

MICRONAUT-S MRSA/IFSG GP 4

Microtitration plates for the automated or manual susceptibility testing of multi-resistant Staphylococci, Enterococci and Pneumococci

Principle, shelf-life and storage

The susceptibility testing is based on the rehydration of antibiotics by adding a standardized bacteria suspension (Mueller-Hinton II broth). The result is measured photometrically after 18-24 hours incubation at 35-37 °C. Results are going to be measured and interpreted either with the MICRONAUT software or visually. Due to a special vacuum drying method the plates can be stored at a room temperature of 15-25 °C. The MICRONAUT test plates have a shelf life of 24 months at date of production.

Antibiotics configuration

The antibiotics configuration of the MICRONAUT-S MRSA/IFSG GP4 plate allows the specific detection of the clinically relevant single or multi-resistances of gram-positive bacteria of nosocomial infection. The susceptibility testing with highly effective reserve antibiotics offers alternatives in case of extreme multi-resistance. The choice of the antibiotics allows the detection of all resistance-phenotypes of Staphylococci, Enterococci and Pneumococci notifiable according to German law (protection against infection act, valid as of Jan 1, 2001)

Procedure

- ▼ Produce bacteria suspension in SoCl (McFarland 0.5)
- ▼ Transfer in Mueller-Hinton II broth
- ▼ Inoculate MICRONAUT-S MRSA/ IFSG gram-positive test plate
- ▼ Incubate for 18-24 hours at 35-37 °C
- ▼ Measure photometrically and interpret with MICRONAUT software

Susceptibility testing of Staphylococci

- ▼ Penicillin G MIC: detection of Staphylococcal penicillinases
- ▼ Oxacillin MIC: detection of oxacillin resistance
- ▼ Detection of oxacillin borderline resistance by detection of Cefoxitin susceptibility
- ▼ Detection of phenotypical resistance patterns of epidemic MRSA (PEN/OXA/CIP/ERY/DOX/SXT/RAM/FUS).
- ▼ Detection of the induced MLSB resistance by Erythromycin/Clindamycin combination test referring to CLSI
- ▼ Test of highly effective antibiotics as alternative for present distinct multi-resistance

Susceptibility testing of Enterococci

- ▼ Ampicillin MIC: detection of ampicillin resistance
- ▼ Detection of the phenotypical glycopeptide resistance pattern of vancomycin resistant Enterococci by determination of the MIC via teicoplanin and vancomycin
- ▼ Differentiation between *Enterococcus faecium* and *Enterococcus faecalis* by determination of the MIC via synergid
- ▼ Detection of HLAR strains through high-level-resistance testing via gentamicin and streptomycin
- ▼ Test of highly effective antibiotics as alternative for present distinct multi-resistance

Susceptibility testing of Pneumococci

- ▼ Penicillin G MIC: detection of PBP changes
- ▼ Detection of cefotaxim resistance
- ▼ Detection of erythromycin resistance
- ▼ Detection of vancomycin resistance
- ▼ Moxifloxacin MIC: detection of group IV quinolones resistance
- ▼ Test of highly effective antibiotics as alternative for present distinct multi-resistance

The MICRONAUT-S MRSA/IFSG GP 4 plate is coated with these antibiotics

Abbreviations	Antibiotics	Abbr.	Antibiotics
AMP	Ampicillin	LIZ	Linezolid
CLI	Clindamycin	MOX	Moxifloxacin
CTX	Cefotaxim	MUP	Mupirocin
COX	Cefoxitin	MPN	Mupirocin nasal
CIP	Ciprofloxacin	OXA	Oxacillin
SXT	Cotrimoxazol (Sulf./Trim.)	PEN	Penicillin G
DPT	Daptomycin	RAM	Rifampicin
DOX	Doxycyclin	SNH	Streptomycin high level
ERY	Erythromycin	SYN	Synergid
ERC	Erythromycin/Clindamycin	TPL	Teicoplanin
FOS	Fosfomycin	TGC	Tigecyclin
FUS	Fusidin acid	VAN	Vancomycin
GEN	Gentamicin		
GNH	Gentamicin high level	GC	Growth Control