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 Alfred 60 and HB&L are the first automated systems for the rapid urine culture with high sensitivity and specificity.

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 exigent micro-organisms such as Haemophilus influenza, Neisseria meningitidis as well as samples characterized by extremely low bacterial counts.

6 Broths are in sterile vials with pierceable hermetic seals, thus considerably reducing contaminations.

7 Samples are incubated at 37°C and constantly mixed avoiding sedimentation, flotation 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 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”.

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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Applications

Non sterile
- Expectoration
- Orotracheal aspiration
- Bronchoalveolar lavage

Sterile
- Cerebrospinal fluid
- Pleural fluid
- Synovial fluid
- Ascitic fluid
- Peritoneal fluid
- Central Venous Catheter tips

Each fluid is individually marked

HUMAN BIOLOGICAL LIQUIDS CULTURE

MARKED

Replicating Alive Bacteria
Non Replicating Materials
- Leucocytes
- Erythrocytes
- Cells
- Dead bacteria
- Salts

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The Mc Farland 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 Mc Farland to perform the direct susceptibility testing.

Advantages

- **1 test 2 results:** Bacterial culture result + 0.5 Mc Farland sample
- 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.
- 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.

**HB&L™ CULTURE KIT Code SI 405.901**
- 120 Disposable yellow cap glass vials
- 120 Disposable dedicated plastic tips
- 10 Blotting paper strips for the dispensing perforated rack

**SHELF LIFE**
- From production: 8 months +2÷8°C
- From reconstitution: 1 months at +2÷8 °C

**STORAGE CONDITIONS**
- Refrigerated temperature (+2÷8 °C)

**HB&L™ DEB KIT Code SI 705.901**
- Culture supplement for human biological liquids
- 8 Vials Reagent A 0.83 mg b-NAD
- 1 Vial Reagent B
- 8 Disposable droppers for reconstituted reagent A
- 20 Blotting paper strips
- 45 Disposable tips

**SHELF LIFE**
- From production: 8 months +2÷8 °C
- From reconstitution: 1 months at +2÷8 °C

**STORAGE CONDITIONS**
- Refrigerated temperature (+2÷8 °C)

**POSITIVE CONTROL KIT Code SI 190.911**
- 3 vials with Lyophilized Microorganism
- 3 Reconstituting solution

**SHELF LIFE**
- From production: 14 months +2÷8 °C
- From reconstitution: 30 days at -20°C

**STORAGE CONDITIONS**
- Before reconstitution: +2÷8 °C.
- After reconstitution: -20 °C

**NEW APPLICATIONS FOR HB&L™ CULTURE KIT SI 405.901 has been validated also for Central Venous Catheter tips (5). Other applications as cornea, organs and tissues transplantation culture are under validation(5).**