solution (1µg/ml) does not exceed 6 months and is checked gravimetrically for evaporation loss.</del> <u>1.5.3 Refrigerated storage of PSP reference solution (1µg/mL) in a sealed container is stored indefinitely as long as there is no evaporation loss as checked by weight. If evaporation is detected, the solution is discarded appropriately. Records are maintained.</u>
<u>C</u>	<input type="checkbox"/>	<u>1.5.4 Dilutions of the 1µg/mL reference solution are prepared by weight or volume using dilute HCl, pH 3 water.</u>
K	<input type="checkbox"/>	<del>4-1.5.5 PSP working dilutions(dilutions of the 1µg/mL reference solution) are discarded after use.</del>
K	<input type="checkbox"/>	<del>5. Make up water is distilled or deionized (circle one) and exceeds 0.5 megohm resistance or is less than 2 µ Siemens/cm conductivity at 25°C to be tested and recorded monthly for resistance or conductivity (circle the appropriate).</del> <u>1.5.6 Reagent water is distilled or deionized (circle appropriate choice), tested monthly and exceeds 0.5 megohm-cm resistance (2 megohms-cm in-line) or is less than 2.0 µSiemens/cm conductivity at 25°C (circle the appropriate water quality descriptor determined). Results are recorded and the records maintained.</u>
O	<input type="checkbox"/>	<del>6- 1.5.7 <u>Make up Reagent</u> water is analyzed for residual chlorine monthly and is at a nondetectable level (&lt;0.1ppm). Results are recorded and records maintained.</del>
<del>K</del>	<input type="checkbox"/>	<del>7- Make up water is free from trace (&lt; 0.5 mg/l) dissolved metals specifically Cd, Cr, Cu, Ni, Pb, and Zn as determined annually with total heavy metal content ≤1.0 mg/l. Records maintained.</del>
O	<input type="checkbox"/>	<del>8-1.5.8 <u>Makeup Reagent</u> water contains &lt;1000 &lt;100 CFU/mL as determined monthly using the heterotrophic plate count method. Results are recorded and records maintained.</del>
		<b><u>1.5.6 Collection and Transportation of Samples</u></b>
O	<input type="checkbox"/>	<del>1. Shellstock are collected in clean, waterproof, puncture resistant containers.</del> <u>1.6.1 Shellfish are collected in clean, waterproof, loosely sealed, puncture</u>

		<u>resistant containers.</u>
K	<input type="checkbox"/>	<del>2.1.6.2</del> Samples are appropriately labeled with the collector's name, harvest area, <u>sampling station</u> and time and date of collection.
K	<input type="checkbox"/>	<del>3. Immediately after collection, shellstock samples are placed in dry storage for transport (e.g. cooler) which is maintained between 0 and 10°C. Upon receipt at the lab, samples are placed under refrigeration.</del> <u>1.6.3 Immediately after collection, shellfish samples are placed in dry storage (ice chest or equivalent) which is maintained between 0 and 10°C with ice or cold packs for transport to the laboratory. Upon receipt at the laboratory, samples are placed under refrigeration.</u>
K	<input type="checkbox"/>	<del>4.1.6.4</del> The time from collection to completion of the bioassay should not exceed 24 hours. However, if there are significant transportation delays, then shellstock samples are processed immediately as follows ( <i>circle the appropriate choice</i> ): a. Washed, shucked, drained, frozen until extracted. b. Washed, shucked, drained, homogenized and frozen. c. Washed, shucked, drained, extracted, the supernatant decanted and refrigerated ( <b>best choice</b> ); or d. The laboratory has an appropriate contingency plan in place to handle samples which can't be analyzed within 24 hours due to transportation issues.
<del>K</del>	<input type="checkbox"/>	<del>5.1.6.5</del> Frozen, shucked product or homogenates are allowed to thaw completely and all liquid is included as part of the sample before being processed further.
<b>Part II – <del>EXAMINATION ANALYSIS</del> OF SHELLFISH FOR PSP TOXINS</b>		
<b>2.1 Preparation of the Sample</b>		
C	<input type="checkbox"/>	<del>1. 2.1.1</del> At least 12 animals ( <u>equivalent to at least 100 g of shellfish meat</u> ) are used per sample or the laboratory has an <u>appropriate proven effective</u> contingency plan for dealing with non-typical species of shellfish.
O	<input type="checkbox"/>	<del>2. 2.1.2.</del> The outside of the shell is thoroughly cleaned with fresh water.
O	<input type="checkbox"/>	<del>3. 2.1.3</del> Shellstock are opened by cutting adductor muscles.
O	<input type="checkbox"/>	<del>4. 2.1.4</del> The inside of the shell is rinsed with fresh water to remove sand or other foreign material.
O	<input type="checkbox"/>	<del>5. 2.1.5</del> Shellfish meats are removed from the shell by separating adductor muscles and tissue connecting at the hinge.
K	<input type="checkbox"/>	<del>6. 2.1.6</del> Damage to the body of the mollusk is minimized in the process of opening.
O	<input type="checkbox"/>	<del>7.2.1.7</del> Shucked shellfish are drained on a #10 mesh sieve (or equivalent) without layering for 5 minutes.
K	<input type="checkbox"/>	<del>8. 2.1.8</del> Pieces of shell and drainage are discarded.
C	<input type="checkbox"/>	<del>9. Drained meats or thawed homogenates are blended at high speed until homogenous (60–120 seconds).</del> <u>2.1.9 Drained meats or previously cooled/refrigerated, shucked, drained meats and their drip-loss liquid or thawed, shucked meat with its freeze-thaw liquid or thawed homogenates with their freeze-thaw liquid are blended at high speed until homogenous (60 – 120 seconds).</u>
<b>2.2 Extraction</b>		
K	<input type="checkbox"/>	<del>1. 2.2.1</del> 100 grams of homogenized sample is weighed into a beaker.
K	<input type="checkbox"/>	<del>2. 2.2.2</del> An equal amount of 0.1 N/0.18 N HCl is added to the homogenate and thoroughly mixed. ( <i>circle the appropriate normality</i> ).
C	<input type="checkbox"/>	<del>3. 2.2.3</del> <u>The pH is checked and, if necessary adjusted to between pH 2.0 and 4.0.</u>
C	<input type="checkbox"/>	<del>4. 2.2.4</del> Adjustment of the pH is made by the dropwise addition of either (5 N HCl) or base (0.1 N NaOH) <u>as appropriate</u> while constantly stirring the mixture.
C	<input type="checkbox"/>	<del>5. 2.2.5</del> The homogenate/acid mixture is promptly brought to a boil, 100 +1°C then gently boiled for 5 minutes.
O	<input type="checkbox"/>	<del>6. 2.2.6</del> The homogenate/ acid mixture is boiled under adequate ventilation (i.e., fume hood).

O	<input type="checkbox"/>	<del>7. 2.2.7</del> The extract is cooled to room temperature.
C	<input type="checkbox"/>	<del>8. 2.2.8</del> The pH of the extract is determined and adjusted if necessary to between pH 2 and 4 preferably to pH 3 with the stirred dropwise addition of 5 N HCl to lower the pH or 0.1 N NaOH to raise the pH.
K	<input type="checkbox"/>	<del>9. 2.2.9</del> The extract volume( <del>or mass</del> ) is adjusted to 200 mL (or grams) with dilute HCl, pH 3.0 water.
K	<input type="checkbox"/>	<del>10.2.2.10</del> The extract is returned to the beaker, stirred to homogeneity and allowed to settle to remove particulates; or, if necessary, an aliquot of the stirred supernatant is centrifuged at 3,000 RPM for 5 minutes before <del>injection being bioassayed</del> .
K	<input type="checkbox"/>	<del>11. If mice cannot be injected immediately then the supernatant should be removed from the centrifuge tubes and refrigerated for up to 24 hours.</del> <del>2.2.11 If the extract cannot be bioassayed or the Jellett Rapid Test (JRT) for PSP cannot be performed immediately, then the supernatant is removed from the centrifuge tubes and sealed and refrigerated for up to 24 hours.</del>
K	<input type="checkbox"/>	<del>12. 2.2.12</del> Refrigerated extracts are allowed to reach ambient temperature before being bioassayed or tested by the JRT for PSP.
<b>2.3 Bioassay</b>		
O	<input type="checkbox"/>	<del>1. 2.3.1</del> A 26-gauge hypodermic needle is used for injection.
<del>K</del> C	<input type="checkbox"/>	<del>2. Healthy mice in the weight range of 17–23 grams (19–21 grams is preferable) from a stock colony are used for routine assays. Mice are not reused for the bioassay.</del> <del>Stock strain used _____ Source of the mice _____</del> <del>2.3.2 Healthy mice in the weight range of 17 – 23 grams (19 – 21 grams is preferable) from a stock colony are used for routine assays. Mice are not reused for the bioassay.</del> <del>Stock strain used _____ Source of the mice _____</del>
C	<input type="checkbox"/>	<del>3. 2.3.3</del> Mice are allowed to acclimate for at least 24 hours prior to injection. <del>In some cases up to 48 hours may be required.</del>
C	<input type="checkbox"/>	<del>4. 2.3.4</del> A conversion factor (CF) has been determined as _____. Month and year when current CF determined _____.
C	<input type="checkbox"/>	<del>5. 2.3.5</del> CF value is checked weekly if assays are done on several days during the week, or, once each day that assays are performed if they are performed less than once per week.  Date of most recent CF check _____  CF verified/ <del>CF not verified</del> : <u>yes</u> / <u>no</u> : (circle <u>the</u> appropriate choice).
C	<input type="checkbox"/>	<del>6. 2.3.6</del> If the CF is not verified, 5 additional mice are injected with the dilution used in the CF check to complete a group of 10 mice. Ten additional mice are also injected with this dilution to produce a second group of 10 mice. The CF is calculated for each group of 10 mice and averaged to give the CF to be used in sample toxicity calculations for the day's or week's work only. All subsequent work must make use of the original laboratory CF value unless this value continues to fail to be verified by routine CF checks.
C	<input type="checkbox"/>	<del>7. 2.3.7</del> If the CF fails to be verified, the cause is investigated and the situation corrected. If the cause cannot be determined with reasonable certainty and fails >3 times per year, the bioassay is restandardized.
O	<input type="checkbox"/>	<del>8. 2.3.8</del> Mice are weighed to the nearest <del>0.5 gram</del> <u>0.1 gram</u> .
C	<input type="checkbox"/>	<del>9. 2.3.9</del> Mice are injected intraperitoneally with 1 mL of the acid extract.
K	<input type="checkbox"/>	<del>10.2.3.10</del> For the CF check at least 5 mice are used.
C	<input type="checkbox"/>	<del>11. 2.3.11</del> At least 3 mice are used per sample in routine assays.
C	<input type="checkbox"/>	<del>12.2.3.12</del> Elapsed time is accurately determined and recorded.
K	<input type="checkbox"/>	<del>13. 2.3.13</del> If death occurs, the time of death to the nearest second is noted by the last gasping breath.

<u>C</u>	<input type="checkbox"/>	<u>2.3.14 Mice are continually observed for up to 20 minutes after injection with periodic checks for a total of 60 minutes as appropriate.</u>
C	<input type="checkbox"/>	<del>14-</del> <u>2.3.15 If the median death time (2 out of 3 mice injected die) is &lt;5 minutes, a dilution is made with dilute HCl, pH 3 water, to obtain a median death time in the range of 5 to 7 minutes.</u>
		<b>2.4 Calculation of Toxicity</b>
C	<input type="checkbox"/>	<del>1-</del> <u>2.4.1 The death time of each mouse is converted to mouse units (MU) using Sommer's Table (Table 6, Recommended Procedures for the examination of Sea Water and Shellfish, Fourth, 4<sup>th</sup>-Fourth Edition). The death time of mice surviving beyond 60 minutes is considered to be &lt;0.875 MU.</u>
K	<input type="checkbox"/>	<del>2-</del> <u>2.4.2 A weight correction in MU is made for each mouse injected using Table 7 in Recommended Procedures for the Examination of Sea Water and Shellfish, Fourth 4<sup>th</sup>- Edition.</u>
C	<input type="checkbox"/>	<del>3-</del> <u>2.4.3 The death time of each mouse in MU is multiplied by a weight correction in MU to give the corrected mouse unit (CMU), the true death time for each mouse.</u>
C	<input type="checkbox"/>	<del>4-</del> <u>2.4.4 The median value of the array of corrected mouse units (CMU) is determined to give the median corrected mouse unit (MCMU), median death time.</u>
C	<input type="checkbox"/>	<del>5-</del> <u>2.4.5 The concentration of toxin is determined by the formula, MCMU x CF x Dilution Factor (DE) x 200.</u>
C	<input type="checkbox"/>	<del>6-</del> <u>2.4.6 Any value greater than 80 µg/100 grams of meat is actionable.</u>
<b><u>PART III – JELLETT RAPID TEST (JRT) FOR PSP</u></b>		
		<b><u>3.1 Procedure</u></b>
<u>K</u>	<input type="checkbox"/>	<u>3.1.1 The batch/lot numbers of the test strips and buffers, their expiration dates, date received and date used are recorded.</u>
<u>K</u>	<input type="checkbox"/>	<u>3.1.2 When placed into service, test strips and buffers (PSP &amp; Matrix) are within their respective expiration dates.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.3 When opened, the test strip desiccant pouch is blue in color indicating its suitability for use. Test strips emerging from desiccant pouches which are pink in color are never used.</u>
<u>K</u>	<input type="checkbox"/>	<u>3.1.4 Test strips and buffer are stored according to the manufacturer's instructions.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.5 Negative extracts are spiked at a low level concentration (40 – 60 µg/100 grams of sample) or equivalent (a bioassayed extract) and used as a positive control for testing both new batches/lots of kits and buffers. Results are recorded and records maintained.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.6 Micropipettors capable of accurately delivering volumes of 100 and 400 µL are used to transfer buffer and sample extracts and to inoculate test strips with diluted extract.</u>
<u>K</u>	<input type="checkbox"/>	<u>3.1.7 Volumes delivered by the micropipettor are checked for accuracy at 100 and 400 µL monthly while in service. Results are recorded and records maintained.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.8 400 µL of the buffer supplied with the test kits is accurately transferred to a small tube.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.9 100 µL of the sample extract is added to the buffer.</u>
<u>K</u>	<input type="checkbox"/>	<u>3.1.10 The sample/extract is thoroughly mixed with buffer by inserting the tip of the micropipettor into the buffer/sample extract mixture and pipetting up and down at least three (3) times.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.11 100 µL of the thoroughly mixed diluted sample extract is inoculated into the test strip sample well.</u>
<u>K</u>	<input type="checkbox"/>	<u>3.1.12 Micropipettor tips are not reused.</u>
<u>K</u>	<input type="checkbox"/>	<u>3.1.13 Inoculated test strips are allowed to react with the sample extract for the period of time specified by the manufacturer.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.14 The test is interpreted according to the manufacturer's instruction card which is specific to each batch/lot of test strips.</u>
<u>K</u>	<input type="checkbox"/>	<u>3.1.15 When invalid tests are repeated, the pH of the sample extract is checked and adjusted as necessary to between pH 2.0 and pH 4.0. An aliquot of Matrix</u>

		<u>buffer and a fresh test strip is used to reassay the sample.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.16 When a repeated JRT test for PSP gives identical invalid results, the sample contains interfering substances which require the use of the mouse bioassay for testing.</u>
<u>C</u>	<input type="checkbox"/>	<u>3.1.17 A positive JRT for PSP is actionable.</u>

Revised 11 – 08 2010

**REFERENCES**

1. Adams, W.N. and S.A. Furfari. 1984. Evaluation of laboratory performance of the AOAC method for PSP toxin in shellfish. *J. Assoc. Off. Anal. Chem.* Vol 67, 6:1147-1148.
2. American Public Health Association. 1970. *Recommended Procedures for the Examination of Sea Water and Shellfish*, Fourth Edition. APHA, Washington, D.C.
3. American Public Health Association. 1992. *Standard Methods for the Examination of Dairy Products*, 16<sup>th</sup> Edition. APHA, Washington D.C.
4. Association of Official Analytical Chemists International. 1990. *Methods of Analysis*, 15<sup>th</sup> Edition AOAC, Arlington, VA.
5. APHA/WEF/AWWA. 1992. *Standard Methods for the Examination of Water and Wastewater*, 18<sup>th</sup> Edition. APHA, Washington, D.C.
6. Title 21, Code of Federal Regulations, Part 58, Good Laboratory Practice for Nonclinical Laboratory Study. U.S. Government Printing Office, Washington, D.C.
7. National Research Council. 1996. *Guide for the Care and Use of Laboratory Animals*. National Academy Press. Washington, D.C.
8. Personal communication with USFDA Seafood Laboratory Branch, Office of Seafood, CFSAN, 1998-1999.
9. JRT Instruction Materials with specified batch/lot number instructions.
10. NELAP – National Environmental Laboratory Accreditation Conference. 2003. Chapter 252. ENVIRONMENTAL LABORATORY ACCREDITATION, 252.302. Qualifications of the Laboratory Supervisor, 252.304. Personnel Requirements.



Laboratory Evaluation Checklist - PSP

<b>LABORATORY STATUS</b>	
<b>LABORATORY:</b>	<b>DATE:</b>
<b>LABORATORY REPRESENTATIVE:</b>	
<b>PARALYTIC SHELLFISH TOXIN COMPONENT: PARTS I and II and III</b>	
<b>A. Results:</b>	
Total # of Critical (C) Nonconformities	_____
Total # of Key (K) Nonconformities	_____
Total # of Other (O) Nonconformities	_____
<b>Total # of Critical, Key and Other Nonconformities</b>	_____
<b>B. Criteria for Determining Laboratory Status of the PSP Component</b>	
<p>1. <b>Does not Conform Status.</b> The PSP component of this Laboratory is not in conformity with NSSP requirements if :</p> <p style="margin-left: 20px;">a. The total # of Critical Nonconformities is <b>&gt;3 or</b></p> <p style="margin-left: 20px;">b. The total # of Key Nonconformities is <b>&gt;6 or</b></p> <p style="margin-left: 20px;">c. The total # of Critical, Key and Other is <b>&gt;10</b></p> <p>2. <b>Provisionally Conforms Status.</b> The PSP component of this Laboratory is determined to be provisionally conforming to NSSP requirements if the number of <b>Critical</b> Nonconformities is <b>&lt; 3 and</b> the number of <b>Key</b> Nonconformities is <b>&lt;6 and</b> the number of <b>Other</b> Nonconformities is <b>&lt;4.</b></p> <p>3. <b>Conforming Status.</b> The PSP component of this Laboratory is determined to be conforming when it has <b>no Critical</b> Nonconformities <b>and &lt; 6 Key</b> Nonconformities <b>and &lt; 4 Other</b> Nonconformities.</p>	
<b>C. Laboratory Status (circle appropriate choice):</b>	
<b>Does Not Conform - Provisionally Conforms - Conforms</b>	

Revised 11 - 08 – 2010