



## Evidence Collection Guidelines\*



Specimen	Number of Swabs	How to Collect	When to Collect		
<b>Known Samples</b>	Blood card in BCA Kit	Several drops of blood is preferred	Always collect	No pulled hairs needed	
<b>Buccal Swabs</b>	Four swabs	Swab inside of cheek for Buccal known sample	<ul style="list-style-type: none"> <li>• If no oral assault Buccal swab is acceptable for known sample</li> <li>• <b>Blood is preferred</b></li> </ul>	Oral rinse before collecting not necessary	
<b>Oral Swabs</b>	Four swabs	Swab along the upper and lower gum line and under tongue	Collect up to 24 hours after oral assault	Collect even if patient has brushed teeth, eaten or drank fluids	Swabs collected from around the mouth even if patient has not showered will be patient's own saliva
<b>Fingernail Swabs</b>	One swab per hand	<ul style="list-style-type: none"> <li>• Lightly moistened swab with either sterile water or saline</li> <li>• Package each hand separately</li> </ul>	<ul style="list-style-type: none"> <li>• Collect only if patient reports scratching assailant</li> <li>• Do not collect if patient has no memory of scratching suspect</li> </ul>	Swabs better than cuttings or scraping fingernails	
<b>Skin Swabs</b>	Two swabs per area <sup>1</sup>	<ul style="list-style-type: none"> <li>• Lightly moistened swab with either sterile water or saline</li> <li>• Package right and left together (more potential for DNA on 2 than 4 swabs)</li> </ul>	<ul style="list-style-type: none"> <li>• Swab even after showering (one-two times)</li> <li>• Collect up to 48- 72 hours</li> </ul>	Swab areas for touch DNA if assailant forcefully touched victims skin i.e. held wrists for extended period of time or neck with manual strangulation	<ul style="list-style-type: none"> <li>• BCA research shows better collection of evidence with two moist swabs (no need to follow with dry swabs)</li> <li>• Swab areas of fluorescence</li> </ul>
<b>Bite marks</b>	Two swabs	<ul style="list-style-type: none"> <li>• Photograph first</li> <li>• Lightly moistened swabs with either sterile water or saline</li> </ul>	<ul style="list-style-type: none"> <li>• Swab even after showering (one-two times)</li> <li>• Collect up to 48-72 hours</li> </ul>		

<sup>1</sup> (V Corum, 2014)



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<b>Pubic Hair Combing</b>		<ul style="list-style-type: none"> <li>• Comb pubic hair</li> <li>• Fold comb in paper</li> <li>• Place in envelope</li> </ul>	If patient has not showered		
<b>Perineal Swabs</b>	Collect four swabs	Lightly moistened swab with either sterile water or saline	<ul style="list-style-type: none"> <li>• Swab even after showering (one-two times)</li> <li>• Collect even while patient is menstruating</li> </ul>	<b>Digital penetration:</b> collect perineal swabs only when the victim is a child	<ul style="list-style-type: none"> <li>• Document why swabs collected from area other than perineum, i.e. mons pubis, labia majora</li> <li>• Sterile 4x4's pre and post void, BCA would test only if swabs were negative</li> </ul>
<b>Penile Swabs</b>	Collect two swabs	Lightly moistened swab with either sterile water or saline	<ul style="list-style-type: none"> <li>• Swab even after showering (one-two times)</li> </ul>		
<b>Scrotum Swabs</b>	Collect two swabs	Lightly moistened swab with either sterile water or saline	<ul style="list-style-type: none"> <li>• Swab even after showering (one-two times)</li> </ul>		
<b>Vaginal Swabs</b>	Collect four swabs	Blind swab collection if patient unable to tolerate speculum exam	Collect up to 120 hours	Collect even while patient is menstruating	<ul style="list-style-type: none"> <li>• BCA prefers no Lube with speculum</li> <li>• No need to document it if you do use lube</li> </ul>
<b>Cervical Os Swabs</b>	Collect two swabs	Place one swab in cervical os then collect second swab	<ul style="list-style-type: none"> <li>• Collect with vaginal assault more than 72 hours</li> <li>• Collect up to 2 weeks after vaginal assault</li> </ul>	Collect even while patient is menstruating	Recommended to collect with every vaginal assault <sup>2</sup>

<sup>2</sup> (Morgan, 2008)



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<b>Rectal Swabs</b>	Collect four at one time -or- Collect two swabs then two more for total of four	<ul style="list-style-type: none"> <li>• Lightly moistened swab with either sterile water or saline</li> <li>• Insert swabs into anus 2 cm, rotate gently</li> </ul>	Collect up to 48 hours after assault	Anoscopy <ul style="list-style-type: none"> <li>• Collect 4 anal swabs prior to anoscope insertion</li> <li>• Collect 4 swabs past end of anoscope</li> </ul>	<ul style="list-style-type: none"> <li>• Perianal swabs = potential drainage from vagina</li> <li>• Little research on viability of sperm in rectum</li> </ul>
<b>Tampons</b>		Put tampon in sterile specimen cup with holes punched in the top	<ul style="list-style-type: none"> <li>• Place cup in paper bag</li> <li>• Seal bag</li> <li>• Place in refrigerator</li> </ul>		
<b>Condoms</b>		Put condom in sterile specimen cup with holes punched in the top	<ul style="list-style-type: none"> <li>• Place cup in paper bag</li> <li>• Seal bag</li> <li>• Place in refrigerator</li> </ul>	Do not tie condom off	
<b>Vomit</b>		Put in sterile specimen cup	<ul style="list-style-type: none"> <li>• BCA will test</li> <li>• Last to test</li> </ul>	<ul style="list-style-type: none"> <li>• Needs to be fresh</li> <li>• Only collect obvious pill fragments in the vomit</li> </ul>	
<b>Trace</b>		<ul style="list-style-type: none"> <li>• Collect items with potential for suspects DNA, i.e. cigarette butt smoked by assailant</li> <li>• Place in Foreign Matter envelope</li> </ul>	<ul style="list-style-type: none"> <li>• Hair collected for trace evidence may need to have pulled head and pubic hairs from victim</li> <li>• Can be obtained at a later time, hair would be tested last</li> </ul>	<ul style="list-style-type: none"> <li>• No underwear in kit</li> <li>• Only put <b>swabs</b> in kit</li> </ul>	<ul style="list-style-type: none"> <li>• Document and photograph trace evidence</li> <li>• Collect trace evidence i.e. leaves, dirt etc. and package in paper bags or envelopes following protocol for clothing.</li> </ul>
<b>Clothing</b>		Package each item separately in paper bags <sup>3</sup>	Collect clothing worn after assault even if laundered <sup>4, 5</sup>	Seal with evidence tape, label with patient name, time, date, case number, jurisdiction, person collecting	

<sup>3</sup> (V Corum, 2014)

<sup>4</sup> (Petricevic, 2006)

<sup>5</sup> (E Kafarowski, 1996)



## Evidence Collection Guidelines



<b>Interesting information</b>	<ul style="list-style-type: none"> <li>• Sexual Assault kit costs the BCA \$8.61 • BCA cost to process kit is about \$1,000</li> <li>• Individual Swab boxes hard to open and increase chance of contamination</li> <li>• BCA makes their own slides</li> <li>• Fluorescence: Sweat, urine, seminal fluid and saliva fluoresce with Alternate Light Source. Many foods fluoresce (dairy products)</li> <li>• Blood does not fluoresce</li> </ul>
<b>Turnaround time</b>	<ul style="list-style-type: none"> <li>• Children and/or Vulnerable adult = immediately Adults = 3 months</li> <li>• Kits are returned to Law Enforcement after processing is completed</li> <li>• Most probative swabs processed first</li> </ul>
<b>Documentation<sup>6</sup></b>	<ul style="list-style-type: none"> <li>• Seal each envelope with patient label and initials over the seal</li> <li>• Mark <b>Yes Specimen Collected</b> on the front of the envelope and initial</li> <li>• Copy of SANE report placed in the Sexual Assault Kit is OK, no need to fill out BCA form in addition</li> <li>• Must document reason swabs were collected for the BCA to process them</li> </ul>
<b>Procedural</b>	<ul style="list-style-type: none"> <li>• Only put the envelopes used back into Sexual Assault kit</li> <li>• Do not touch envelopes or the inside of the Sexual Assault kit without gloves</li> <li>• Phantom profiles: use gloves and mask while collecting swabs</li> <li>• BCA kit, Blood and Urine kits need to be refrigerated</li> <li>• 2 skin swabs yields more concentrated sample<sup>7</sup></li> <li>• Allow wet swabs to dry before packaging<sup>8</sup></li> <li>• Swabs should be done simultaneously to ensure equal amount of DNA on all swabs<sup>9</sup></li> </ul>
<p>*2014 Guidelines only, Always refer to local jurisdiction and SANE Program protocols</p>	

<sup>6</sup> (V Corum, 2014)

<sup>7</sup> (V Corum, 2014)

<sup>8</sup> (V Corum, 2014)

<sup>9</sup> (A Burg, 2011 )



## Evidence Collection Guidelines



Specimen	How to Collect	When to Collect		
		24 Hours	48 Hours	120 Hours
<b>Blood</b>	<ul style="list-style-type: none"> <li>● <b>Ideal</b> volume 10 mls in <b>both</b> grey top tubes</li> <li>● 5 mls in both in grey top tubes is better than 1 full tube</li> <li>● One tube is saved for the defense</li> <li>● Can use purple top tube if no grey top available</li> </ul>	Collect	>48 hours don't collect	Don't collect
<b>Urine</b>	<ul style="list-style-type: none"> <li>● <b>Ideal</b> volume is 50-100 mls</li> </ul>	After 24 hours the alcohol in a sample will be gone*	Only test for drugs in urine	No testing
	*No algorithm to go backwards to obtain a urine alcohol level Urine is collected in bladder and the value could only be an average of the urine in the bladder since the last void			
<b>Collect Blood and urine</b>	<ul style="list-style-type: none"> <li>● Time of the SANE exam is the one time we are able to collect samples</li> <li>● Both blood and urine is best for testing</li> <li>● Collect even without a report to Law Enforcement</li> <li>● Blood and urine collected, urine will be tested first (stays in the urine longer than blood) if they are positive BCA will do a confirmation</li> <li>● Blood and urine for alcohol level the specimens need to be refrigerated</li> <li>● Blood and urine for drug testing the specimens need to be frozen</li> </ul>			
<b>Documentation</b>	<ul style="list-style-type: none"> <li>● BCA Toxicologists generally do not see the SANE report</li> <li>● Document patient's prescribed medications, date and time of last dose on Toxicology forms</li> <li>● Document date and time of medications given to the patient in the Emergency Department on Toxicology forms</li> <li>● Document drugs and alcohol consumed before and after the assault on the Toxicology forms</li> </ul>			
<b>Drugs</b>	<ul style="list-style-type: none"> <li>● Victims wake-up because the drugs are leaving the system</li> <li>● GHB: Found by the BCA only 4 times in 15 years. GHB moves thru the body faster than alcohol, 8-10 hours for clearance. GHB is a biological compound found in urine. GHB is an endogenous compound that everyone's body produces. Stays 8-10 hours in urine and 4-6 hours in the blood. No screening test for GHB, it is a confirmation process, not an easy or quick test.</li> <li>● Rohypnol more common in Southwestern US, never found by the BCA in MN</li> <li>● Benzodiazepines most common drug found (Ativan, Xanax)</li> <li>● Methamphetamine and cocaine are next most common drugs found</li> </ul>			
<b>Alcohol Formulas</b>	<ul style="list-style-type: none"> <li>● Burn Off Formula: Simple multiplication formula = 0.015 X the hours since consumption</li> <li>● Widmark Formula: Takes into consideration body weight, gender, variables of eating, drinking and the kind of alcohol, victim/witnesses accounts and SANE report</li> </ul>			

## Bibliography

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