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| Purpose | This document will define the procedure for the presence of spermatozoa in a semen sample after a vasectomy. |
| Policy | Semen sample must be tested within 1 hour from collection time. |
| |  |  | | --- | --- | | Workplace Safety |  | | All laboratory employees are expected to maintain a safe working environment and an injury-free workplace. Laboratory employees are responsible for their own safety, the safety of others and adhering to all departmental and medical center safety policies and procedures.   * For standard precautions and safety practices in the laboratory; see **Safety Practices**, specifically, but not limited to, equipment safety, proper body mechanics, sharps exposure and proper use of personal protective equipment (PPE). * For Universal Body Substance precautions, see **Universal Body Substance Precautions**, specifically, but not limited to, exposure to body fluids. * For proper hand-washing, see **Hand washing Policy**, specifically, not limited to, proper hand-washing. * For proper infection control, see **Infection Control**, specifically, but not limited to, proper use of gloves. * For proper handling of regular and infectious waste, see **Handling of Regular and Infectious Waste**, specifically, but not limited to, proper disposal of regular and biohazardous waste. * For proper cleaning of work area, see **Cleaning Work Areas**. * For proper handling of chemicals and reagents, see the Chemical Hygiene Plan. * For proper storage and disposal of chemical hazardous waste, see **Storage & Disposal of Chemical Hazardous Waste**.   All laboratory employees are expected to maintain a safe working environment and an injury-free workplace. Laboratory employees are responsible for their own safety, the safety of others and adhering to all departmental and medical center safety policies and procedures. |

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| Specimen | * Fresh – samples collected within an hour of testing and not enriched, diluted or treated. * Post-vasectomy – fresh samples collected within an hour of testing and designated as post-vasectomy specimens. * The patient’s physician or the laboratory provides the collection instructions (see **attachment A at LAMC-PPP-0318 Semen Analysis: Manual Method**) and the sterile plastic container. * Specimen must be completely labeled with patient’s name and medical record number. * Specimen must be protected from extremes of temperature (less than 68°F or more than 104°F) during transport to the laboratory. * Specimen must be hand delivered to the main laboratory within 15 minutes from time received and must be analyzed within 1 hour from collection time for an accurate evaluation of sperm motility. Motility will not be performed for specimen not analyzed within 1 hour from collection time. |
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| Specimen rejection | * Refrigerated or frozen specimens * Mislabeled or unlabeled specimens | | |
| Reagents and/or Media | **Description** | **Vendor** | **Storage** |
| Qwik Check Liquefaction | MES | Room temperature |

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| Materials and supplies | * Glass slide * Coverslip * Disposable pipette * Conical Centrifuge tube |

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| Equipment | * Centrifuge * Microscope |

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| Safety or Special Safety Precautions | *Refer to the safety manual for general safety requirements.* |

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| Procedure | Follow the steps below to perform post vasectomy semen analysis | |
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| **Step** | **Action** |
| 1 | Allow the specimen to liquefy. Swirl semen in container to determine if coagulum has liquefied. A liquefied specimen will take the shape of the container.  **Note:**  Normal semen sample liquefies within 60 minutes at room temperature. Continuous gentle mixing or rotation of specimen during liquefaction may reduce errors in determining sperm concentration. Failure of specimen to liquefy within 30 minutes must be recorded in the report. When samples do not liquefy within 30 minutes, extend incubation time and pipette the specimen repeatedly with a sterile pipette. If this method fails, use of an enzymatic treatment- Qwik Check Liquefaction Kit may be used. Use of these manipulations must be recorded in the report. Refer to package insert for use.  *Note: Motility should not be reported on specimens tested more than 1 hour after collection.* |
| 2 | Mix the liquefied semen sample well. |
| 3 | Using a disposable pipette, place a drop of specimen on a slide. |
| 4 | Cover the drop on the slide with a coverslip. |
| 5 | Observe under high power magnification (40x), scan at least 20 fields. |
| 6 | Look for the presence of spermatozoa. |
| 7 | Note the number of spermatozoa / HPF and if they are motile. Also make note of any WBC's or RBC's present. |
| 8 | If no sperm present, transfer semen sample to a conical centrifuge tube. |
| 9 | Spin the sample at 3000 RPM for 15 minutes. |
| 10 | Decant the supernatant. |
| 11 | Place a drop of sediment on a slide and place a coverslip over the specimen. |
| 12 | Examine 10 fields for spermatozoa. |
| 13 | Note the number of spermatozoa/HPF and if they are motile. Also make note of any WB’s or RBC/s present. |
| 14 | Report in the Cerner using **Accession Result Entry** in Cerner the following:   |  |  | | --- | --- | | **If…** | **Then…** | | No sperm are observed | * report **0 Sperm** for Post Vas Count * **No Sperm Seen** for Motility. * Choose the drop down comment” Post Vas count was confirmed by concentration technique.” | | Sperm are present | * Enumerate the number/hpf for Post Vas Count: **0 – 3**, **4 – 20**, or **>20** * Select **Motile Sperm** or **Non-Motile** for Motility. | | Sperm are present and specimen was tested more than 1 hour after collection | * For Motility, choose the drop down comment: “Not performed >1hr after collection.” |  * Enumerate any RBC's or WBC's, if present, as few, moderate or many in the comment field. * *Note:*    + *After centrifugation, motility can be lost. Do not report motility on centrifuged specimens.* Report motility as “==” and enter result comment “Not performed, motility lost due to concentration technique”   + *Motility should also not be reported on specimens tested more than 1 hour after collection.* |

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| Reference Range | Reference range: < 4 per HPF |

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| Limitations | * Incomplete ejaculation and/or incomplete collection of total ejaculation may lead to inaccurate results. |
| Reference | World Health Organization, 2010, WHO laboratory manual for the Examination and Processing of human semen, 5th edition.  College of American pathologists, 2019, Hematology and Coagulation Checklist |

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| Controlled Documents | |  |  | | --- | --- | | **Document Number** | **Document Name** | | LAMC-PPP-0123 | Safety Practices | | LAMC-PPP-0127 | Infection Control | | LAMC-PPP-0128 | Universal Body Substance Precaution | | LAMC-PPP-0129 | Handling of Regular and Infectious Waste | | LAMC-PPP-0130 | Cleaning Work Areas | | LAMC-PPP-0132 | Hand-washing Policy | | LAMC-PPP-0134 | Storage and Disposal of Chemical Hazardous Waste | | LAMC-PPP-0318 | Semen Analysis: Manual Method | | SCPMG-PPP-0136 | Managing the Semen Analysis- Patient Questionnaire |   See below the list of controlled documents |
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