



Designation: ~~E2124 – 15~~ E2124 – 20

# Standard Practice Specification for Specification for Equipment and Supplies in Sexual Assault Violence Investigations<sup>1</sup>

This standard is issued under the fixed designation E2124; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

## 1. Scope

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

1.2 Additional information can be found in Terminology [E1732](#), Guide [E1843](#), ~~Specification Specifications~~ [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, skills, or ability abilities acquired through appropriate education, training, and experience (see Practice [E2917](#) and should, Education and Training) and is to be used in conjunction with sound professional judgment. professional judgement by individuals with such discipline-specific knowledge, skills, and abilities.~~

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, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>2</sup>

[E1732 Terminology Relating to Forensic Science](#)

[E1843 Guide for Sexual Violence Investigation, Examination, and Evidence Collection Protocol](#)

<sup>1</sup> This ~~practice specification~~ is under the jurisdiction of ASTM Committee [E30](#) on Forensic Sciences and is the direct responsibility of Subcommittee [E30.11](#) on Interdisciplinary Forensic Science Standards.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the ~~standard's~~ standard's Document Summary page on the ASTM website.

[E2057 Specifications for Preparation of Laboratory Analysis Requests in Sexual Assault Investigations](#)

[E2123 Practice for Preservation of Evidence in Sexual Violence Investigation](#)

[E2917 Practice for Forensic Science Practitioner Training, Continuing Education, and Professional Development Programs](#)

### 3. Summary of Practice Specification

3.1 ~~These specifications outline~~ This specification outlines considerations when choosing equipment to be used in the medical-legal examination of sexual ~~assaults~~ violence cases. 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~~ violence cases are received:

4.1.1 ~~Speculum—Alternate Light Sources—~~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. Alternate light sources assist in the location, documentation and collection of dried stains, foreign debris, and subclinical bruising. The ultraviolet light is most often used and is considered basic equipment in a sexual violence physical examination. Variable wavelength settings are recommended to visualize semen, urine, stains, foreign debris, and possibly subclinical bruising present on the skin surface.

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

4.1.2 Examination Light—Examinations should be conducted under a high quality examination white-light.

4.1.3 ~~Colposcope—Imaging Capture—~~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. Cameras and other forms of imaging devices are used to examine and document the body. The use of colposcopy has been shown to be critical in both pediatric and adult sexual assault examinations: imaging devices allows the examiner to magnify the areas of the body where injuries are located.

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

4.1.3.2 ~~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. 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.~~

~~(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.~~

4.1.3.3 Use a forensic/photographic ruler (sometimes referred to as a scale) for size-reference in photographs.

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.

~~4.1.4 *Otoscope and Ophthalmoscope—Magnification Equipment*—These instruments are useful to determine whether injury to the ear(s) or eye(s), or both, have occurred. A colposcope or other magnifying instrument may be used during the examination.~~

~~4.1.4.1 Disposable shields should be used to prevent cross-contamination. There are several varieties of colposcopes manufactured and each type should be reviewed to ascertain the best instrument for their facility.~~

~~4.1.4.2 The otoscope may also be helpful in examining other cavities, such as the oropharynx. equipment should have photographic and/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.~~

4.1.5 *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~~ may be used for this purpose by a qualified examiner.

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

~~4.1.6 *Otoscope and Ophthalmoscope*—These instruments are useful to determine whether injury to the ear(s) or eye(s), or both, have occurred.~~

~~4.1.6.1 Disposable shields should be used to prevent cross- contamination.~~

~~4.1.6.2 The otoscope may also be helpful in examining other cavities, such as the oropharynx.~~

~~4.1.7 *Overhead Lighting*—Overhead natural lights such as “daylight” bulbs that give good skin tone illumination should be used, for improved observation as well as accurate photography.~~

4.1.8 *Speculum*—The speculum is used to view the vaginal walls and cervix in pubertal females. 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.

~~4.1.9 *Scale (Physicians)*—A physicians scale should be available to accurately measure the height and weight of the examinee.~~

4.1.10 *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 ~~((nono heating element should be presentpresent))~~ to the specifications of an individual examination setting. If utilized, jurisdictions should follow the specified recommendations of the local laboratory regarding the use of a swab dryer.

~~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 “daylight” 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—Instruments, Equipment, and Supplies*: Stethoscope, sphygmomanometer, thermometer, and surface measuring devices should be easily available.~~

4.1.12.1 Stethoscope, sphygmomanometer, thermometer, and surface measuring devices (reference scale/ruler) should be easily available.

4.1.12.2 Copies of exam protocols should be available.