



Standard Practice for Specification for Equipment and Supplies in Sexual Assault Investigations¹

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1. Scope

1.1 This practice describes the basic instruments used for the medical-legal examination of victims or suspects, or both, in sexual assault investigations. These specifications are designed to be used in conjunction with other specifications, guides, and practices associated with sexual assault examinations that are listed in Section 2.

1.2 Additional information can be found in Terminology E1732, Guide E1843, Specification E2057, and Practice E2123.

1.3 This practice offers a set of instructions for performing one or more specific operations. This standard cannot replace knowledge, skill, or ability acquired through appropriate education, training, and experience and should be used in conjunction with sound professional judgment.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*²

- E1732 Terminology Relating to Forensic Science
- E1843 Guide for Sexual Assault Investigation, Examination, and Evidence Collection
- E2057 Specifications for Preparation of Laboratory Analysis Requests in Sexual Assault Investigations
- E2123 Practice for Transmittal of Evidence in Sexual Assault Investigation

3. Summary of Practice

3.1 These specifications outline considerations when choosing equipment to be used in the medical-legal examination of

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

sexual assaults. The types of equipment listed should be included in any examination facility. Considerations for choosing a variation or optional equipment are also given.

4. Instrumentation and Supplies

4.1 The following instrumentation should be available at examining facilities where sexual assault cases are received:

4.1.1 *Speculum*—The speculum is used to view the vaginal walls and cervix. Clear plastic disposable specula are preferred because they allow the examiner to see through them and visualize the vaginal walls. Metal specula do not allow this visibility and also may reflect light when taking photographs. Speculum illuminators which attach to the handle should be considered as an aid (as they assist) in visualizing the vaginal walls and cervical area.

4.1.2 *Colposcope*—The colposcope is used to magnify and provide increased visibility, especially in the vaginal area where structures include many folds and grooves of tissue. The examiner must deliberately examine each structure to determine the presence or absence of injury or foreign material, or both. The use of colposcopy has been shown to be critical in both pediatric and adult sexual assault examinations.

4.1.2.1 There are several varieties of colposcopes manufactured and each program should review numerous types to ascertain the best instrument for their facility in view of existing equipment and physical layout of the examination environment.

4.1.2.2 The colposcope should have photographic or video capability, as well as print capacity. The photographic or video capability should be of sufficient resolution to adequately record and document the detail observed in the examination.

(1) Appropriate digital storage media, and other supplies necessary for the type of photographic instrument must also be maintained.

(2) Cameras incapable of close-up photography, disposable cameras, or cameras, or a combination thereof, that produce “instant” photographs are generally not of sufficient quality to warrant consideration.

4.1.3 *Alternate Light Sources*—Alternate light sources assist in the location, documentation and collection of dried stains, foreign debris, and subclinical bruising. The ultraviolet light (Wood's lamp) is most often used and is considered basic equipment in a sexual assault physical examination.

4.1.3.1 Alternate light sources specifically designed for use in criminal investigation activities which have the capability of illuminating surfaces under variable wavelength settings can help in locating a greater variety of stains and are valuable in locating subclinical bruising and establishing patterns of injury.

4.1.4 *Anoscope*—When the examiner needs more than an external examination of the anorectal area, a clear plastic disposable anoscope should be available.

4.1.5 *Otoscope and Ophthalmoscope*—These instruments are useful to determine whether injury to the ear(s) or eye(s), or both, have occurred.

4.1.5.1 Disposable shields should be used to prevent cross-contamination.

4.1.5.2 The otoscope may also be helpful in examining other cavities, such as the oropharynx.

4.1.6 *Microscope*—Local evidentiary procedures may call for an examiner to observe wet mount slides prepared from a swab to determine and record the presence of motile spermatozoa. An appropriate light microscope can be used for this purpose by a qualified examiner.

4.1.6.1 A variety of imaging attachments are available for microscopes and should be considered when procuring the instrumentation.

4.1.7 *Swab Dryer*—To reduce degradation of samples, the examination area should contain equipment necessary to allow adequate air drying of wet or moist evidence items prior to packaging. Swab dryers are available commercially or can be built (**no heating element should be present**) to the specifications of an individual examination setting.

4.1.8 *Examination Light*—The best quality examination light available should be obtained, preferably with a halogen light source.

4.1.9 *Overhead Lighting*—Overhead lights such as “day-light” fluorescent bulbs that give good skin tone illumination should be used, for improved observation as well as accurate photography.

4.1.10 *Scale*—A balance beam scale should be available to accurately measure the height and weight of the examinee.

4.1.11 *Trays and Tables*—Counter space, trays and tables should be adequate and at proper height to facilitate using equipment during examinations. These surfaces should meet hospital standards for cleanliness.

4.1.12 *Other Instruments*—Stethoscope, sphygmomanometer, thermometer, and surface measuring devices should be easily available.

4.2 *Supplies*—In addition to those supplies included with the instrumentation described above in 4.1, disposable supplies listed in **Table 1** should be available during sexual assault examinations.

4.2.1 A list of medical equipment and supplies is provided in **Table 1**.

TABLE 1 Medical Equipment and Supplies

Medical Equipment

Spec illuminator light
Illuminator replacement bulb
Halogen exam light
Balance beam scale
Overbed table
Otoscope
Rechargeable handle for oto
Sphygmo, aneroid

Medical Supplies

Emesis basin, 9 in.
Temp-a-dot, F
3 cc, 21G by 1½ syringe
20 cc Syringe w/o needle, monoject
Sharps cont. 1 qt
Foley, 5 cc, 18Fr
Exam gloves, latex unisive, no powder
Non-sterile, 2 by 2
Non-sterile, 4 by 4
Paper tape, 1 in. with dispenser
PVP iodine scrub, 1 stick/pak
Exam gown
Slippers, M
Slippers, L
Ft. drapes
Head towels, blue
Washclothes, dispo, non-scrim
Procto apps. 16 in.
Surgilube 5 g tube
Tongue depressors, non-sterile
Cotton-tipped applicators, sterile 6 in.
Otoscope specula
Vag spec small
Vag spec med
Anoscope
Vacutainer, 7 ml, lavender EDTA
Vacutainer needles, 21G by 1 in.
Vacutainer holders
Vacutainer winged collection sets, 21G by ¾ in.
Calgiswab type 4, sterile 1's
Table paper, 18 in. crepe

5. Keywords

5.1 instrumentation; investigation; sexual assault; supplies

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