

The Academy of Veterinary Clinical Pathology Technicians

Skills List

Understanding of test methodology, techniques and ability to perform testing must be applied to each skill. The overall goal is to provide accurate and valid results to assist in the appropriate diagnosis and monitoring of the patient by the veterinarian thus minimizing negative affects to the patient and promoting the rapid recovery and overall health of the patient.

Core Clinical Pathology Skills – 100% of the skills must be mastered. Skills must be cross referenced in the case logs.			
General			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Develop standard operating procedures (SOPs) and/or laboratory testing protocols for use in the laboratory		
	Accurately report test results, using appropriate units of measurement		
Quality Control/Assurance			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Set up, run and evaluate quality control/assurance on all testing methods used		
Hematology – Manual Procedures (Mammalian and non-mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Measure and report total plasma protein using a refractometer		
	Measure and report packed cell volume using manual methods		
	Perform estimated hemoglobin measurement		
	Calculate red blood cell indices (MCHC only)		
	Perform leukocyte estimates on peripheral blood films		
	Perform platelet estimates on peripheral blood films		
	Perform reticulocyte percentage		
	Perform differential count on peripheral blood films		
	Calculate relative leukocyte counts		
	Calculate absolute leukocyte counts		
	Evaluate leukocyte morphology on peripheral blood films		
	Evaluate erythrocyte morphology on peripheral blood films		
	Evaluate platelet morphology on peripheral blood films		

Hematology – Automated Procedures (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform erythrocyte count		
	Perform hematocrit measurement		
	Perform hemoglobin measurement		
	Perform red blood cell indices (mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin concentration (MCHC))		
	Perform leukocyte count/corrected leukocyte count		
	Perform platelet count		
	Evaluate differential count (manual confirmatory evaluation with peripheral blood film)		
	Report relative leukocyte counts		
	Report absolute leukocyte counts		
	Evaluate/validate erythrocyte morphology on peripheral blood films		
	Evaluate/validate leukocyte morphology on peripheral blood films		
	Evaluate/validate leukocyte estimates on peripheral blood films		
	Evaluate/validate platelet morphology on peripheral blood films		
	Perform/validate platelet estimates on peripheral blood films		
Hematology – Miscellaneous			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Manually calculate red blood cell indices (MCV, MCH and MCHC)		
	Manually calculate corrected white blood cell counts (CWBC)		
	Manually calculate reticulocyte percentages, absolute reticulocyte counts and reticulocyte production index (RPI – canine only)		
Clinical Chemistry (Mammalian and non-mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform automated clinical chemistry tests		
Urinalysis (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Measure and report specific gravity using a refractometer		
	Perform physical evaluation (color and clarity) of urine samples		
	Perform chemical evaluation (commercial reagent strip, manual method)		

	Perform sulfosalicylic acid testing (SSA) on urine samples		
	Microscopically evaluate urine sediments (using both stained and unstained methods) and accurately report findings		
	Accurately identify cells found in urine sediments		
	Accurately identify casts found in urine sediments		
	Accurately identify crystals found in urine sediments		
	Accurately identify microorganisms found in urine sediments		
	Accurately identify artifacts/contaminants/parasites found in urine sediments		
Cytology (Mammalian and non-mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Identify basic cell types		
	Collect, process and evaluate ear cytology samples		
	Collect, process and evaluate vaginal cytology samples		
	Perform (or assist with) skin scrapings and process the samples for evaluation		
	Perform (or assist with) collection of impression smears and process the samples for evaluation		
	Perform (or assist with) fine needle aspirations and process the samples for evaluation		
	Perform (or assist with) joint taps and process the samples for evaluation		
	Perform (or assist with) bone marrow aspirations and process the samples for evaluation		
	Perform (or assist with) transtracheal wash aspirations and process the samples for evaluation		
	Properly stain cytology samples using a variety of staining techniques (including rapid stain, New Methylene Blue and Lactophenol Cotton Blue)		
	Properly handle, prepare and submit samples for histopathology, biopsy, and necropsy.		

Coagulation (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform activated partial thromboplastin time (aPTT) testing (indicate manual or automated method)		
	Perform prothrombin time (PT) testing (indicate manual or automated method)		
	Perform activated coagulation time (ACT) testing (indicate manual or automated method)		
	Perform buccal bleeding time (BMBT) testing		
Immuno-Hematology (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform blood typing (tube or card method)		
	Perform crossmatching (evaluation of both major and minor portions)		
Serology/Immunology (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform enzyme-linked immunosorbent assays		
Acid-Base Evaluation (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Properly, handle and analyze blood gas samples		
Microbiology (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Identify organisms with various testing methods, such as plating, gram stain, and other methods of staining.		
	Identify organisms microscopically, including fungal spores, bacteria, and yeast.		
	Perform fungal cultures		
	Perform environmental microbial monitoring		
Parasitology (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform macroscopic external parasite exams		
	Collect, process and evaluate skin scrapings		

	Perform fecal testing for internal intestinal parasites using centrifugal testing methods		
	Perform fecal testing for internal intestinal parasites using standing floatation testing methods		
	Perform fecal testing for internal intestinal parasites using sediments testing methods		
	Perform fecal testing for internal intestinal parasites using direct smear testing methods		
	Perform egg counts for intestinal parasites		
	Perform testing for internal circulatory parasites using direct smear (wet prep) and peripheral blood film methods		
Miscellaneous Testing and Technical Skills (Mammalian and non-mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform fecal occult blood testing		
	Calibrate ("zero") refractometers		
	Demonstrate ability to properly dilute samples		
	Demonstrate proper use of pipettes		
Supplemental Clinical Pathology Skills – any 25 of the following supplemental skills must be mastered. These skills must be cross referenced in the case logs.			
Hematology (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform leukocyte count using manual methodology		
	Perform platelet counts using manual methodology		
	Perform red cell distribution width (RDW) measurement		
	Perform mean platelet volume (MPV)		
	Perform Platelet PCT		
	Absolute Reticulocyte Value		
	Perform fibrinogen testing (indicate heat precipitation or automated method)		
Clinical Chemistry (Mammalian and non-mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform ketone testing on milk, blood or urine ketosis testing (bovine only) Indicate sample type(s) used:		

Urinalysis (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform chemical evaluation (commercial reagent strip, automated method)		
	Perform bilirubin confirmatory testing (Ex: Ictotest®) on urine samples		
	Perform glucose confirmatory testing (Ex: Clinitest®) on urine samples		
	Perform ketone confirmatory testing (Ex: Acetest®) on urine samples		
	Perform urine protein-creatinine testing on urine samples		
	Perform microalbuminuria testing		
	Measure osmolarity of urine samples		
	Ability to perform manual and/or automated tests related to urinalysis.		
Cytology (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Process and evaluate semen samples		
	Process and evaluate rumen fluid		
	Process and evaluate pleural fluid		
	Process and evaluate peritoneal fluid		
	Process and evaluate cerebral spinal fluid (CSF)		
	Evaluate skin scrapings		
	Evaluate impression smears		
	Evaluate fine needle aspirates		
	Evaluate joint fluid		
Coagulation (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform Fibrin Degradation Products (FDP) testing		
	Perform Antithrombin III (AT-III) testing		
	Perform D-dimer testing		
Immuno-Hematology (Mammalian, various species and pathologies)			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform jaundice foal agglutination testing (Colostrum Crossmatch/JFA)		
	Perform neonatal isoerythrolysis (NI) screening for pregnant mares (serum or colostrum)		
	Perform Coombs testing		

Serology/Immunology			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform agglutination type assay (Ex: Brucellosis)		
	Perform immunodiffusion (Agar Gel, Ex: EIA, Johne's Disease)		
	Perform rapid immunomigration (Immunochromatography, lateral flow immunoassay)		
	Perform cardiac troponin		
	Perform intradermal testing		
	Perform IgG passive transfer testing (serum or colostrum)		
	Perform titer testing		
Toxicology			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform ethylene glycol testing		
Endocrinology			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform insulin testing		
	Perform cortisol testing		
	Perform T3 testing		
	Perform T4 testing		
	Perform TSH testing		
	Perform LH testing		
	Perform progesterone testing		
	Perform testosterone testing		
Microbiology			
Date Mastered		Case Log Number(s)	Signature or Initials of Veterinarian or VTS
	Perform L.A.S.T. (Live Animal Swab Test) for antibiotic residue in meat		
	Perform California Mastitis Testing (CMT)		
	Collect milk samples and perform culture testing		
	Collect milk samples and perform antibiotic residue testing		
	Perform urine sample culture testing		
	Perform blood cultures		
	Perform fecal cultures		
	Perform antimicrobial sensitivity testing		

