Believe in Innovation

HUMAN BIOLOGICAL LIQUIDS CULTURE

Improving the inpatient diagnostic management to reduce hospitalization time, diagnostic analysis requests and therapeutic treatments

The rapid analysis of human biological liquids is decisive to the inpatient for whom the timely correct diagnosis and the beginning of an adequate therapy in most cases represent the only way to survive.

In addition to community acquired infections, hospital acquired infections have a high Public Health impact by increasing morbidity and mortality rates and costs through prolonged hospital stays and additional diagnostic and treatment costs.

LIGHT SCATTERING TECHNOLOGY APPLIED TO BACTERIAL CULTURE

1 Sidecar, Alfred 60AST and HB&L are the first automated systems for the rapid urine culture with high sensitivity and specificity (2,3).

2 Using the patented technology based on light scattering they are able to monitor the intense bacteria replication activity from the inoculum step into specific culture broths providing real time growth curves.

3 Quantitative bacterial count results are reported in CFU/ml.

4 Due to the optimization of the broth it is possible to perform the bacterial culture in sterile and non sterile endocavitary samples such as respiratory fluids, cerebrospinal fluid and pleural fluid offering a sensitivity of 1 CFU/ml in 6 hours.

5 Enhanced liquid culture media combined with a specific supplement (DEB) has been developed to detect aerobic bacteria and fastidious micro-organisms such as Haemophilus influenzae, Neisseria meningitidis as well as samples characterized by extremely low bacterial counts.

6 Broths are in aseptic vials with pierceable screw cap.

7 Samples are incubated at 37°C and constantly mixed avoiding sedimentation, floation and growth anomalies typical of several micro-organisms.

8 Only live bacteria are detected while interference from non replicating substances such as erythrocytes, leucocytes, dead cells and salts present in the sample are eliminated during the initial zero reading.

ONLY LIVE BACTERIA ARE DETECTED

The results obtained by many studies conducted at in different reference centres demonstrate that Alifax systems offer "an excellent agreement with the cultural method [Petri dish] and a useful and precise count of the bacteria supplying undoubted advantages especially in those samples for which the bacteria amount represents a validation criteria” (1).

PERFORMANCE IN DIFFERENT PUBLICATIONS

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>N° samples</th>
<th>Sensitivity %</th>
<th>Specificity %</th>
<th>PPV %</th>
<th>NPV %</th>
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Due to regulatory requirements, the products listed herein are available for sale in any relevant Country territory provided that they have been registered according to the applicable domestic law. The products listed herein may have incurred changes with respect to the last available edition.

Applications

Non sterile
Expectoration
Orotracheal aspiration
Bronchoalveolar lavage
Sterile
Cerebrospinal fluid
Pleural fluid
Synovial fluid
Ascitic fluid
Peritoneal fluid
Central Venous Catheter tips
Cornea transport and storage media

Each fluid is individually marked

Reprinted from: Medicina Interna 18, 1972.

HB&L™ CULTURE KIT Code SI 405.901
HB&L™ DEB KIT Code SI 705.901
HB&L™ ENRICHMENT KIT Code SI 405.915

1 Rif 2 2009 546 100 100 100 100 100
2 Rif 3 2010 322 97.2 100 100 99.9 98
3 Rif 6 2013 10655 95.5 99.9 98.2 99.8 98
The McFarland Monitor is a new instrument application that monitors the turbidity levels of positive samples during the bacterial culture test.

A visual and audible alert advises the Operator when the sample reaches the suitable bacteria concentration at 0.5 McFarland to perform the direct susceptibility testing.

**Advantages**

1. **1 test 2 results:**
   - Bacterial culture result
   - 0.5 McFarland sample

2. The positive sample can be immediately tested with a customized antibiotic panel following therapeutic treatment indications without waiting the analysis end and further dilution steps.

3. The use of a bacterial culture in a logarithmic phase reduces the stress conditions and the mutations that could occur when bacteria reach the stationary phase.

**NEW APPLICATIONS**

FOR HB&L™ CULTURE KIT SI 405.901 has been validated also to test microbiological suitability of substances, preparations or formulations produced using aseptic procedures.

**BIBLIOGRAPHY**