

Discussion

Q: I notice that QBC Diagnostics offers a dry hematology analyzer. What is dry hematology? Do all hematology analyzers use the same basic methodology?

A: Dry Hematology is a unique means of performing a complete blood count analysis without the need for liquid reagents used by other conventional hematology analyzers. In traditional wet hematology a blood sample is mixed with a stream of liquid reagents which dilute and lyse, or break apart, the cells in order to analyze their composition. In dry hematology a precisely constructed sample collection tube is internally coated with EDTA and acridine orange. This tube is then filled with a small amount of whole blood and mixed with the dry reagents, allowing them to effectively bond with and stain unique proteins within the cells of the blood. When this sample is then exposed to a particular wavelength of light the stained enzymes will begin to glow and fluoresce, and the analyzer then measures the volume of these cells to determine the sample's composition. So why is Dry Hematology better than conventional methodology?

1. **Minimal System Maintenance** – Since dry hematology allows all reagents to be housed within the disposable sample collection tube, required maintenance and upkeep to the analyzer is kept to a minimum. With dry hematology there's no need for decontamination, replacement of filters or tubes, and no cleaning of reagent wells. Simply throw away the disposable and give an occasional wipe-down to the analyzer.
2. **Extended Shelf Life** – Dry hematology reagents have a drastically longer shelf life than liquid reagents. While most liquid reagents only last for a few weeks after opening, dry hematology reagents hold their integrity for over a year, meaning there's no rush to run samples before your reagents expire.
3. **Ease of Storage** – By housing all necessary reagents within the sample collection device, dry hematology saves laboratories half the disposable inventory space used with conventional analyzers. Plus, dry hematology reagents are far less sensitive to storage conditions than liquid reagents, allowing for a far wider range of inventory settings than their liquid counterparts.

Summary:

Dry Hematology analyzers provide several advantages over traditional wet hematology analyzers. Dry hematology reagents are generally less volatile, easier to store, and have a much longer shelf life than liquid reagents. Additionally, since dry hematology allows all reagents to be housed within the disposable sample collection device, required maintenance and upkeep to the analyzer is kept to a minimum. In short, dry hematology is a great choice for anyone looking to simplify their on-site complete blood count testing.