

# STANDARD DEVIATIONS: Lab Week 2021

Greetings,

Happy Lab Week 2021!



{ASCP Lab Week 2021}

It's that time of year again.

Time to find out how much Administration knows about the laboratory.

Time to realize just how much you're appreciated in the whole healthcare scheme.

Time to remember just how awful a potluck in a crowded breakroom can get.

Time to find out which reps are interested in you and which ones are interested in your account.

Time for a break.

And, speaking of time, here are some machines that I have worked on over the past forty years.  
Grab one of those stale bagels and take a minute to reflect on how far we've come.







The Coulter Counter revolutionized hematology. By measuring the impedance of particles passing through an aperture we were able to measure the concentration of WBCs, RBCs, and even platelets (but just one at a time). The Coulter cup cuvette became one of the most ubiquitous pieces of hardware in a lab.





Here's a Flame Photometer. Before ion-specific electrodes or selective membranes, we looked for flame color. Sodium (yellow) and Potassium (a lilac-blue) have specific color signatures that can be quantified when calibrated for intensity of the flame. The idea of the test is that sample atoms evaporate and since they are hot, they emit light when being in flame. For years this was the instrument for measuring Lithium (red) concentrations for patients on that drug.





The invention of Gas-permeable membranes made it possible to measure the partial pressures of  $O_2$  and  $CO_2$  in a whole blood sample. Radiometer's line of blood gas analyzers stretches back decades. These machines were extremely picky about their environment and required calibrations every couple of hours. These things were so picky that we ran samples in triplicate and took averages.





Wow! Automation!! This little unit is the IL-508 Multi-channel *with DOS*! It was capable of doing electrolytes, glucose, calcium, and phosphorus when it was working. It was called “The Cow” for the sound the pumps made.





And then one day the world changed. When Kodak introduced their dry chemistry automated technology in repurposing the dwindling film industry, clinical labs, and testing in general, became a much more prominent component of the healthcare paradigm. This platform revolutionized the clinical laboratory. Reagent stability, quick turn-around-times, random access sampling, QC monitoring; and an 8-bit computer! Man, this was the bee's knees!

The early machines paved the way for a revolution in laboratory science. The sophistication of automation has forever altered the way we work.



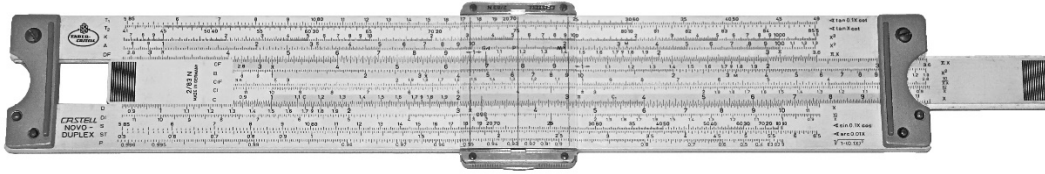




And some old friends never quit. The silver-silver chloride digital chloridometer from Labconco has been around for decades and shows no sign of wear. It is still used for Sweat Chloride testing.







And this was our computer. Yep, we used a slide rule to calculate Body Surface Area of pediatric patients for determining Creatinine Clearance. Believe it or not, techs carried calculators not phones. We wrote out chemical equations and graphed calibration curves and extrapolated unknowns. Every result from instrument to log book to requisition (in triplicate carbon copy) was written by hand.

We've come a long way. But not everything has changed.

The thing that hasn't changed in all these years is the people collecting samples, processing orders, caring for instruments, analyzing data, ensuring QC, tracking inventories, troubleshooting problems, performing the assays, interpreting the results, and making all this technology meaningful.

You will hear it this week; that you are valued and respected, that you are appreciated and a critical part of the process. And then next week? Back to answering complaint calls about results for samples that have yet to be received.

Not from this desk. Not from this perspective and not from this voice. Labs are one of the links in a chain of essential parts of the healthcare system. Your dedication, expertise, and commitment are fundamental to the health of all. That respect is there 24/7/365; just like you. Thank you.

Have a great week and be safe,

Bryan



# Differential Count Gloves



