



# Pathology Core Protocol

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<b>Protocol Section:</b>	Clinical Chemistry: General Lab Procedure	<b>Policy No:</b> CC-PPC1-GLP-SRH_serum
<b>Protocol Subject:</b>	Lab Animal Serum_Sample Submission and Receiving	<b>Effective Date:</b> Apr 28, 2016
		<b>Date Reviewed:</b> Sept 6, 2016
		<b>Date Revised:</b> Sept 13, 2016

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**Introduction:** Clinical chemistry tests are dependent on the quality of the specimen submitted. Any artifact or mishandling of the serum sample will compromise the accuracy of test results. Serum is plasma from which fibrinogen has been removed via a clotting process. It is used for chemistry testing in which the presence of any anticoagulants or preservative would interfere with test results. Serum sample submitted 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 are stored for longer than one week. Live animal 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 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)
- Red-top blood collection tubes (BD Microtainer Cat. No. :365963)
- 1.5ml microtubes with ID labels
- Centrifuge with temperature controlled
- Freezer -20°C (storage within a week) or -80°C (storage for length period of time)

**Procedures:**

1. Prior to sample submission the lab manager or lab coordinator must be contracted by email and a complete Clinical Chemistry Service Request Form submitted by email or online through LIMS
2. Collect the blood into red-top blood collection tube or tubes with no clot activators, anticoagulants, preservatives or separator.
3. Allow blood to clot at room temperature for 30 minutes. Do not refrigerate the blood until it has clotted.
4. Centrifuge the sample at 1000 rcf for 10 minutes in 8°C
5. Pipette out the serum from the clot and transfer the serum into a 1.5ml microtube labelled with the animal ID.
6. On the requisition 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.
7. If the serum 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 the collection time and kept on ice during transport.
8. If the serum samples are not for immediate testing, they can be kept frozen at -20°C for up to one week or at -80°C for extended periods of time. Transport the serum on dry ice.
9. Once the serum 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:** \_\_\_\_\_