



CPAL

Central Pennsylvania Alliance Laboratory

Technical Bulletin

No. 99

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DNA Sequence Analysis for Identification of Microorganisms – Assay Enhancement – *sodA*, *rpoB* and *tuf* Gene Sequencing

Contact:

Dr. Jeffrey Wisotzkey, 717-851-1422
Technical Director, CPAL

Effective Date:

July 2, 2012

Performed:

Set up Monday through Friday and resulted when assay is complete. Expected Turn-Around-Time (TAT) is 1-2 days from receipt of specimens at CPAL.

Mnemonic:

MICROID

Method:

PCR amplification and Di-deoxy chain terminating DNA sequencing chemistry (Sanger Method). DNA sequence data is compared to DNA sequence database data to identify the “Best Match” sequence.

Summary:

The MICRO ID assay has been enhanced to include *sodA*, *rpoB* and *tuf* gene sequencing, in addition to the 16S rDNA, 18S rDNA, IVS and *hsp65* sequence analysis. The addition of the ability to sequence these three genes will provide increased likelihood of identifying submitted organisms to the species level. This will be particularly useful for the speciation of *Mycobacterium* and *Streptococcus* species. In addition, these genes can provide useful sequence information to aid in the identification of certain additional groups.

Result Reporting

Reports will reflect which additional genes were evaluated (See also, Technical Bulletin #92; *DNA Sequence Analysis for Identification of Microorganisms*). The

Technical Bulletin 99

Issued on: June 27, 2012

For questions about this and other information, call Central Pennsylvania Alliance Laboratory at 1-888-480-1422.

determination of which additional gene sequences to evaluate will be made by the laboratory based on 1) preliminary phenotypic data provided to the CPAL lab and/or 2) a review of the 16S rDNA analysis. The additional analysis will be automatically performed. No additional action is required by the ordering institution.

IMPORTANT!!

Please be sure to include any relevant information with the submitted specimen. This will help ensure the fastest possible turn around time for the MICRO ID assay.