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300LEVEL

LABORATORY INSTRUMENTATION AND TECHNIQUES

MLS 304

How to maintain the automatic analysers in ABUAD multi system hospital and keep them in good condition.

ANSWER

An automated analyser is a medical laboratory instrument designed to measure different chemicals and other characteristics in a number of biological samples quickly, with minimal human assistance. The measurement of blood properties and other fluids may be useful in the diagnosis of disease. An autoanalyzer is an example of an automated chemistry analyzer using a special flow technique named "continuous flow analysis (CFA).

Maintenance of automatic analyzers are as follows:

A. VENTILATON

1. Allow good air circulation around the device (15 inches from the wall)

2. Avoid reagent pollution by dust

SAFETY PRECAUTIONS:

1. Keep away from direct sunlight

2. Keep in dry and cool space

OPERATING

1. Wait about 10 minutes after switching on analyzer before using it.

2. Avoid sudden shutdowns.

3. Always observe the shutdown procedure.

B.CLEANING

1. Clean the surface of the equipment using a natural cleaner or a wet disinfected cloth and also Regularly clean the external body of the auto analyzer.

2. It is advisable to carry out the regular deep cleaning of the automated analyzer using a mixture of ether and alcohol in the ratio 20:30 OR recommended cleaning solution.

3. Clean the device before and after analysis with distilled water and also before shutting down the auto analyzer.

4. Keep the environment of the working equipment clean.

5. Also carry out daily routine or weekly routine of wiping down of automated analyzer.

C. CALIBRATION

1. Daily calibration is required.

2. Regularly calibrate the automatic analyzer e.g before running a sample and also when you feel it is giving wrong results.

D.INSPECTION AND REPAIRS

1. Inspect the equipment from time to time.

2. Check if there are no air bubbles in the reagent tubing, Always check reagent leaks in the hydraulic circuit, check for air or vacuum leakage in the circuit.

3. Regular servicing of the automatic analyzer and repair is needed. This must be carried out by an authorized service. E.g, Every 3 months do full service of auto analyzer.

E. REFURBISHMENT,TESTING AND ADJUSMENT

1. In cases whereby automatic analyzer still works but not as efficient as before, refurbishing can play an important role.

2. Remove the entire piece of equipment.

3. Fully clean each and every component of the automatic analyzer.

4. Relubricate any moving parts.

5. If any parts are showing any signs of wear and tear consider replacing the part. E.g Change the fuse when faulty,Adjustment of peristaltic pump tube and also Change the light source lamp. etc.

6. And then couple the equipment back together.

7. Documenting equipment condition

NOTE: ALWAYS FOLLOW MANUFACTURER’s RECOMMENDATIONS.

BACK UP PROCEDURES: It will do automatically back up.