



FIRST AUTOMATED SYSTEM FOR BACTERIAL CULTURE AND SUSCEPTIBILITY TESTING

The extreme flexibility of ALFRED 60/AST makes a substantial contribution to the automation needs of the modern microbiology laboratory



ALFRED 60/AST is the first **fully automated system** able to perform **bacterial culture, RAA and susceptibility testing** by automating the whole process of sample inoculation, reading and result transmission.



Using the patented technology based on **light scattering** it is able to detect the presence of bacteria and their drug resistance in a few hours with **high sensitivity and specificity**.

ALFRED 60/AST monitors the growth phases of bacteria from the inoculum step into specific culture broths providing **real time growth curves** and **quantitative bacterial count results in CFU/ml**.

All the samples are incubated at 37°C and **only Replicating microorganism 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.

Broth turbidity level is detected by the **McFarland Monitor** and as the sample reaches the 0.5 McFarland it is buffered into the refrigerated area and then tested with a customized antibiotic panel.

Via the **Host Query application**, ALFRED 60/AST can receive from the LIS, sample test information used to determine for each specimen specific analysis settings such as test profile, cut-offs and incubation times.



Refrigerated area for antibiotics and positive samples at 0.5 McFarland turbidity level.

TESTS AND APPLICATIONS

	Urine culture	3 hours , cutoff 30.000 CFU/ml
	Residual Antimicrobial Activity (RAA) test	Simultaneously to the culture test
	Human Biological Liquid Bacterial Culture*	6 hours , cutoff <50 CFU/ml
	Bacteria Culture on special sample*	6 hours , cutoff <50 CFU/ml
	MDRO culture screening	6,5 hours
	Aerobics, Anaerobics and Yeast/Fungi detection for microbiological suitability tests*	48 hours
	Susceptibility testing with customized antibiotic panel for:	3 or 5 hours
	· Urine	
	· Human Biological Liquids	
	· Positive Blood Culture	
	· Isolated Colonies	



ALFRED 60/AST Code SI 105.100/AST

CUSTOMIZABLE PROTOCOLS WITH DIFFERENT INCUBATION TIMES AND CUT-OFFS

INCUBATION TIME (min)	FAST PROTOCOL (URINE ONLY) THRESHOLD (CFU/ml)	STANDARD PROTOCOL (URINE or HBL) THRESHOLD (CFU/ml)
70	1.000.000	20.000.000
80	500.000	12.000.000
110	100.000	2.000.000
120	DEFAULT 50.000	1.000.000
140	15.000	300.000
145	10.000	200.000
160	-	100.000
180	-	DEFAULT for URINE 30.000
190	-	15.000
235	-	1000
275		100
290		50
290-360		DEFAULT for HBL <50

* Manual loading

FEATURES

- Light Scattering Technology
- Quantitative results expressed in CFU/ml
- Automated susceptibility testing with customised antibiotic panels
- Refrigerated area at + 4°C for antibiotics and 0.5 McFarland positive sample storage
- Needle with capacitive sensor
- Check of correct vial loading for autobuffering function in the refrigerated area
- Real time detection of microorganism growth curves
- Integrated turbidimeter with McFarland Monitor
- Single sample management with customised analysis profile: incubation time, analytical protocol, cut-off
- Automatic reagent and sample dispensing
- Sampling with continuous loading of primary closed tubes
- Automatic result reading and reporting
- Built-in barcode reader for sample identification
- LIS bidirectional interface and Query Host application
- 37°C incubation
- User friendly software
- Universal rack that accommodate various tube sizes
- Use of closed tubes (in compliance with the law in force)
- Customised reports
- Database for epidemiological studies
- Connection to HB&L for increased capacity



PRIMARY TUBE UNIVERSAL RACK



Code SI 0903.900

The new Alifax disposable tube for urine collection can be loaded directly on primary tube rack.

4 CONTROL LEVELS:

1. Flow sensor
2. Sample withdrawn sensor
3. Wash and waste tank sensors
4. Tube and reagent presence sensor

AUTOMATION KIT Code SI 1201.900
New packaging kit for one step loading of eugonic broth vials. Each vial can be used for culture, RAA test or susceptibility testing depending on test profile setting.



ALFRED 60/AST - HB&L CONNECTION

Following sample inoculation into the vials through ALFRED 60/AST, all vials can be transferred to one or more HB&L UROQUATTRO along with the growth curve data allowing continuous analysis.



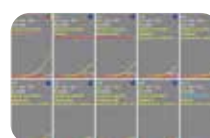
SAMPLE DISPENSING
on to ALFRED 60/AST



VIAL TRANSFER
by mechanical tool from ALFRED 60/AST to HB&L



DATA TRANSFER
by serial connection from ALFRED 60/AST to HB&L



ANALYSIS CONTINUED
on HB&L

Technical Features

Power supply: 115 - 230 VAC ± 10%
Power consumption: 290 W

Frequency: 50 or 60 ± 2 Hz
Room operating temperature: +10÷30 °C

Size: 1050X800X670 mm
Weight: 120 Kg (Alfred 60/AST)