

§ 493.1211

42 CFR Ch. IV (10-1-99 Edition)

requirements of 21 CFR 610.53 for blood products and other biologicals, and labeling requirements, as cited in 21 CFR 809.10 for all other in vitro diagnostics. Any exception to the product dating requirements in 21 CFR 610.53 will be granted by the FDA in the form of an amendment of the product license, in accordance with 21 CFR 610.53(d). All exceptions must be documented by the laboratory; and

(2) Components of reagent kits of different lot numbers are not interchanged unless otherwise specified by the manufacturer.

[57 FR 7163, Feb. 28, 1992, as amended at 58 FR 5230, Jan. 19, 1993]

§ 493.1211 Standard; Procedure manual.

(a) A written procedure manual for the performance of all analytical methods used by the laboratory must be readily available and followed by laboratory personnel. Textbooks may be used as supplements to these written descriptions but may not be used in lieu of the laboratory's written procedures for testing or examining specimens.

(b) The procedure manual must include, when applicable to the test procedure:

(1) Requirements for specimen collection and processing, and criteria for specimen rejection;

(2) Procedures for microscopic examinations, including the detection of inadequately prepared slides;

(3) Step-by-step performance of the procedure, including test calculations and interpretation of results;

(4) Preparation of slides, solutions, calibrators, controls, reagents, stains and other materials used in testing;

(5) Calibration and calibration verification procedures;

(6) The reportable range for patient test results as established or verified in § 493.1213;

(7) Control procedures;

(8) Remedial action to be taken when calibration or control results fail to meet the laboratory's criteria for acceptability;

(9) Limitations in methodologies, including interfering substances;

(10) Reference range (normal values);

(11) Imminent life-threatening laboratory results or "panic values";

(12) Pertinent literature references;

(13) Appropriate criteria for specimen storage and preservation to ensure specimen integrity until testing is completed;

(14) The laboratory's system for reporting patient results including, when appropriate, the protocol for reporting panic values;

(15) Description of the course of action to be taken in the event that a test system becomes inoperable; and

(16) Criteria for the referral of specimens including procedures for specimen submission and handling as described in § 493.1103.

(c) Manufacturers' package inserts or operator manuals may be used, when applicable, to meet the requirements of paragraphs (b)(1) through (b)(13) of this section. Any of the items under paragraphs (b)(1) through (b)(13) of this section not provided by the manufacturer must be provided by the laboratory.

(d) Procedures must be approved, signed, and dated by the director.

(e) Procedures must be re-approved, signed and dated if the directorship of the laboratory changes.

(f) Each change in a procedure must be approved, signed, and dated by the current director of the laboratory.

(g) The laboratory must maintain a copy of each procedure with the dates of initial use and discontinuance. These records must be retained for two years after a procedure has been discontinued.

§ 493.1213 Standard; Establishment and verification of method performance specifications.

Prior to reporting patient test results, the laboratory must verify or establish, for each method, the performance specifications for the following performance characteristics: accuracy; precision; analytical sensitivity and specificity, if applicable; the reportable range of patient test results; the reference range(s) (normal values); and any other applicable performance characteristic.

(a) The provisions of this section are not retroactive. Laboratories are not required to verify or establish performance specifications for any test method

of moderate or high complexity in use prior to September 1, 1992.

(b)(1) Each laboratory that introduces a new procedure for patient testing using a device (instrument, kit, or test system) cleared by the FDA as meeting certain CLIA requirements for quality control, must demonstrate that, prior to reporting patient test results, it can obtain the performance specifications for accuracy, precision, and reportable range of patient test results, comparable to those established by the manufacturer. The laboratory must also verify that the manufacturer's reference range is appropriate for the laboratory's patient population.

(2) Each laboratory that introduces a new method or device as specified in either § 493.1202(a) or (b), or § 493.1203(a), must, prior to reporting patient test results—

(i) Verify or establish for each method the performance specifications for the following performance characteristics, as applicable:

- (A) Accuracy;
- (B) Precision;
- (C) Analytical sensitivity;
- (D) Analytical specificity to include interfering substances;
- (E) Reportable range of patient test results;
- (F) Reference range(s); and
- (G) Any other performance characteristic required for test performance.

(ii) Based upon the performance specifications verified or established in accordance with paragraph (b)(2)(i) of this section, establish calibration and control procedures for patient testing as required under §§ 493.1217 and 493.1218.

(c) The laboratory must have documentation of the verification or establishment of all applicable test performance specifications.

[57 FR 7163, Feb. 28, 1992, as amended at 58 FR 5230, Jan. 19, 1993]

§ 493.1215 Standard; Equipment maintenance and function checks.

The laboratory must perform equipment maintenance and function checks that include electronic, mechanical and operational checks necessary for the proper test performance and test result reporting of equipment, instru-

ments and test systems, to assure accurate and reliable test results and reports.

(a) *Maintenance of equipment, instruments, and test systems.* (1) For manufacturers' equipment, instruments or test systems cleared by the FDA as meeting certain CLIA requirements for quality control, the laboratory must—

(i) Perform maintenance as defined by the manufacturer and with at least the frequency specified by the manufacturer; and

(ii) Document all maintenance performed.

(2) For methods or devices, as specified in either § 493.1202(a) or (b) or § 493.1203(a), the laboratory must—

(i) Establish a maintenance protocol that ensures equipment, instrument, and test system performance necessary for accurate and reliable test results and test result reporting;

(ii) Perform maintenance with at least the frequency specified in paragraph (a)(2)(i) of this section; and

(iii) Document all maintenance performed.

(b) *Function checks of equipment, instruments, and test systems.* (1) For manufacturers' equipment, instruments, or test systems cleared by the FDA as meeting certain CLIA requirements for quality control, the laboratory must—

(i) Perform function checks as defined by the manufacturer and with at least the frequency specified by the manufacturer; and

(ii) Document all function checks performed.

(2) For methods or devices, as specified in either § 493.1202 (a) or (b) or § 493.1203(a), the laboratory must—

(i) Define a function check protocol that ensures equipment, instrument, and test system performance necessary for accurate and reliable test results and test result reporting;

(ii) Perform function checks including background or baseline checks specified in paragraph (b)(2)(i) of this section. Function checks must be within the laboratory's established limits before patient testing is conducted; and

(iii) Document all function checks performed.

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