

INTERDISCIPLINARY BIOTECHNOLOGY UNIT
ALIGARH MUSLIM UNIVERSITY, ALIGARH

NOTICE CALLING FOR QUOTATION/TENDER

A. BACTERIAL IDENTIFICATION SYSTEM - ONE

Specification of Fully Automated Rapid Bacterial Identification and Drug Susceptibility System.

- It should be Fully Automated, Walk-away, High-throughput & random-access Bacterial Identification & Antibiotic Susceptibility system.
- System should be able to perform incubation and result-interpretation simultaneously.
- System should have more than 95 sample positions.
- System should be able to process Identification and Drug Susceptibility testing (both ID & AST) for minimum 66 samples at a time.
- System should have advance Software that maintains consistency of Identification and Susceptibility test results.
- Sensitivity detection should be based on turbidity and redox reaction.
- System should employ Combination of chromogenic & fluorogenic substrates together with 5 independent time specific databases for highly accurate & faster Identification
- System should employ Redox Reaction for Bacterial Metabolism & Turbidity for Bacterial cell division to determine microbial growth during AST, to reduce major errors.
- Test panels should be sealed & should never move inside the system to avoid dislodging of panels from the its position, jam, crack or leak
- System should be able to estimate true Doubling Dilution and there should n't be any skipped dilution of various antibiotics to estimate true MIC for analys is of delayed resistance
- MIC interpretation should not be based on computer –simulation technology.
- Estimation of Susceptibility should be based on Doubling Dilution MIC inline with the CLSI guideline.
- System should have test panels with various combinations- i.e. Only Identification Panel, Only Sensitivity Panel, and Identification & Sensitivity Combination Panel.
- Should have no fluidics within the system to reduce maintenance.
- Company should be able to provide customized sensitivity panels as per the need of the institutions with different configuration.

- Should have User definable expert rules, which can be configured as enabled v/ sdisabled and manual interpretation v/s automated interpretation.
- Primary panels should be able to identify various resistant mechanisms those may be present in the sample- ESBL, MRSA, VRE, HLAR, b-lactamase- producing Staphylococcus (Penicillinase), Macrolide resistance in Streptococci (Efflux/MLSb), High Level Penicillin resistance in S. pneumoniae, Low Level Penicillin resistance in S. pneumoniae
- Should have more than 40 substrate tests for calculating single organism identification.
- Should have more than 80 wells of sensitivity testing for calculating MIC and sensitivity report of a single organism.
- System should work on 0.25MF to 0.5 MF .
- System should be supplied with high end database management system which can integrated to Hospital/ Lab information system for bi-directional information flow for patient data and information on drug sensitivity patterns with following features-
 - Work-station
 - Detailed Patient Data Incorporation
 - Specimen Demographics
 - Centralized Order Management for Microbiology testing
 - Improved workflow
 - Multiple Platform Connectivity
 - Detailed Data Review-Patient, Specimen, Test & Isolate levels
 - Unlimited Microbiology Data Storage Capacity
 - Incorporation of Patient Therapies
 - Full Transaction Logging
 - Direct On-line Technical Support
- There should be availability of JOINED (Combo) Panel for ease of use.
- Company should provide a brand new unit with certificate of analysis with compatible
- UPS system with minimum 30 mins back-up.
- Company will provide 1000 test of ID+AST (joined) panel as per user requirement.
- Warranty – 5 years

B. ZETASIZER - ONE

Specification of Zetasizer

The Zetasizer is the system of choice where the highest sensitivity and widest size range is required

- It is a particle size analyzer for the enhanced detection of aggregates, measurement of small or dilute samples, or samples at high concentration, plus a molecular weight analyzer for molecular size and molecular weight measurement.
- Static light scattering measurements enable determination of the second virial coefficient for macromolecule solubility tests.

- Size measurement from 0.3nm (diameter) to 10 microns using patented *NIBS* (Non-Invasive Back Scatter) technology.
- Molecular weight measurement down to 980Da.
- Second virial coefficient measurement for solubility.
- Automated temperature trend measurements.
- Sample concentrations from 0.1ppm to 40%w/v.
- Protein size measurement as dilute as 0.1mg/mL (Lysozyme).
- A Quality Factor gives confidence in the data.
- The Expert advice report gives help to improve sample preparation or the measurement procedure.
- 21CFR part 11 software option enables compliance with ER/ES.
- Research software option gives access to further features and analysis algorithms for the light scattering specialist.
- Automation of measurements using an autotitrator option.
- Flow mode capability to enable use as a GPC / SEC detector.
- Alternative laser, 50mW at 532nm for samples incompatible with the standard 633nm laser fitted.
- Optical filter option to improve measurements with fluorescent sample.
- Temperature range extension option to 120°C.
- Systems can be upgraded to add zeta potential at a later date.