



701 East Pratt Street  
Baltimore, Maryland 21202-3194  
www.zooquaticlab.com

## Clinical Laboratory Analyst II

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**Position Title:** Clinical Laboratory Analyst II  
**Location:** IMET/Rita Rossi Colwell Center, G-049  
**Reports To:** Managing Director of Laboratory Services  
**Status:** Essential Employee

**General Purpose:** Perform clinical pathology and water chemistry analyses for the National Aquarium (NAIB) and ZooQuatic Laboratory clients, maintaining protocols and quality control standards established by the Managing Director of Laboratory Services.

### Essential Functions:

1. Clinical Laboratory Duties
  - Hematology for mammalian and non-mammalian species, including:
    - Preparation of total cell counts by hemacytometer, with training for interpretation
    - Hemoglobin (HemoCue Hb 201+),
    - PCV (microhematocrit centrifuge), total dissolved solids, Schalm's heat precipitate proteins
    - Erythrocyte sedimentation rate,
    - Reticulocyte count preparation,
    - Blood smear preparation and staining for leukocyte differential
    - Automated complete blood counts for large and small mammals (Heska HT5)
    - Reporting results through TRACKS (National Aquarium), and fax or email for ZooQuatic Laboratory clients
  - Clinical Chemistry analysis
    - Abaxis VetScan, with responsibility for judging when this method is necessary based on sample volume and when to contact Animal Health for test requirements.
    - Alfa Wasserman Vet Axcel
    - Catachem ChemWell-T (invertebrate copper, Mg, creatinine, phosphorus)
    - Heska analyzers
      - HT5 Hematology (mammals)
      - COAG (fibrinogen)
      - Element I (T4)
    - Osmolality calibration and measurement (Wescor Osmometer)
  - Preparation of parasitology samples of terrestrial and aquatic species including direct, flotation, and cytology staining (gram, acid fast and hematology staining); scanning, and training for interpretation
  - Cytology preparation (Midas III autostainer, manual dip-stain methods)

- Microbiology sample preparation including:
    - Media preparation
    - Primary culture set-up with direction for media selections
    - Perform REMEL ONE test identification for organisms as guided by Laboratory Manager
    - Interpret antibiotic susceptibility testing zones (Kirby Bauer).
  - Performs routine maintenance, calibration, and basic troubleshooting techniques for all equipment in the laboratory.
  - Manage samples sent to outside laboratories.
    - Coordinate requests from Animal Health for each sample
    - Proficient in sample preparation, aliquoting correct volumes for each shipment per sample
    - Proficient in sample storage and shipping requirements, including temperature, and primary and secondary containers.
    - Prepare submission forms for each request, each laboratory
    - Maintain Send-Out Log, and monitor pending test status as needed
    - Daily monitoring of Laboratory Services Inbox for test results
    - Enter results in TRACKS
  - DOT Shipping certification – maintain training and certification
  - Records Management
    - Maintain scanning and filing of paper records
    - Manage daily lab record keeping sheets
    - Proficient in TRACKS software
  - Sample coordination for large-scale projects
    - Organize submission records, Excel spreadsheets, etc.
    - Organize laboratory samples (slides, sample tubes)
    - Sort, organize, and stain blood smears
    - Verify and/or create sample labels
    - Organize and store completed samples
2. Water Chemistry Duties
- Serve as back-up for Water Quality Analyst II
  - Perform daily water quality analyses on marine and freshwater systems, including but not limited to salinity, pH, total ammonia, nitrite, nitrate, alkalinity, calcium, hardness, phosphate, free/total chlorine.
  - Perform basic troubleshooting on laboratory equipment
  - Perform coliform and enterococcus tests (IDEXX)
  - Measure levels of selected therapeutic agents in aquarium systems established by the NAIB Director of Animal Health.
  - Biological Conditioning: Understand the theory of establishing and maintaining nitrogen cycling in aquatic systems using ammonium chloride or urea according to established protocols.
3. Reporting
- Ensures timely reports of laboratory results to Aquarium staff per Water Quality Analyst II.
  - Maintains the water chemistry database and electronic dissemination of water quality data to IMET distribution list.
  - Proficient in TRACKS database for laboratory reporting.

4. Safety/Hazardous Materials

- Complies with all safety protocols established by NAIB and the U. Maryland Environmental Health and Safety office.
- Monitors hazardous waste volumes and coordinates with Environmental Health and Safety for collection as needed.

**Qualifications/Basic Job Requirements:** Bachelor's degree in biology, medical technology, or veterinary technology with three years of professional experience preferred.

**Competencies:** Advanced knowledge regarding biological and chemical components relevant to water quality and clinical pathology testing, including, but not limited to, hematology for mammalian, avian, reptilian and piscine species; parasitology of aquatic animals, cytological stain preparations, clinical microbiology skills, basic water chemistry testing and aquatic animal husbandry methods and implications. Competency in lab equipment maintenance, safety procedures, clean up and disposal of waste and spills. Knowledge with the following equipment: Hach 4000 spectrophotometer, Orion ISE analyzer and electrodes, Ion Chromatograph, refractometer, etc. Proficiency in computer operating systems including EXCEL software. Must have ability to communicate clearly and effectively to various levels of staff. Must be able to prioritize and work within established timelines.

**Problem Solving:** Understand the concepts and applications of quality control; demonstrate ability to troubleshoot instrumentation and method problems.

**Human Relations:** Daily contact with National Aquarium Animal Care and Welfare staff regarding laboratory specimen submissions. May participate in training of interns and students. Frequent contact with vendors, colleagues, and outside laboratories.

**Accountability:** Accountable for accurately processing and reporting laboratory specimens within the expected turnaround time.

**Human Resources:** Non-supervisory position

**Physical Requirements:** These are physical and mental requirements of the position as it is typically performed. Inability to meet one or more of these physical or mental requirements will not automatically disqualify a candidate or employee from the position. Upon request for a reasonable accommodation, the Company may be able to adjust or excuse one or more of these requirements, depending on the requirement, the essential functions to which it relates, and the proposed accommodation.

X Seeing

X Ability to Move Distances within and between offsite buildings

X Lifting (specify) (up to 20 pounds)

X Color Perception (Red, Green, Amber)

X Hearing/Listening

X Clear Speech

**Work Environment:**

X Works with Others

X Moving Objects

X Verbal Contact w/Others

X Face-to-Face Contact

X Noise

X Fumes/Odors

X Inside

X Mechanical Equipment

- X Hazardous Materials
- X Electrical Equipment

Exposure to Animals:  
X Zoonosis Potential

**Disclaimer:**

The above statements are intended to describe the general nature and level of work being performed by employees assigned to this classification. They are not intended to be construed as an exhaustive list of all responsibilities, duties and/or skills required of all personnel so classified.

**This is an accurate description of the essential functions of my position.**

*Employee* \_\_\_\_\_ *Date:* \_\_\_\_\_

*Job Evaluation Requested:* \_\_\_\_\_

**Approvals:**

*Direct Supervisor/Manager:* \_\_\_\_\_ *Date:* \_\_\_\_\_

Rev. November 8, 2023/J. Arnold