

Serum Banking Policy

Introduction and Rationale

Serum banking is the collection and frozen storage of serum samples obtained from employees who may be at risk for an occupationally acquired infection. Serum is the protein-rich liquid that separates out when blood changes to a solid or semisolid state (coagulates). The purpose of serum banking is to assess whether there was exposure to a research agent by providing the ability to compare serum obtained after an acute illness or exposure with serum obtained before the illness or potential exposure.

The National Institutes of Health requires serum banking for employees who work with specific biological agents. Collection or storage of serum will be performed if it is: (1) required by federal regulations or suggested by evidence-based occupational health practice standards; and (2) there is a plan to analyze the data as part of a risk assessment strategy.

The UW has three levels of serum banking requirements:

1. **Not required, not offered:** For work with most biological agents, serum banking is neither required nor offered.
2. **Required to offer serum banking:** For work with some biological agents (e.g., *Coxiella burnetii*), the UW Employee Health Center (EHC) must offer serum banking, but employees are not required to participate in order to work with those agents.
3. **Serum banking required:** For work with a select few biological agents (e.g., SARS-CoV, highly pathogenic avian influenza virus), serum banking is required for all employees who work with or may be exposed to the biological agent. University employees may not work in areas where these agents are in use unless they participate in serum banking.

The determination of which biological agents require or offer serum banking is made following a review of the research protocols by UW Environmental Health and Safety (EH&S) and the Institutional Biosafety Committee (IBC), in consultation with the principal investigator or supervisor.

When serum banking is required or offered, it becomes part of the medical management protocols for that biological agent. The cost of serum banking is charged to the research project budget for employees participating in the serum banking process.

Protocols for Collecting and Storing Serum

The following steps are taken to collect and document the serum collection:

1. The serum is collected at the EHC during the preplacement medical evaluation before the employee works with or near the biological agent.
2. Before the sample is drawn, the EHC occupational health nurse reviews the serum sample consent form with the employee and answers any questions.
3. Serum specimens are labeled with an EHC lab accession number and are logged into the UW Medical Center (UWMC) laboratory database.

The University takes the following measures to ensure all collected serum is properly stored:

1. The serum is labeled and stored in a locked -70° Celsius freezer in the UWMC.
2. The EHC has a key, and a back-up key is located with the Assistant Director of Public and Occupational Safety and Health.
3. The freezer is monitored by alarm system. If the temperature is too high, an alarm notifies the alarm system company, which notifies UWMC Engineering.
4. If UW Medicine Engineering determines there is a problem with the freezer, the EHC manager is notified.

Ownership and Use of the Serum

The stored serum is the property of the University of Washington. The University uses the following protocols to ensure stored serum maintains its integrity and is used for only the purposes for which it was collected:

1. The stored serum is used solely for occupational health purposes related to the employee's participation in the biological research for which the serum was originally collected.
2. The serum sample results, if tested, become part of the employee's confidential medical record maintained by the EHC.
3. Serum is destroyed after 10 years or sooner if the study is complete. If the study continues for longer than 10 years, a new baseline serum sample will be collected.
4. To destroy serum, it is autoclaved and disposed in the manner required by applicable health and safety regulations.

Questions

Questions about serum banking should be directed to the Employee Health Center at 206.685.1026 option 0.