Invention Title: The Smart Device for Evaluating Blood Sample Quality

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Description of the Problem

Blood samples play a vital role in diagnosing diseases and guiding treatment plans. However, Rejected or defective blood samples due to clotting, hemolysis, or incorrect handling are a significant challenge in medical laboratories. According to statistics, the rejection rate for samples 2-3% leading to delays in diagnosis and treatment for patients. This often results in the need to collect new samples, causing inconvenience for patients and increasing workloads for healthcare providers.

Description of the Idea

The invention is a compact, smart device placed in blood collection rooms or hospital wards. It performs a quick quality check of blood samples immediately after collection. The device uses advanced detection technology to identify issues like clotting or hemolysis within few minute. It provides instant feedback through an LED indicator (green for acceptable, red for rejected) and displays the specific issue on a screen, allowing technicians to recollect samples before the patient leaves.

To watch the invention video
https://youtu.be/G2Pwsd9R_oQ

Sustainability of the Idea

This device ensures reduced sample rejection rates, minimizing wastage of resources such as tubes, reagents, and time. By avoiding repeat procedures, it supports sustainability in healthcare by promoting efficiency and reducing unnecessary medical waste.

Novelty of the Idea

The idea is unique in addressing sample quality assurance at the point of collection, a step often overlooked. Unlike current systems that only detect problems at the laboratory, this device bridges the gap by providing real-time, pre-laboratory analysis.

Implementation of the Idea

The device can be implemented in various healthcare facilities, including hospitals, clinics, and diagnostic centers. It requires minimal training for blood collection staff and integrates seamlessly into existing workflows.

Cost Benefit Analysis of the Idea

•Cost: Initial investment in the device and training.

•Benefits: Significant savings in time, labor, and resources by reducing repeat procedures, patient revisits, and delays in diagnosis. The device ensures faster turnaround times and improved patient satisfaction.

Impact of the Idea

This innovation enhances the quality of laboratory services, leading to faster and more accurate diagnoses. It improves patient care, reduces healthcare system burdens, and boosts trust in diagnostic procedures. Risk of the Innovation

- Technical: Potential issues with device calibration or accuracy.
- Operational: Resistance to adoption due to perceived changes in workflow.
- Financial: High initial costs might limit accessibility for smaller healthcare facilities. Mitigating these risks involves thorough device testing, robust training programs, and scalable pricing models.

Contact info.

If you have interested in such an idea,

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