

ALFRED^{AST}

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 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.

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
	MRSA culture screening	6,5 hours
	MDRO culture screening	6,5 hours
	Susceptibility testing with customized antibiotic panel for:	3 hours
	· Urine	
	· Human Biological Liquids	
	· Positive Blood Culture	
	· Isolated Colonies	



Windows™ operative System

Alfred 60 S Code SI 195.100
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

Windows is a Microsoft trademark
* 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 bacterial 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:

- Flow sensor
- Sample withdrawn sensor
- Wash and waste tank sensors
- 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 along with the growth curve data allowing continuous analysis.

By integrating the 2 systems it is possible to analyze up to 180 samples in 5 hours.



Dispensing procedure	Dispensing time
60 Urine cultures	50 minutes
30 Urine cultures + 30 RAA tests	40 minutes
180 Urine cultures	150 minutes
90 Urine cultures + 90 RAA tests	120 minutes



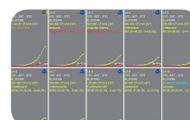
SAMPLE DISPENSING
on to ALFRED 60^{AST}



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

Alfred 60 - Technical Features
Power supply: 230VAC ± 10% or 115 VAC ± 10 %
Power consumption: 290 W

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

Size: 1100x820x600
Weight: 120 Kg