possess qualifications that are equivalent to those required for such certification; or

- (2) Be a doctor of medicine, a doctor of osteopathy or doctor of podiatric medicine licensed to practice medicine, osteopathy or podiatry in the State in which the laboratory is located; and
- (i) Have at least one year of laboratory training during medical residency (for example, physicians certified either in hematology or hematology and medical oncology by the American Board of Internal Medicine); or
- (ii) Have at least 2 years of experience directing or supervising high complexity testing; or
- (3) Hold an earned doctoral degree in a chemical, physical, biological, or clinical laboratory science from an accredited institution and—
- (i) Be certified and continue to be certified by a board approved by HHS;
- (ii) Before February 24, 2003, must have served or be serving as a director of a laboratory performing high complexity testing and must have at least—
- (A) Two years of laboratory training or experience, or both; and
- (B) Two years of laboratory experience directing or supervising high complexity testing.
- (4) Be serving as a laboratory director and must have previously qualified or could have qualified as a laboratory director under regulations at 42 CFR 493.1415, published March 14, 1990 at 55 F8 9538, on or before February 28, 1992; or
- (5) On or before February 28, 1992, be qualified under State law to direct a laboratory in the State in which the laboratory is located; or
- (6) For the subspecialty of oral pathology, be certified by the American Board of Oral Pathology, American Board of Pathology, the American Osteopathic Board of Pathology, or possess qualifications that are equivalent to those required for certification.
- [57 FR 7172, Feb. 28, 1992, as amended at 58 FR 5234, Jan. 19, 1993; 59 FR 62609, Dec. 6, 1994; 62 FR 25858, May 12, 1997; 63 FR 55034, Oct. 14, 1998; 65 FR 82944, Dec. 29, 2000; 68 FR 3713, Jan. 24, 2003]

§ 493.1445 Standard; Laboratory director responsibilities.

The laboratory director is responsible for the overall operation and administration of the laboratory, including the employment of personnel who are competent to perform test procedures, record and report test results promptly, accurately and proficiently, and for assuring compliance with the applicable regulations.

- (a) The laboratory director, if qualified, may perform the duties of the technical supervisor, clinical consultant, general supervisor, and testing personnel, or delegate these responsibilities to personnel meeting the qualifications under §§ 493.1447, 493.1453, 493.1459, and 493.1487, respectively.
- (b) If the laboratory director reapportions performance of his or her responsibilities, he or she remains responsible for ensuring that all duties are properly performed.
- (c) The laboratory director must be accessible to the laboratory to provide onsite, telephone or electronic consultation as needed.
- (d) Each individual may direct no more than five laboratories.
- (e) The laboratory director must—
- (1) Ensure that testing systems developed and used for each of the tests performed in the laboratory provide quality laboratory services for all aspects of test performance, which includes the preanalytic, analytic, and postanalytic phases of testing;
- (2) Ensure that the physical plant and environmental conditions of the laboratory are appropriate for the testing performed and provide a safe environment in which employees are protected from physical, chemical, and biological hazards;
 - (3) Ensure that-
- (i) The test methodologies selected have the capability of providing the quality of results required for patient care;
- (ii) Verification procedures used are adequate to determine the accuracy, precision, and other pertinent performance characteristics of the method; and
- (iii) Laboratory personnel are performing the test methods as required for accurate and reliable results;
- (4) Ensure that the laboratory is enrolled in an HHS-approved proficiency

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testing program for the testing performed and that—

- (i) The proficiency testing samples are tested as required under subpart H of this part;
- (ii) The results are returned within the timeframes established by the proficiency testing program;
- (iii) All proficiency testing reports received are reviewed by the appropriate staff to evaluate the laboratory's performance and to identify any problems that require corrective action; and
- (iv) An approved corrective action plan is followed when any proficiency testing result is found to be unacceptable or unsatisfactory;
- (5) Ensure that the quality control and quality assessment programs are established and maintained to assure the quality of laboratory services provided and to identify failures in quality as they occur:
- (6) Ensure the establishment and maintenance of acceptable levels of analytical performance for each test system:
- (7) Ensure that all necessary remedial actions are taken and documented whenever significant deviations from the laboratory's established performance characteristics are identified, and that patient test results are reported only when the system is functioning properly;
- (8) Ensure that reports of test results include pertinent information required for interpretation:
- (9) Ensure that consultation is available to the laboratory's clients on matters relating to the quality of the test results reported and their interpretation concerning specific patient conditions;
- (10) Ensure that a general supervisor provides on-site supervision of high complexity test performance by testing personnel qualified under § 493.1489(b)(4);
- (11) Employ a sufficient number of laboratory personnel with the appropriate education and either experience or training to provide appropriate consultation, properly supervise and accurately perform tests and report test results in accordance with the personnel responsibilities described in this subpart;

- (12) Ensure that prior to testing patients' specimens, all personnel have the appropriate education and experience, receive the appropriate training for the type and complexity of the services offered, and have demonstrated that they can perform all testing operations reliably to provide and report accurate results;
- (13) Ensure that policies and procedures are established for monitoring individuals who conduct preanalytical, analytical, and postanalytical phases of testing to assure that they are competent and maintain their competency to process specimens, perform test procedures and report test results promptly and proficiently, and whenever necessary, identify needs for remedial training or continuing education to improve skills:
- (14) Ensure that an approved procedure manual is available to all personnel responsible for any aspect of the testing process; and
- (15) Specify, in writing, the responsibilities and duties of each consultant and each supervisor, as well as each person engaged in the performance of the preanalytic, analytic, and postanalytic phases of testing, that identifies which examinations and procedures each individual is authorized to perform, whether supervision is required for specimen processing, test performance or result reporting and whether supervisory or director review is required prior to reporting patient test results.

[57 FR 7172, Feb. 28, 1992, as amended at 68 FR 3714, Jan. 24, 2003]

§ 493.1447 Condition: Laboratories performing high complexity testing; technical supervisor.

The laboratory must have a technical supervisor who meets the qualification requirements of §493.1449 of this subpart and provides technical supervision in accordance with §493.1451 of this subpart.

§ 493.1449 Standard; Technical supervisor qualifications.

The laboratory must employ one or more individuals who are qualified by education and either training or experience to provide technical supervision