



### LFS/Q0509 Set 1

#### Laboratory Technician Assistant Final Assessment

#### 1. LFSQ/N0531: Carry out washing, processing and drying of the glassware/ plastic ware for experimentation

**Commented [SV1]:** Only validation of the the first 61 MCQ are required (Q# 1 to 61).  
Q# 62 to 87 are taken for QCC\_Microbiology which has already been approved by the sector.  
Pre-validated MCQs are kept in Green text

##### Processing the glassware for experimentation

##### PC1. washing and cleaning the glassware with different solutions and types of water to ensure complete cleaning and removing of dirt

1. Which of the following must a technician ensure when processing glassware for an experiment?
  - a. Requisition and purchase of new glassware
  - b. Clean and wash the glassware with acid
  - c. Take stock and inventory of the glassware
  - d. **Clean and remove dirt from the glassware**

##### PC2. ensure glass and plastic ware used for experimentation to be scrupulously clean

2. Identify the laboratory practice that must **always** be followed when cleaning glassware?
  - a. Use an abrasive detergent
  - b. **Allow the glassware to soak**
  - c. Check for organic matter to remain intact
  - d. Use wire brushes to clean glassware surface

##### PC3. use deionized distilled water as the final rinse in the cleansing process

3. What solution must always be used for the final rinse of glassware?
  - a. Salt water
  - b. Diluted acid
  - c. **Deionized distilled water**
  - d. Deionized sodium hydroxide

##### PC4. sterilize contaminated laboratory ware before cleansing

4. What is the ideal sterilization condition for contaminated glassware?
  - a. Dry heat for 15-20 mins at 40-60°C
  - b. Dry heat for 15-20 mins at 140-160°C
  - c. **Autoclave for 15-20 mins at 100-120°C**
  - d. Autoclave for 30-40 mins at 100-120°C

##### PC5. monitor proper operation and supply of the distilled and deionized water source

5. Distilled water is inevitable for glassware cleaning. Which step ensures preparation of distilled water in the laboratory?
  - a. Keeping the capillary tube sealed
  - b. Keeping boiling tank in an ice bed
  - c. Use of plastic ware as collection tank
  - d. **Keeping the collection tank in an ice bed**

##### PC6. select detergent which is compatible with area water and leaves behind no undesirable residues on the cleansed laboratory ware and equipment

6. What is a criterion when selecting detergent to clean different laboratory glassware?
  - a. Economical
  - b. Renowned brand
  - c. Easily available in the market
  - d. **Compatible with the area water**

**PC7. check cleansed laboratory ware and equipment for acid / reagent residues**

7. What is best done when a cleaned glassware is detected with chromic acid residue?
- Rinse with 70% alcohol
  - Rinse with distilled water**
  - Dispose it to the rubber bin
  - Dispose it to the biological bin

**PC8. inspect washed laboratory ware and equipment for cleanliness**

8. Who is responsible to inspect washed laboratory ware for cleanliness?
- Auditor
  - Housekeeping
  - Research fellow
  - Laboratory technician**

**PC9. code all laboratory ware and equipment to cleansing specifications required for laboratory studies.**

9. Which document contains glassware cleansing specifications?
- OSHS guidelines
  - End user specification
  - Material MSDS sheets**
  - Purchase order summary

**PC10. use autoclave for drying and sterilization of the glassware before further use.**

10. Which equipment is used to dry sterilize glassware before experimentation?
- Oven**
  - Incubator
  - Spectrometer
  - Ultra centrifuge

**2. LFS/N0530: Help the lab/QC Chemists/ Research Associates in performing the experiments and analysis.**

**Help in set up of the experiment**

**PC1. to ensure the reagents, glassware, equipment is available at the right time**

11. Which of the following is a mandatory step in setting up the laboratory for an experiment?
- Staff recruitment
  - Equipment calibration**
  - Incubation of microbial samples
  - Improved attendance system

**PC2. to assist in laboratory tests in order to produce reliable and precise data to support scientific investigations**

12. What process assists in producing reliable results from the test data?
- Interpretation**
  - Fermentation
  - Multivariate observation
  - Designing the experiment flow

**PC3. to prepare specimens and samples as per the guidelines and required for the experiment**

13. ISO-9000, ISO-14001, OHSAS-18000 are the example of which of the following?
- Resource planning system
  - Quality management systems**
  - Management information systems
  - Performance management system

**PC4. to set up and operate standard laboratory equipment, for example centrifuges, titrators, pipetting machines and PH meters**

14. Which of the following is the recommended procedure to measure pH using a pH meter?
- a. **Place the pH electrode in the test sample**
  - b. Place the pH electrode in the buffer solution
  - c. Place the pH electrode in the storage solution
  - d. Place the pH electrode in a bottle of distilled water

**Ensure protocol and procedures**

**PC5. to carry out routine tasks accurately and maintain strict adherence to SOPs**

15. What of the following document aids a technician to accurately calibrate the centrifuge?
- a. Store requisition book
  - b. Equipment warranty card
  - c. Annual maintenance contract file
  - d. **Standard operating procedure manual**

**PC6. to follow and ensure strict safety procedures and safety checks are followed**

16. What type of details are listed in an operation manual?
- a. Leave policies
  - b. Weekly schedule
  - c. **Safety procedures**
  - d. Competitors details

**PC7. keeping up to date with technical developments, especially those which can save time and improve reliability**

17. Why is it important for a technician to know the latest trends regarding technical developments?
- a. To impress seniors
  - b. **To produce reliable results**
  - c. To improve budget planning
  - d. To monitor laboratory proceedings

**Carry out inspection and maintenance of equipment and materials**

**PC8. maintaining and repairing equipment and laboratory apparatus as a part of routine activities**

18. Which is an example of routine inspection of laboratory apparatus?
- a. Cleaning staff lockers
  - b. Updating maintenance log
  - c. Calibration of faulty equipment
  - d. **Checking for any loose nut and bolts**

**PC9. coordinating work in the laboratory to ensure efficient use is made of expensive pieces of equipment.**

19. What is best done if a technician observes a breakage of a high value equipment?
- a. Investigate the case
  - b. Change the supplier
  - c. **Report to supervisor**
  - d. Request a third party audit

**PC10. ensuring the laboratory is well-stocked and resourced**

20. What ensures the availability of minimum inventory in a laboratory?
- a. Automation
  - b. Overstocking
  - c. **Regular stock taking**
  - d. Controlling pilferages

**1. LFS/N0533: Ensure appropriate measures are taken while opening of chemicals to be used in analysis**

**Handling of chemicals**

**PC1. display commitment to handle and use the chemical properly from initial receipt to ultimate disposal.**

21. Which is an example of poor laboratory practice when handling chemical containers at the time of delivery?

- a. Supplier being aware of the associated risks
- b. Assessing the risk before use of hazardous goods
- c. Opening containers without appropriate PPE**
- d. Containers being delivered to the accurate location

**PC2. New chemicals shall be obtained only if the supervisor has determined that the use of the new chemical is necessary**

22. Who is authorized to indent new stock of chemicals?

- a. Vendor
- b. Chemist
- c. Assistant
- d. Supervisor**

**PC3. Carry out labeling and packaging of chemical containers in accordance with applicable regulations**

23. What must be done when storing any hazardous substance?

- a. Wash the container
- b. Label the container**
- c. Sterilize the container
- d. Depressurize the container

**PC4. Ensure all chemical containers are dated**

24. What data must be recorded when using chemical stocks for experiments?

- a. Name of the supplier
- b. Colour of the container
- c. Address of the manufacturer
- d. Opening date of the container**

**PC5. Move the received chemicals to the designated storage area**

25. Where should chemical stock be kept for laboratory use?

- a. Under direct sunlight
- b. Close to the apparatus
- c. Designated storage area**
- d. In a closed dark office space

**PC6. store large bottles of acids and other hazardous substances on a shelf that is no more than three feet above floor level**

26. What must be ensured when storing 'per chloric acid' in the laboratory?

- a. Do not store on glass shelves
- b. Store with cellulose materials
- c. Store close to organic chemicals
- d. Do not store on wooden shelves**

**PC7. acid-resistant trays should be placed under bottles of mineral acids**

27. Where should acid-resistant trays be stored?

- a. Under the mineral acid bottles**
- b. Under the organic acid bottles
- c. Near to radioactive substances
- d. Near to time sensitive chemicals

**PC8. ensure appropriate safety eyewear and other personal protective equipment to be used**

28. What facility **must** be available in laboratories where corrosive materials are handled?

- a. Source of heat/ignition
- b. Spill contamination tools
- c. Emergency eye wash area**
- d. Emergency eye hazard area

**PC9. while transferring chemicals one must ensure containers are properly labeled and know what to do in the event of a release or spill**

29. What must be done when transferring large sized bottles of acids or bases?

- a. Follow instruction/ caution on label**
- b. Treat similar to radioactive material
- c. Display with manufacturer's name
- d. Label with chemical composition

**PC10. wear appropriate personal protective equipment (PPE)**

30. What PPE must be used when cleaning chemical spill from a work platform?

- a. Hard hat
- b. Respirator
- c. Rubber glove**
- d. Metal tipped boots