



Pathology Core Protocol

Protocol Section:	Clinical Chemistry: General Lab Procedure	Policy No: CC-PPC1-GLP-SRH_Heparin
Protocol Subject:	Lab Animal Plasma with Heparin_Sample Submission and Receiving	Effective Date: Apr 28, 2016
		Date Reviewed: Sept 6, 2016
		Date Revised: Sept 13, 2016

Introduction: Clinical chemistry tests are dependent on the quality of the specimen submitted. Any artifact or mishandling of the plasma sample will compromise the accuracy of test results. Heparin is the anticoagulant of choice for most of the chemistry analysis because it interferes the least with chemical assays. It prevents clotting by preventing conversion of prothrombin to thrombin during the clotting process. Heparin is available as a sodium, potassium, lithium or ammonium salt.

Submitted plasma samples can be freshly collected within 1 to 2 hours and brought in on ice, or frozen at -20°C or at -80°C if samples will be stored for longer than one week. Live animals can also be submitted to our lab for terminal bleeding procedures with retro-orbital collection. Laboratories are responsible for declaring any potential biosafety hazards of the submitted specimens on the service request form. All submitted lab animal specimens must be fully documented before being accepted for testing.

Materials:

- Clinical Chemistry Service Request Form (in excel format or online through TCP LIMS)
- Green-top with Lithium Heparin anticoagulant blood collection tubes (BD Microtainer Cat. #365985)
- 1.5ml microtubes with ID labels
- Centrifuge with temperature controlled
- Freezer -20°C (storage within a week) or -80°C (storage for periods longer than one week)

Procedures:

1. Prior to sample submission the lab manager or lab coordinator must be contacted by email and a completed Clinical Chemistry Service Request Form submitted by email or online thru LIMS.
2. Collect the blood into collection tubes with heparin as the anticoagulant.
3. Gently mix the blood-filled collection tube using a rocking motion 12 times. Never shake the tube.
4. Keep the blood on ice if it's not ready to be centrifuged immediately.
5. Centrifuge the sample at 5000 rcf for 10 minutes at 8°C
6. Pipette out the plasma from the clot and transfer the plasma into a 1.5ml microtube labelled with the animal ID.
7. On the service request form fill in the collection time, route of blood collection, clinical history and note any diet or medication administered to the animal before blood collection.
8. If the plasma is intended to be tested fresh, samples must be brought to our lab by 12pm and a sample submission day must be arranged a minimum of one week in advance. The fresh samples must be submitted within 4 hours of collection time and kept on ice during transport.
9. If the plasma samples are not intended for immediate testing, they can be kept frozen in -20°C for up to one week or -80°C for extended periods of time. Transport the serum on dry ice.
10. Once the plasma samples arrive in our lab, the samples must be verified with the submitted service request form; i.e. number of specimens submitted and any biosafety precautions in handling. All fresh samples are loaded onto the chemistry analyzer immediately and frozen samples are stored at -20°C or -80°C according to the length of storage time.

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Reference:

Laboratory Procedures for Veterinary Technicians Third Edition. Paul W. Pratt, VMD. Mosby Inc. 1997.

Issued by Lab Manager: _____ **Date:** _____

Approved by Facility Management: _____ **Date:** _____