Specialty Summary  Tests and analyzes specimens of human origin and other substances by established scientific laboratory techniques to aid in diagnosing, treating, and preventing diseases or to support medical research; and supervises medical laboratory activities. Related DoD Occupational Subgroup: 311.

Duties and Responsibilities  -Performs hematological tests and urinalyses. Accomplishes standardized quantitative and qualitative evaluation of erythrocytes, leukocytes, and thrombocytes. Examines stained blood smears microscopically and refers any abnormal cells to superiors. Performs coagulation studies on human blood and plasma. Performs chemical, macroscopic, and microscopic urine specimen examinations.

-Performs chemical analysis. Analyses human material or other products submitted to the laboratory, using photometric, calorimetric, titrimetric, radioisotope, or any other chemical or physical procedures applicable to clinical chemistry. Calibrates and maintains all instruments. Makes necessary calculations and reports data to superiors. Reviews all chemistry procedures to ensure current procedures are used.


-Performs microbiological and serological tests. Conducts procedures to isolate and identify bacteria by gross and microscopic examination, staining, biochemical and immunological procedures, or any other determination of growth characteristics. Performs sensitivity test on pathogenic bacteria. Assists in identifying viruses and fungi. Applies parasitological techniques to recover and identify parasites. Applies standard serological tests for identifying antibodies specific to diseases.

-Accomplishes general medical laboratory duties. Conducts bacteriological and chemical examination of food products, water, dairy products, and sewage incidental to preventive and veterinary medicine programs. Takes all necessary precautions to maintains safe conditions in laboratory for both laboratory and hospital personnel. Performs preventative maintenance procedures on laboratory equipment. Performs and evaluates laboratory quality control procedures. Prepares reagents for use in test performance.

-Plans, organizes, directs, coordinates, and evaluates medical laboratory activity. Composes local medical laboratory regulations. Applies continuous effective internal quality control of all medical laboratory departments. Advises superiors regarding status and adequacy of equipment, supplies, and personnel training, and operating efficiency. Coordinates with other activities, agencies, and organizations. Resolves problems about operating medical laboratory activities. Inspects medical laboratory activities. Furnishes deficiency reports and outstanding accomplishments to
superiors. Interprets inspection findings and recommends corrective actions.

- Performs medical laboratory functions. Assists medical officers and allied scientist in research assignments in broad pathology field. Prepares tissue for electron microscopy. Directs toxicology procedures performance incident to aerospace pathology and forensic medicine programs. Assists in epidemiological investigations. Assists biological warfare officer in developing procedures for detecting bacteriological agents’ incident to biological warfare.

**Specialty Qualifications:**

**Knowledge.** Knowledge is mandatory of hematology, urinalyses, clinical chemistry, microbiology, blood banking, immunology, medical terminology, medical ethics applicable to performing medical laboratory procedures, medical laboratory management and medical administrative principles, pathology and histopathology fundamentals, and routine equipment maintenance.

**Education.** For entry into this specialty, completion of high school courses in algebra and chemistry is mandatory. Completion of high school courses in biology, zoology, and other basic science is desirable.

**Training.** For award of AFSC 4T031, completion of the basic medical laboratory course is mandatory.

**Experience.** The following experience is mandatory for award of the AFSC indicated: 4T051. Qualification and in possession of AFSC 4T031. Also, experience in performing functions in urinalyses, hematology, bacteriology, serology, and chemistry.

4T071. Qualification in and possession of AFSC 4T051. Also, experience performing or supervising functions such as work normally performed in a routine clinical laboratory (class A dispensary or hospital); specialty performance of tests or technical supervisory experience in clinical chemistry, bacteriology, toxicology, or virology at class A, class B, or analogous laboratory; or combination of foregoing types of experience.

**Other.** For entry into this specialty, normal color vision as defined in **AFI 48-123**, Medical Examination and Standards, is mandatory.

**Strength Req:** G

**Physical Profile** 333333

**Citizenship** No

**Required Aptitude Score:** G-58
Technical Training:

Course #: J3AQR4T031 000
Length (Days): 84

Location: S

Course #: J5BO4T031 000
Length (Days): 180

Location: Var