Body Fluid Identification Procedures Index

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1. **Aseptic Technique and Contamination Control**

All items such as scissors and tweezers which could contain DNA must be free of contaminate DNA. Items that require sterilization must be flamed prior to use or sonicated.

1.1 Flame Sterilization

Scissors and tweezers will be sterilized at the beginning of each procedure and in between every sample. This is accomplished by passing the scissors or tweezers over the flame for 2 or more seconds ensuring that every surface is exposed to the flame.

1.2 Sonication Procedure

If a slide is being prepared from a sample which is being cut with scissors and that sample could contain spermatozoa, the scissors must first be sterilized using the sonication procedure and then flamed prior to use on the sample.

1.2.1 Mix Alconox and deionized water and place in the Branson 1510 sonicator.

1.2.2 Place the scissors in the sonicator and degas for 5 minutes followed by sonication for 60 minutes at 45° degrees Celsius.

1.2.3 Once sonication is complete, remove the scissors and rinse them in water and then follow up with a rinse using deionized water.

1.2.4 The scissors need to be flamed according to the procedures listed above prior to being use.

1.3 Sterilization of the Bench Top

Benches will be cleaned with a 10% solution of bleach prior to use and in between cases. This solution of bleach should be made daily. Fresh brown paper will then be placed on the bench. The paper should be changed minimally between the victim and the suspect’s items and in between cases.

1.4 Aseptic Techniques While Handling Evidence

1.4.1 Gloves and lab coats must be worn at all times while handling samples. Gloves should be changed between cases or when a body
fluid, such as liquid blood, has contaminated that glove.

1.4.2 Gloves need to be changed between items identified as belonging to the suspect and victim.

Safety - Gloves and safety glasses should be used when using bleach solution.

2. **BLOOD ANALYSIS**

2.1 **Kastle Meyer Test (Phenolphthalein Test)**

The Kastle Meyer Test is a presumptive test for blood and can give reactions for substances other than blood.

**Standards and controls**

Standards will include a known blood stain (positive control) and a known blood-free sample (negative control). These controls will be tested prior to analysis on a daily basis and the results will be recorded in the laboratory notes.

**Procedure**

2.1.1 Rub the suspected stain with a folded piece of filter paper or a clean cotton swab. Add the following reagents onto the filter paper or swab in order; one drop of ethanol, one drop of phenolphthalein, and one drop of 3% H₂O₂ onto the sample rubbing. A positive reaction is indicated by the development of a pink color within 5 seconds of adding the H₂O₂. Reactions occurring after 5 seconds or before the addition of the hydrogen peroxide are inconclusive.

2.1.2 Perform the Kastle Meyer Test on any stains that visually appear to be blood even if blood analysis is not requested.

2.1.3 If a sample is weak, cut a small portion of the sample and place this cutting on the filter paper and add the chemicals directly to the sample.

2.1.4 If blood examination is requested and the item does not appear to have any stains on it the entire item must be examined using the Kastle Meyer Test to eliminate the chance that a small or weak bloodstain may have been missed unless latent or touch DNA examination has been requested or ridge detail is noted on this item and swabbing it would compromise possible prints or DNA. If a
weak reaction is seen an attempt must be made to localize the area where the positive reaction was noted.

2.1.5 If a bag of clothing is submitted from the suspect and only one bleeder is indicated only the best article of clothing needs to be analyzed. It should be noted on the worksheet that the remaining evidence was not examined and the reason should be noted as redundant.

2.2 RSID test for Human Blood

The RSID (Rapid Stain Identification) test is a confirmatory test for the presence of human blood. This test should be run if human blood identification is specifically asked for or if there is a possibility that the unknown stain could be animal blood unless there is a limited amount of sample.

Standards and controls

Each new lot number must be QC’d before being placed into current usage. A positive and negative control must be run with every case or every batch of cases. The positive control will consist of a known human blood sample and the negative control will consist of only 20 ul of extraction buffer to 80 ul of running buffer. If a reddish line is seen in the negative control the test will be considered invalid and the sample will be rerun. If a reddish line appears again in the negative control the test will be considered invalid and ABACard Heme Trace test will be used. In the event that this should occur, the QC officer will be notified immediately.

Procedure

2.2.1 Using scissors which have been flamed, cut a small sample of sufficient size depending on the concentration of the stain from your sample and place into a 1.5 ml centrifuge tube. Add a minimum of 100 ul and up to 1 ml of RSID blood extraction buffer. (The amount of buffer added will depend on the sample size and should be enough to cover the sample)

2.2.2 Allow the sample to extract for a minimum of 15 min. For weak or older samples, analysts should to use a larger quantity of material and/or extract over night.

2.2.3 After completing the extraction process, pipette 20 ul of this sample into a separate 1.5 ml centrifuge tube and add 80 ul of
RSID blood running buffer and immediately add all 100 ul to the sample well on the RSID blood card.

2.2.4 When there is a positive reaction, two lines will appear, one line in the area marked "C" for control and one in the area marked "T" for test. A positive indication is noted by the presence of a reddish line. Any other color line does not constitute a positive reaction and should be called negative. A positive result can be recorded as soon as both of these lines appear. In order to determine that the test is negative a full ten minutes must pass after the liquid is added to the card. If the reaction is negative then only one line appears in the area marked "C". If no line appears at the area marked "C" the test must be repeated. The positive test result should not be recorded if the line appears at the T area after the 10 minute time period.

Note: There is no high dose hook effect associated with this test. Therefore, there is no need to dilute and rerun a sample that is negative.

2.3 **ABA card Hematrace**

ABA card Hematrace is a back up test used for to examine evidence for the presence of human blood if RSID is not available. Because this test will cross react with some animal blood such as primates and ferrets it can only give a reaction consistent for the presence of human blood.

**Standards and controls**
Each new lot number must be QC'd before being placed into current usage.

**Procedure**

2.3.1 Using sterile scissors cut at least a 1/4 in. square area from your sample and place into the 1.5ml centrifuge tube using sterile forceps. Pipette 5 drops of Hema Trace Extraction Buffer into centrifuge tube. Allow the sample to extract for a minimum of 5 minutes. For weak or older samples, analysts may desire to use a larger quantity material and a longer extraction time.
2.3.2 After completing the extraction process, pipette 3 drops of the extracted sample into the well marked "S" on the OneStep ABACard.

2.3.3 When there is a positive reaction, two lines will appear, one line in the area marked "C" for control and one in the area marked "T" for test. If the reaction is negative then only one line appears in the area marked "C". In order to determine that the test is negative a full ten minutes must pass after the liquid is added to the card. If no line appears at the area marked "C" the test must be repeated. Any indication of a line on the “T” well is indicative of a positive reaction regardless of color.

2.3.4 Since validation studies have shown that anti-human hemoglobin reactions were obtained from body fluids other than blood (e.g. urine), then in order for one to identify human blood, both the phenolphthalein and anti-human hemoglobin test must be positive.

Note: Beware of a high dose hook effect. If a sample gives a negative or extremely weak positive reaction, and your preliminary (phenolphthalein) testing indicates you would expect a strongly positive result, repeat the testing in the following manner. Add 3 drops of Hema Trace Extraction Buffer to the prior extract tube, pipette the fluid up and down a couple of times to mix the fluid thoroughly, and re-run the test. If necessary, one could repeat the dilutions again in this manner, or do a serial dilution of the extract.

2.4 Report wording for samples requiring DNA analysis
If a swabbing or cutting is taken from an item of evidence for DNA testing then the following wording should be in the report. “A swabbing or cutting was taken from Item _______ for DNA analysis.” If a sub item will be made from this swabbing or cutting the wording should say.; “A swabbing or cutting (Item _sub item number) was taken from Item_______ for DNA analysis.”

2.5 Luminol Test (Albrecht Reaction)

Luminol is a presumptive test for the presence of blood. A Phenolphthalein test should also be run and a positive result should be obtained from the Phenolphthalein test and Luminol test before a sample is noted as a chemical indication for blood.

Standards and Controls
A penny is sprayed to ensure that the chemicals are working properly.

**Procedure**

2.5.1 Prior to doing a Luminol test, chemicals should be weighed and stored as follows: Place .5 grams of the luminol (5-amino-2,3 dihydro-1,4 pthalazinedione) along with 25 grams of sodium carbonate (Na₂CO₃) in a ziplock bag labeled with the lot number and chemical names. Place 5.5 grams of sodium perborate (NaBO₃) in a separate ziplock bag labeled with the lot number and chemical name. 500 ml of distilled water stored in a container is also needed for this test.

2.5.2 Just prior to use, pour the contents of both zip lock bags into the distilled water and shake well to dissolve as much of the reagent as possible. Not all of the reagents will completely dissolve. Transfer the solution into a hand pump spray bottle.

2.5.3 Spraying a fine mist, spray in front of you and walk backwards while spraying, keeping others behind you. Note: Avoid walking over an area that has already been sprayed to eliminate unnecessary tracking up of the crime scene. Look for areas where a brightly lit reaction occurs for 5 to 20 seconds.

2.5.4 Test the areas that give a reaction to the luminol with the Phenolphthalein test. See section 2.1 on the procedure for using the Phenolphthalein test.

*Safety*: Use gloves when handling powder and liquid solutions. Take care not to inhale the powder as it is an irritant

3. **SEmen Analysis**

If they victim has indicated no oral assault then you do not need to examine the oral swabs for semen if they have been taken. In the reason box: indicate no oral assault reported.

3.1 **Acid Phosphatase Test (Walker Test)**

The Acid Phosphatase Test is a preliminary test for semen. It will detect the enzyme acid phosphatase which is present in semen. Note: If the
enzymatic activity is low it is possible for a seminal stain to give a negative Acid Phosphatase reaction.

Note: The PCR-STR methods used in the DNA Unit are extremely sensitive and detect as little as 500 picograms of DNA. Analysts are reminded that protein markers used to screen for semen (Acid Phosphatase) are more easily degraded than sperm cells, can be affected by various disease states, and are extremely water soluble. For this reason, it is not unexpected that occasionally one will find a sample which yields a negative Acid Phosphatase result, but is positive for sperm cells.

Standards and Controls

An aliquot of sodium acetate buffer is kept at each analyst’s bench. A fresh aliquot is prepared the first working day of each month. Fast blue working solution must be made fresh daily by placing approximately 5 ml of water into a 13x100 mm tube and adding a small amount of the Fast Blue salt into the water until an opaque yellow color develops. A known seminal stain is used as a positive control. Sodium acetate buffer mixed with alpha-naphthyl acid phosphate calcium salt is used as a reagent control. A substrate control, if present, is set up using a control cutting from an apparently “unstained” area of the same material that the suspected stain is cut from. Each new lot of alpha-naphthyl acid phosphate calcium salt needs to be QC’d prior to use by the QC officer.

Procedure:

3.1.1 Remove a small portion of the suspected stain area. If the item tested is a pair of panties, at least three cuttings from the crotch area are required.

3.1.2 Place each sample into a separately labeled well on a spot plate. And place the positive control, reagent control and substrate controls in their respective wells.

3.1.3 Fill the wells about half full with the sodium acetate buffer. Add a small portion of alpha naphthyl acid phosphate calcium salt to each well (a few grains will be sufficient).

3.1.4 Mix each well with a separate wooden applicator stick and rotate the plate 5-15 minutes.
3.1.5 After the plate has rotated, add a drop of Fast Blue B solution to each well and look for a color change. A positive reaction will usually turn purple but lighter shades have been noted. See ample plate below:

![Figure showing color changes in wells](image)

Grade the color change as follows:

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<th>Grade</th>
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<td>Dark Purple</td>
<td>4+</td>
</tr>
<tr>
<td>Purple</td>
<td>3+</td>
</tr>
<tr>
<td>Purple/Pink</td>
<td>2+</td>
</tr>
<tr>
<td>Pink</td>
<td>1+</td>
</tr>
<tr>
<td>Pale Pink</td>
<td>+/-</td>
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<tr>
<td>Yellow</td>
<td>negative (-)</td>
</tr>
</tbody>
</table>

3.1.2 A slide must be made on all samples that give a 3+ or above. Slides may be made on samples that give a reaction below a 3+ at the discretion of the analyst.

*Safety:* Fast Blue B Salt is an irritant and a carcinogen. Alpha-naphthyl acid phosphate hemalcium salt is an irritant.

### 3.2 SPERM IDENTIFICATION - CHRISTMAS TREE STAIN

#### Standards and Controls

A known sperm slide should be made after the stains have been freshly prepared by the QC officer to ensure that both stains are working.
correctly. Results of this QC check will be documented in the QC Manual.

**Procedure**

3.2.1. If a slide is needed per your AP results then the cut approximately ¼ inch by ¼ inch ¼ inch² piece of cloth or the tip of a swab with sonicated scissors and place it on a clean microscope slide. Add a couple of drops of de-ionized water to the sample and tease the sample apart with two sterile wooden applicator sticks.

3.2.2. If the slide was prepared by the hospital or you have made a slide it needs to be heat fixed and stained. Flame the slide (or place on a hot plate) briefly before staining it to ensure that the sample is fixed to the slide.

3.2.3. Place the slides on a rack and apply the Kernechtrot stain to the slides. Leave the stain on for a minimum of 15 minutes. The stain can be left on the slide longer; however, the stain should not be allowed to dry onto the slide.

3.2.4. Apply the Picroindigocarmine stain to each slide. Leave this stain on only a brief time (no more than 15 seconds).

3.2.5. Wash off the stain with methanol. Let the slides air dry.

3.2.6. Once dry, apply a small amount (a couple of drops) of permount onto the slide and add a 22x50 mm cover slip over the slide.

3.2.7. Observe the slide under the microscope at 200x or 400x and confirm the microscopic characteristics of the sperm head at 400x. Spermatozoa have a clear acrosomal cap, a red head and a green tail. Spermatozoa may be identified without the presence of a tail; but the clear acrosomal cap must be present and clearly visible.

3.2.8. A microscopic examination to look for the presence of spermatozoa must be performed on blood and saliva evidence if there is a possibility that sperm may exist on that evidence due to its location (ie crotch area of the suspect’s pants).
3.2.9 Swab both the inside and the outside of a condom and make a slide directly from the swabblings. There is no need to do an Acid Phosphatase Test on these swabblings prior to doing a sperm search.

3.2.10 The sperm should be counted in a microscopic field at 200x and the amount documented for quantitative purposes. If the sperm quantity is low on an intimate sample an attempt should be made to find a second piece of evidence with a higher quantity of sperm.

3.2.11 If sperm has been found on both the panties and the vaginal swabs and there is at least 1 sperm/field located on a vaginal swab and there is only one donor in the case then only the vaginal swabs need to be sent unless there is saliva on the panties.

*Safety: Picric Acid is an explosive if allowed to dry out.*

3.3 **RSID test for Semen**

The RSID (Rapid Stain Identification) test is a confirmatory test for the presence of human semen. This test will be run if a 3 + or greater is seen on the Acid Phosphatase test and no sperm is seen on the microscope slides.

**Standards and controls**

Each new lot number must be QC'd before being placed into current usage. A positive and negative control must be run with every case or every batch of cases. The positive control will consist of a known human semen sample and the negative control will consist of only 20 ul of extraction buffer to 80 ul of running buffer. If a reddish line is seen in the negative control the test will be considered invalid and the sample will be rerun. If a reddish line appears again in the negative control the test will be considered inconclusive. In the event that this should occur, the QC officer will be notified immediately.

**Procedure**

3.3.1 Using scissors which have been flamed, cut a small sample of sufficient size depending on the concentration of the stain from your sample and place into a 1.5ml centrifuge tube. Add a
minimum of 100 ul and up to 1 ml of RSID semen extraction buffer. (The amount of buffer added will depend on the sample size)

3.3.2 Allow the sample to extract for a minimum of 15 min. For weak or older samples, analysts may desire to use a larger quantity of material and/or extract over night.

3.3.3 After completing the extraction process, pipette 20 ul of this sample into a separate 1.5 ml centrifuge tube and add 80 ul of RSID semen running buffer and immediately add all 100 ul to the sample well on the RSID semen card.

3.3.4 When there is a positive reaction, two lines will appear, one line in the area marked "C" for control and one in the area marked "T" for test. A positive result can be recorded as soon as both of these lines appear. The lines must be reddish in color. In order to determine that the test is negative a full ten minutes must pass after the liquid is added to the card. If the reaction is negative then only one line appears in the area marked "C". If no line appears at the area marked "C" the test must be repeated. The positive test result should not be recorded if the line appears at the T area after the 10 minute time period.

3.3.5 If there is a limited sample and both semen and saliva testing are needed the sample can be extracted in either semen or saliva extraction buffer. 20 ul of the extracted sample will then be added to the appropriate running buffer and tested as previously described.

Note: Beware of a high dose hook effect. If a sample gives a negative reaction and your preliminary (Acid Phosphatase test) testing indicates you would expect a strong RSID result, make a 1/10 dilution using the semen extraction buffer and sample and repeat the test.

3.4 **Report wording for samples requiring DNA analysis**
If a swabbing or cutting is taken from an item of evidence for DNA testing then the following wording should be in the report. "A swabbing or cutting was taken from Item ________ for DNA analysis." If a sub item will be made from this swabbing or cutting the wording should say,; "A swabbing or cutting (Item _____sub item number) was taken from Item ________ for DNA analysis."

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4. **SALIVA ANALYSIS**

Saliva analysis should be performed on all cases where the victim has stated, or is unsure, that cunnilingus has occurred, on cases where the suspect has licked his fingers before penetrating the victim or to validate a statement made by an individual involved in the case. Saliva analysis will not be performed on rectal swabs.

4.1 Phadebas Test

The Phadebas test is a preliminary test to look for the enzyme amylase which is present in saliva. This test can be used to screen large pieces of evidence which could contain multiple stains.

**Standards and Controls**

A positive control which is known saliva sample and a negative control which contains only the reagents will be set up along with a cloth control, if present, which is a small cutting from an apparently unstained area on the item of evidence and run on every case or every batch of cases. Each new lot of phadebas tablets must be QC’d by the QC officer prior to being put into use.

**Procedure**

4.1.1 Make a small cutting of the suspected stain along with your controls and place each cutting in a separate 13x100mm labeled test tube.

4.1.2 Add one Phadebas tablet to each tube. Then add 4 ml distilled water to each test tube and vortex the mixture for a few seconds or until the materials are well mixed.

4.1.3 Incubate at 37°C for thirty minutes.

4.1.4 Vortex and spin in a serafuge for five minutes and then look for a color change in the liquid at the end of the test. Note the chart below for the appropriate grading of the color change. If the test is not going to be observed immediately then add 1 ml of .5N NaOH to stop the reaction. If the phadebas is +/- or greater you need to do an RSID. If the RSID is positive then you report human saliva. If the RSID test is negative then there is no saliva. If the phadebas is 1+ or greater you will check the phadebas box positive as well.
If you have a +/- phadebas and a negative RSID you will call the sample negative.

**Phadebas Table**

| +/ - | 1+ | 2+ | 3+ | 4+ |

*Safety: Sodium hydroxide is caustic and corrosive.*

4.2 **RSID test for Human Saliva**

The RSID (Rapid Stain Identification) test is a test for the presence of human saliva. If there is limited sample the phadebas test should be skipped and only the RSID test should be done. If multiple areas on one item of evidence are positive for the Phadebas only the best area needs to be tested further with the RSID – Saliva test.

Note: Human saliva can be confirmed if both a positive result is obtained with the phadebas and the RSID saliva test. If there is a limited sample and only the RSID test can be run then only reaction consistent with human saliva can be reported due to the fact that the RSID test will cross react with human breast milk.

**Standards and controls**
Each new lot number must be QC'd before being placed into current usage. A positive and negative control must be run with every case or every batch of cases. The positive control will consist of a known human saliva sample and the negative control will consist of only 20 ul of extraction buffer to 80 ul of running buffer. If a reddish line is seen in the negative control the test will be considered invalid and the sample will be rerun. If a reddish line appears again in the negative control the test will be considered inconclusive. In the event that this should occur, the QC officer will be notified immediately.

Procedure

4.2.1 Using scissors which have been flamed, cut a small sample of sufficient size depending on the concentration of the stain from your sample and place into a 1.5ml centrifuge tube. Add a minimum of 100 ul and up to 1 ml of RSID saliva extraction buffer. (The amount of buffer added will depend on the sample size)

4.2.2 Allow the sample to extract for a minimum of 15 min. For weak or older samples, analysts will extract over night.

4.2.3 After completing the extraction process, pipette 20 ul of this sample into a separate 1.5 ml centrifuge tube and add 80 ul of RSID saliva running buffer and immediately add all 100 ul to the sample well on the RSID saliva card.

4.2.4 When there is a positive reaction, two lines will appear, one line in the area marked "C" for control and one in the area marked "T" for test. A positive result can be recorded as soon as both of these lines appear. In order to determine that the test is negative a full ten minutes must pass after the liquid is added to the card. If the reaction is negative then only one line appears in the area marked "C". If no line appears at the area marked "C" the test must be repeated. The positive test result should not be recorded if the line appears at the T area after the 10 minute time period.

Note: There is no high dose hook effect associated with this test. Therefore there is no need to dilute and rerun a sample that is negative.

4.3 Report wording for samples requiring DNA analysis
If a swabbing or cutting is taken from an item of evidence for DNA testing
then the following wording should be in the report. “A swabbing or cutting was taken from Item ________ for DNA analysis.” If a sub item will be made from this swabbing or cutting the wording should say; “A swabbing or cutting (Item _sub item number) was taken from Item ________ for DNA analysis.”

5. **Mini Crimescope**

This procedure is used to examine items of evidence for the presence of biological evidence which may not be visible to the naked eye.

**Procedure**

5.1. Start up procedures.

5.1.1 Set the wheel to “White light “as a default when not using the unit.

5.1.2 Turn on the main switch (in the back). Check with your hands that there is air circulation on both exhaust top holes and on the fan located above the light guide connection.

5.1.3 Aim the wheel towards a wall and turn on the lamp switch (on the front of the unit). Within 1 - 2 minutes you should see a bright spot. Do not look at the spot for too long as it is extremely intense. If the spot is weak, verify that the intensity knob on the front of the unit (located below the light guide connection) is open all the way.

5.1.4 Scan your filters for the different colors available. Do not look into the light source. Use protective goggles and turn out lights and get room as dark as possible.

5.2 Examination procedures

5.2.1 Scan the item of evidence with the light beam and look for areas that glow when the beam hits the stain.

5.2.2 Collect and/or make notes of these areas.

5.2.3 Refer to the information below for wave length and goggle use:

**Body Fluid Detection**
Semen, Saliva, Urine, Sweat, Vaginal fluids, Feces...

Blood does not fluoresce: it absorbs at 415 nm and reflects at 254 nm.

For dark surfaces and for saliva use “UV” and Clear/Yellow goggles.
On most clothes and rugs use “445/455/5CSS/515” and Orange goggles. Use 515 on white clothes.

Refer to the operator’s manual for further applications.

5.3 Shut down procedures:

5.3.1 Turn off lamp (front switch) and let the fans run for 3 - 5 minutes.

5.3.2 Turn off main switch (back switch). Do not restart the lamp when the bulb is still hot. An arcing noise may be heard when re-starting too early.

5.3.3 If power is lost in the building, turn the lamp off but leave the fan switch on so the lamp can continue to cool when the power is restored.

Safety: Always wear protective goggles when operating the Mini-Crimescope.

6. Photo Evidence Documentation

6.1 Circumstances for Photo Documentation

6.1.1 A digital image needs to be taken on all evidence in which a body fluid has been identified except for swabs.

6.1.2 A digital image needs to be taken on any evidence that a swabbing or cutting is taken from showing where that sample was swabbed or cut for DNA analysis.

6.2 Procedures for Photo Documentation

6.2.1 When taking a digital image of a piece of evidence, an overall picture needs to be taken to show areas that have been cut or swabbed for further analysis (i.e. DNA analysis). The areas that are tested need to be labeled. Sub items also need to be documented.
6.2.2 Multiple photographs can be taken on large articles of evidence if necessary to properly document that evidence.

6.2.3 All photographs need to be labeled with the case number, item number, photographers’ initials and the date that the picture was taken.

6.2.4 All photos must not have any extraneous clutter in them and should be in focus.

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| November 22, 2001| 01              | 1. Procedure Updates  
|                  |                 | 2. Collation of all Body Fluid Procedures into one protocol |
| August 7, 2003   | 02              | Clarification on the preparation of Phenolphthalin Stock Solution |
| December 9, 2004 | 03              | Sperm ID christmas tree stain, chance in QC; Safety issue on NaOH; use of water for P30 testing; add reagents, sample description, standards and controls to ABA card testing, change phenolphthalin preparation, change extraction volume for heme ABA card. |
|                  |                 | 2. Add RSID protocol for blood, semen and saliva identification.  
|                  |                 | 3. Remove ABAcard test for Hematrace and p30 |
| July 23, 2008    | 05              | Review and update procedures. Add ABA card Hematrace back in to the SOP |
| December 7, 2009 | 06              | 1. Review of procedures and update to include the wording on reports for samples having DNA testing.  
|                  |                 | 2. Add that pictures must be free of clutter and should be in focus. |
DOCUMENT APPROVAL REQUEST (DAR) FORM

COMPLETE BOTH SIDES - THIS IS A TWO-SIDED FORM

NOTE: Attach or Reference any necessary support documentation

Page 1 of 2

I. INITIATOR INFORMATION

INITIATED BY (SIGNATURE): Jenny Elwell
PRINT INITIATORS NAME: Jenny Elwell
DATE: 12/1/09

II. SCOPE OF CHANGE

DOCUMENTATION TO BE CREATED OR CHANGED (Title):

X SOP Procedure

III. REASON FOR CHANGE (Summarize why document was created or changed).

Update and review manual

IV. DESCRIPTION OF CHANGE (Describe the type of change - i.e., "From...To") - Attach additional pages if necessary.

1. Review of procedures and update to include the wording on reports for samples having DNA testing.

2. Add that pictures must be free of clutter and should be in focus.
## V. IMPACT OF CHANGE

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<th>SAFETY IMPACT?</th>
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<td>X NO</td>
<td>□ No</td>
<td>□ Yes</td>
</tr>
<tr>
<td></td>
<td>(attach additional information)</td>
<td></td>
</tr>
</tbody>
</table>

### COMMENTS:

TRAINING REQUIRED? X YES □ NO

To be completed by (date): TBD
Person responsible for training (name): ASAC Jenny Elwell
Personnel to be trained (function or names): Body Fluid unit:
Type of training: □ Routing □ Meeting

---

### VI. APPROvals

Minimum of two signatures required for all documents. The Technical Leader's signature is needed on all DARs (if not the initiator). Enter "NA" for spaces not used

<table>
<thead>
<tr>
<th>NAME/TITLE</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jenny Elwell</td>
<td>12-1-09</td>
</tr>
<tr>
<td>NAME/TITLE</td>
<td>DATE</td>
</tr>
<tr>
<td>Maciej J. Dettman</td>
<td>12-2-09</td>
</tr>
<tr>
<td>NAME/TITLE</td>
<td>DATE</td>
</tr>
<tr>
<td>Susie Banks</td>
<td>12-2-09</td>
</tr>
</tbody>
</table>