Designation: E 2063 – 00

Standard Practice for Calibration and Functionality Checks Used in Forensic Psychophysiological Detection of Deception (Polygraph) Examinations[1]

This standard is issued under the fixed designation E 2063; 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 reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice provides guidelines for calibration and instrumentation (both analog and computerized systems) used in the psychophysiological detection of deception (*verification of truth*). As a minimum, such instrumentation shall simultaneously record an individual's respiratory, electrodermal, and cardiovascular activity. Analog polygraphs shall be calibrated by the psychophysiological detection of deception (PDD) examiner, manufacturer, or factory-authorized individual. Computerized instrumentation shall be calibrated by the manufacturer or factory-authorized individual. The PDD examiner or factory-authorized individual shall perform functionality checks to ensure instrumentation is operating properly.

1.2 This practice does not prohibit additional components which may be offered as supplemental measurements of physiological change. Additional recording components (such as movement sensors) shall meet the manufacturer's specifications.

2. Referenced Documents

2.1 *ASTM Standards:*

E 1954 Practice for Conduct of Research in Psychophysiological Detection of Deception (Polygraph)[2]

E 2000 Guide for Minimum Basic Polygraph Education and Training of Individuals Involved in the Detection of Deception PDD [2]

E 2035 Terminology Related to Forensic Psychophysiology[2]

2.2 *Other Document:*

Manufacturer Manual(s) for System(s) in Use

3. Terminology

3.1 *Definitions of Terms*—See E 2035.

3.2 Terminology may vary according to different manufacturers.

4. Significance and Use

4.1 This practice sets forth the minimum requirements for calibration and functionality checks when conducting PDD examinations and related activities.

5. Minimum Requirements for Calibration and Functionality Checks of Polygraph Instrumentation

5.1 A recorded chart shall be created demonstrating correct functioning of the instrument. This chart will be maintained for a period of one year.

5.1.1 This chart shall contain the following information, as applicable: name, date, location, manufacturer, model, and instrument identification.

5.1.2 All notations, settings, and adjustments shall be clearly and permanently noted on the chart (either marked by hand or, in the case of computerized instrumentation, electronically recorded).

5.1.3 All calibration and functionality checks shall be conducted in accordance with the manufacturer's specifications.

6. Calibration Check (Analog Instruments)

6.1 Calibration checks shall be conducted in accordance with the manufacturer's specifications, but not less than once every three months.

6.2 At any time a malfunction is identified, the instrument shall not be used to conduct a PDD examination until that malfunction has been corrected as demonstrated by a calibration check.

6.3 A record in the form of a calibration chart shall be kept identifying the date, instrument identification, and by whom the calibration check was conducted.

6.3.1 This record shall be maintained for a minimum of one year.

7. Functionality Check (Computer Instruments)

7.1 Functionality checks shall be conducted at least once every six months.

7.2 At any time a malfunction is identified, the instrument shall not be used to conduct a PDD examination until that malfunction has been corrected as demonstrated by a functionality check.

7.3 A record in the form of a functionality chart in printed or digital format shall be kept identifying the date, instrument identification, and by whom the functionality check was conducted.

---

[1] This practice is under the jurisdiction of ASTM Committee E-52 on Forensic Psychophysiology and is the direct responsibility of Subcommittee E52.02 on Instrumentation.

Current edition approved Jan. 10, 2000. Published April 2000.

[2] *Annual Book of ASTM Standards*, Vol 14.02.

7.3.1 This record shall be maintained for a minimum of one year.

8. Keywords

8.1 calibration; calibration chart; forensic psychophysiology and psychophysiological detection of deception (PDD); functionality chart; functionality check; instrument; polygraph