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**A revolutionary software application for reagent-free clinical chemistry spectroscopic testing:
From validation to application**

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The traditional IVD clinical reagent spectroscopy diagnostic testing is an indispensable tool in the medical lab with the use of Uv-Vis spectrophotometers. However, this method requires stable uninterrupted power supply for storage and cold chain distribution of reagents due to their high enzyme base temperature sensitivity. The process is cumbersome and bulky with each test requiring its own reagent(s) and calibration standards. Also, compounded by the high cost of reagents - constituting about 50% of the medical lab operations cost. Leading to a widen access gap to clinical chemistry testing. In contrast, this revolutionary invented analytical spectroscopy testing model in software empolys the use of Uv-Vis-Nir or Vis-Nir spectrophotometers. Over 80% of clinical chemistry spectroscopic tests are undertaken without the use of reagents for whole blood, serum, plasma and urine test samples and with no alteration or drying of the sample as in multivariant analysis. It requires only three primary standards by the end user for calibration. Outputing singular or mulitple tests per unit test sample with reuseable cuvettes within a minute. Enzyme concentration testing reagents used by this method are non-enzyme based hence requires no strict refrigeration. This method is applicable for routine testing with high commercial accuracy averaging 40% lower than the traditional reagent base method for a wide range of tests on a single device providing highly marginable cost savings with minimal operations risks to medical diagnostic facilities worldwide in bridging the diagnosis to treatment gap.

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