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HOW TO MAINTAIN THE AUTOMATIC ANALYZERS IN ABUAD MULTI SYSTEM HOSPITAL?

An automated analyzer is a medical laboratory instrument designed to measure different chemicals and other characteristics in a number of biological samples. Well-maintained lab equipment ensures that data is consistent and reliable, which in turn impacts the productivity and integrity of the work produced. Medical laboratory equipments are very expensive, some of the are sophisticated. As a student, one should always ask for assistance when using the equipment in the laboratory to prevent spoilage of the equipment. He /she should be careful while using the equipment and pay attention to the equipment while in use. In case of any issues, he/she should report to the head scientist on duty. There are various procedures and routines will ensure that the laboratory equipment is well-maintained and cared for, this includes;

* Developing standard operating procedures for all lab equipment.
* Preparing documentation on each specific equipment, outlining the repairs and maintenance undertaken.
* Outlining a preventive maintenance program for each equipment.
* Training students, technical and managerial staff on proper use and care of lab equipment.
* Proper use of rules and regulations of the laboratory equipments.

 **General Care Tips for the laboratory automated analyzer**

1. **Cleaning**
* Regular cleaning of the lab equipment ensures that it is ready for use when needed, that stubborn stains/substances do not get a firm hold, and that experiments are not contaminated by impurities carried over from previous experiments.
* Make certain that;
* The equipment is always cleaned before and after each use.
* Cleaning reagents and cleaning aids used are specific for laboratory equipment care.
* In addition to cleaning lab equipment before and after each use, a schedule is required for more in-depth cleaning. This might involve dissembling certain machines to clean hard-to-reach parts.
* Always follow instructions from the manufacturer on cleaning policy. Certain parts of the equipment might require very specific solvents, cleaning materials, or drying procedure.
1. **Calibration**
* Calibration involves comparing the measurements of an equipment against the standard unit of measure, for the purpose of verifying its accuracy and making necessary adjustments. Regular calibration of laboratory equipment should be done because over time, biases develop in relation to the standard unit of measure. This guards against invalid data and ensures safety during experimentation. An independent specialist, that can provide calibration certificates where necessary, should be engaged in the process.
* Calibration should be done when;
* The recommended time by the manufacturer elapses.
* The equipment is hit by a force, dropped on the ground, or involved in any accident or an event of safety concern.
* There are unusual patterns or sounds while the equipment is in use.
* Measurements obtained are questionable.
* Highly critical measurements, where data accuracy is of utmost importance, are to be carried out.
1. **Repairs and Refurbishments**
* Lab equipment is generally costly and repairs and refurbishment prolong the lifespan of equipment, saving the lab the expense of new purchases.
* The following are points to consider;
* Repair and/or refurbish faulty or worn out lab equipment without any delay. Faulty machines may stop working suddenly in the middle of an experiment leading to loses and they can also be a source of safety concerns.
* Minor repairs can be done by a dedicated staff, while major repairs should be directed to specialist with knowledge on the specific machine or equipment.
* Refurbish old equipment to give them a new lease of life by cleaning thoroughly, polishing where necessary, lubricating movable parts, and replacing small worn out bits.