

Loop Mediated Isothermal Amplification (LAMP)

The innovator has developed reagents, which are specifically designed based on DNA sequences of several isolates, which improve the specificity. At a minimum, this technology is a reagent and instrument for measuring molecular diagnostics. It provides cost effective confirmatory molecular tests for infections, cancers and genetic diseases in animals, plants and humans. This technology is used in the confirmation of clinical, veterinary and plant diseases by testing presence of specific DNA or RNA pertaining to that specific causative agent. This technology uses low cost devices both for carrying out (reaction) and detection (results). It is a stand-alone product but can be utilized with other immuno diagnostics.

The innovator has specifically targeted five infections, HCV/HIV/HBV/ Malaria and TB. The true uniqueness is the reagents, which are specifically designed, based on DNA sequences of several isolates that improves the specificity. The technology is developed from a platform technology called Loop Mediated Isothermal Amplification (LAMP). LAMP is a single tube technique for the amplification of DNA. It may be combined with a reverse transcription step to allow the detection of RNA. LAMP has the potential to be used as a simple screening assay in the field or at the point of care by clinicians. This LAMP based technology is cheaper, faster and more specific than PCR.

Salient Features

- The present technology offers low cost confirmatory diagnostic tool. . The process involved with this technology is considerably low cost, it is about 1/10 the cost of present system (PCR).
- The present technology demands low skilled technician technicians to conduct the testing. This test can be administered by the grass roots level technicians, even in rural areas.

Areas of application

This technology would be used in detection of diseases

End users

- Medical equipment manufacturers
- Hospitals
- Rural health centers

