

**AFSC 43T3\*, Qualified**  
**AFSC 43T1\*, Entry**

**BIOMEDICAL LABORATORY**  
**(Changed 31 Oct 18)**

**1. Specialty Summary.** Manages, directs, supervises, and performs analyses of biologic and related materials in hospital, environmental, occupational, epidemiological, toxicological, or research and development laboratories; and teaches medical laboratory sciences. Related DoD Occupational Group: 260802.

**2. Duties and Responsibilities:**

2.1. Directs and supervises laboratory services. Serves as Chief of Laboratory Services or as Chief of one or more areas of Laboratory Services. Maintains records and reports on laboratory operations necessary to provide workload accountability. Serves on professional, technical, consultant, and advisory committees to improve working relationships with other staff members and to communicate with biomedical laboratory officers and members of other specialties within the Air Force Medical Service. Participates in meetings of professional societies and symposia and disseminates information obtained to other biomedical science personnel. Manages and conducts quality assurance activities to ensure compliance with accreditation agency standards and improves services. Participates with patient safety programs initiatives to ensure AFMS high reliability organizational goals are met.

2.2. Conducts scientific analyses. Performs and supervises analyses in one or more areas of biomedical laboratory disciplines including clinical chemistry, environmental and industrial hygiene, chemistry, toxicology, microbiology, molecular biology, hematology, coagulation, serology, immunology, blood banking, immunohematology, blood collection, and virology in both the managed care setting and deployed environment.

2.3. Performs specialized duties. Manages and performs the development, evaluation, and application of new, modified, and improved procedures, techniques, and equipment for updating the laboratory services, including data automation and reporting. Responsible for correcting any analytic technical problems within the laboratory. Maintains surveillance of scientific literature and recognizes need for applying new or improved techniques and procedures. Consults with other medical staff members to determine their requirements for effective patient care. Stays abreast of current Air Force requirements and developments through consultations and meetings with Air Force biomedical laboratory officers and other members of the Air Force Medical Service.

2.4. Performs teaching duties. Teaches and instructs medical and related personnel in both technical and interpretive aspects for a variety of laboratory sciences.

2.5. Establishes and maintains a records management program and quality control commensurate with specified Air Force regulations and requirements set forth by select national accrediting/regulatory agencies. Establishes and maintains the proper use of calibration standards, reference samples, and quality control charts. Applies standard statistical methods to daily laboratory results and ensures that results are reported only when they conform to predetermined statistical limits and criteria. Participates in recognized proficiency surveys.

2.6. Ensures equipment, apparatus, and other instruments are in correct operating condition. Ensures instruments requiring calibration or other standardization are calibrated and standardized. Ensures faulty equipment, instruments, and apparatus are repaired or replaced. Updates present equipment.

2.7. Supervises military and civilian personnel to include staff development. Develops strategic business plans and manages annual budget and capital resources.

2.8. Functions as a scientist in a research, development, and acquisition setting. Performs duties as principle investigator, research scientist, program manager and acquisition specialist in areas of laboratory science. Involved in the development, testing, and evaluation of new technologies with applications in the clinical laboratory and in all areas of force health protection.

**3. Specialty Qualifications:**

3.1. Knowledge. Knowledge is mandatory of one or more areas of specialization within the field of biomedical laboratory science.

3.2. Education. The following education is required as indicated:

3.2.1. For entry in AFSC 43T1A, it is mandatory to meet one of the following requirements:

3.2.1.1. A bachelor's degree in medical technology or equivalent and current, valid, and unrestricted certification as a Medical Technologist or Medical Laboratory Scientist from the American Society for Clinical Pathology (ASCP).

3.2.1.2. A baccalaureate degree from a United States Service Academy and certification as a Medical Laboratory Technician from the ASCP.

3.2.1.3. A bachelor's degree and certification as a Medical Laboratory Technician (MLT) from ASCP. MLT's must also possess a Specialist Certification from the ASCP.

3.2.2. For entry into AFSCs 43T1B/C/D/E/F/H, a master's degree or higher or a current, valid, and active specialist certification from the ASCP in the corresponding discipline indicated by the suffix.

3.3. Training. For award of AFSC 43T1A, current, valid, and active certification as a Medical Laboratory Scientist or Medical Technologist by the ASCP is mandatory.

3.4. Experience. For award of AFSC 43T3X, a minimum of 24 months of experience is mandatory in biomedical laboratory assignments.

3.5. Other. Not used.

#### 4. \*Specialty Shredouts:

*Suffix      Portion of AFS to Which Related*

A	Biomedical Laboratory Science	Performs and supervises work in any recognized area of clinical laboratory.
B	Microbiology	Performs and supervises microbiology examinations in the medical laboratories. Master's degree in microbiology/ bacteriology or clinical pathology specializing in microbiology is mandatory.
C	Clinical Chemistry	Performs and supervises chemical analyses in medical laboratories. Master's degree in chemistry (including 1 year of biochemistry or clinical chemistry) or clinical pathology specializing in chemistry is mandatory.
D	Environmental and Industrial Hygiene Chemistry	Performs and supervises chemical and other evaluations for the environmental and occupational settings. A master's degree in one of the following scientific disciplines or equivalent experience acceptable to the Surgeon General, HQ USAF, is mandatory: Industrial Hygiene Chemistry, Inorganic Chemistry, Organic Chemistry, or Chemical Toxicology.
E	Blood Bank	Performs and supervises blood bank activities, including collecting, processing, and issuing blood and blood components. Master's degree in immunohematology, clinical pathology specializing in immunohematology, medical technology, completion of the Tri-Service Blood Bank Fellowship, or equivalent experience acceptable to the Surgeon General, HQ USAF, is mandatory.
F	Toxicologist	Performs and supervises chemical and other evaluations in determining and estimating harmful effect of exposure to environmental, occupational, chemical and materials. Master's degree in Toxicology is desirable.
H	Hematology	Performs and supervises hematology and hemostasis analysis in medical laboratories. A master's degree in hematology, clinical pathology specializing in hematology, medical technology, or equivalent experience acceptable to the Surgeon General, HQ USAF, is mandatory.