General Specimen Collection Guidelines

“The accuracy of any test procedure is dependent on the quality of the specimen. The quality of the specimen is dependent on how and when it was collected, the care given to its preservation, and how soon it reaches the laboratory.”

Safety
To protect the safety of the healthcare worker collecting the sample, the transport couriers and laboratory personnel, the following precautions must be followed when collecting specimens:

1. During specimen collection wear gloves, laboratory coat and, where appropriate, a mask and/or goggles.
2. Use leak-proof containers and plastic zip-lock transport bags that have a separate outside compartment for the test requisition form.
3. Make sure screw-cap lids are fastened evenly and securely. Insure that no label material is caught in the threads of the lid.
4. Do not transport leaking containers to the laboratory because test results will be compromised and it is a hazard to couriers and laboratory personnel.
5. To protect the safety of others take care not to contaminate the outside of the specimen container or the laboratory requisition form.

Labeling
Proper identification of every patient sample is as important as the quality of the sample and the precision of the laboratory. Take the following precautions when collecting specimens:

(Note: Unlabeled/mislabeled specimens will not be tested.)

1. Clearly label the specimen container with the patient’s name, date of collection, and Medical Record Number.
2. Check with the patient to make sure that you are collecting/drawing the right person. Verify patient’s name with the test requisition and container label.

Collection
The patient specimen or collection site must be carefully selected so that it represents the active disease process. The common sites of infection are often contaminated with indigenous flora so precautions must be taken to obtain a valid specimen.

1. Avoid indigenous flora that may overgrow or obscure the true disease agent.
2. Select the correct site and use the proper collection techniques.
3. Collect an adequate volume of specimen.
**Collection (Continued)**

Special care must be taken with specimens collected for DNA or blood lead testing because they are easily contaminated by the environment or by other specimens. Urine samples collected for DNA must not be used for dipstick analysis or contaminated in any other way.

Specimens for the isolation of an etiologic agent:
1. Obtain specimens as early as possible in the illness and before antibiotic treatment is initiated.
2. If treatment has already been initiated, obtain specimens at least 48 hours after completion of therapy. **If you are requesting DNA tests or some direct fluorescent stains, remember that these types of tests can remain positive for 3 or 4 weeks after the organisms are no longer viable.**
3. Transport the specimen as quickly as possible using recommended conditions.

Specimens for serologic assays:
1. Collect specimen in a sterile serum-separator vacutainer. (Tiger-top tube)
2. Allow the blood to clot at least 30 minutes before refrigerating.
3. Do not allow whole blood specimens to freeze because it breaks down the blood cells and makes the specimen unsatisfactory for testing.
4. Blood should not be collected right after the patient has eaten because lipemic blood interferes with many tests.
5. Normally antibodies are not formed until about 2 weeks after the onset of a disease. A rise in antibody titer is the most reliable diagnostic indicator. The first specimen should be collected within seven days of disease onset and the second specimen should be collected two to three weeks later.

**Storage and Transport**
Proper transport systems and prompt delivery of specimens to the laboratory are critical for obtaining useful laboratory test results. Use the following general guidelines when transporting specimens to the laboratory. (More specific information is available for each test type in the charts that follow.)
1. Optimally, specimens for bacterial culture should not be stored for more than 24 hours before transport to the laboratory. Refer to the collection tables for optimum transport conditions.
2. **Shigella spp., Neisseria spp.** and **Haemophilus influenzae** (which are sensitive to cold temperatures) should not be refrigerated.
3. Store sputum, bronchial wash, urine and external ear specimens at 4°C.
4. Store JEMBEC plates inoculated for **Neisseria gonorrhoea** testing at 25°C.
5. Never refrigerate genital, eye or internal ear specimens.
6. If clinic personnel transport specimens, correct conditions must be maintained during transport and specimens must be transported according to the Department of Transportation regulations.
7. Urines that will be >24hrs before transport should be sent to UNILAB. **You must use UNILAB requisition forms for specimens sent to UNILAB.**

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Out of Control Situations
Specimen quality problems that seriously compromise the validity of the specimen and the test results warrant specimen rejection. Some of the situations that might result in specimen rejection are:
   1. Unlabeled or mislabeled specimen.
   2. Specimen too old or unsatisfactory (i.e. hemolysed, poor condition)
   3. Specimen submitted on grossly outdated media or transport kits.
   4. No specimen received with test requisition form.
   5. Anaerobic test request from aerobic transport.
   6. Specimens that have leaked in transport.

Deliveries to the Laboratory
Specimens are picked up from the clinics daily by courier. Before specimens are bagged for pickup, they should be checked to be sure that all laboratory forms are completely filled out and that each specimen is tightly sealed and properly packaged for safe delivery.

It is the responsibility of the clinic to ensure that laboratory specimens are not a hazard to transport personnel or to laboratory personnel that handle specimens.

Laboratory personnel will be available at the laboratory for special Saturday morning deliveries by special arrangement. Call the laboratory to make arrangements.