

Many important decisions depend on the results of chemical measurements

When one views the extent to which chemical measurements influence our very existence it is difficult to understand why more attention has not been paid to the quality of those measurements.

It has become even more common in modern times to base critical decisions on the results of chemical tests many in the medical and pharmaceutical fields but also some that are outside of that arena. A driver whose breath alcohol test returns a result of greater than the limit can face a fine of thousands of dollars and possibly some jail time. This type of trust in the testing method is predicated on many years of research and development of more reliable tools for detection, analysis measurement of amount and concentrations of substances.

However like all things man made there are limitations and flaws in all such applications of science. It is therefore more important than ever to ensure that the science of measurement Metrology is applied to our important and life deciding chemical measurements to ensure high frequencies of accurate reliable results.

In the Trinidad and Tobago environment test results are often taken as received. There is little assessment or comparison of results to determine consistency or accuracy. This ensures that inconsistencies go undetected. All such exercises conducted locally (on the rare occasion that they are performed) usually reveal wide variations among submitted results.

That is not good news for a society which has been rapidly increasing its applications of chemistry to embrace more fields and activities. Modern chemistry needs to detect or differentiate between smaller and smaller concentrations of more and more substances for many purposes.