



Resistant Gram positives - Key antibiotic MICs

This product covers key resistances shown by:

Staphylococcus aureus

Enterococcus faecium & *Enterococcus faecalis*

Streptococcus pneumoniae

MICRONAUT-S MRSA GP

Provides MIC's for relevant antibiotics used to detect and treat Gram positive cocci exhibiting antibiotic resistance.



Staphylococcus aureus

- > Penicillin G MIC detects penicillinases
- > Oxacillin and Cefoxitin MIC detects Oxacillin resistance and Oxacillin borderline resistance
- > Erythromycin/Clindamycin combination test detects induced MLSB (CLSI)
- > Susceptibility testing of second line antibiotics, Vancomycin, Linezolid, Tigecycline, Daptomycin and Ceftaroline as therapeutic options.
- > Interpretations according to EUCAST

Enterococcus faecium and *Enterococcus faecalis*

- > Ampicillin MIC for detection of resistance
- > Vancomycin and Teicoplanin MIC for detection of phenotypical glycopeptide resistance pattern
- > Synercid MIC to differentiate *Enterococcus faecium* from *Enterococcus faecalis*

Streptococcus pneumoniae

- > Penicillin G MIC to detect PBP changes
- > Susceptibility testing of Ceftaroline, Erythromycin, Vancomycin and many others
- > Moxifloxacin MIC to detect group IV quinolones resistance

Antibiotics & Concentrations	MIC (µg/ml)							
Ampicillin	16	8	4	2				
Cefoxitin	16	8	4	2				
Ceftarolin	0.5							
Daptomycin	0.5							
Erythromycin	4	2	1	0.5	0.25			
Erythromycin/Clindomycin	4/0.5							
Fosfomycin	64	32	16	8				
Fucidin	2	1						
Gentamicin	8	4	2	1	0.5			
Gentamicin High Level	500							
Linezolid	8	4	2	1				
Moxifloxacin	2	1	0.5	0.25				
Mupirocin	256	1						
Oxacillin	16	8	4	2	1	0.5	0.25	0.125
Penicillin G	8	4	2	1	0.5	0.25	0.125	0.0625
Rifampicin	2	1	0.5	0.625				
Synercid	4	2	1	0.5				
Teicoplanin	16	8	4	2	1	0.5	0.25	0.125
Tigecyclin	1	0.5	0.25	0.125				
Trimethoprim/Sulfamethoxazol	4/76	2/38	1/19	0.5/9.5	0.03/0.6			
Vancomycin	32	16	8	4	2	1	0.5	0.25

Procedure

- Produce bacteria suspension in NaCl (McFarland 0.5)
- Transfer into Mueller-Hinton II broth
- Inoculate MICRONAUT-S test plate
- Incubate for 18-24 hours at 35-37°C
- Measure photometrically and interpret with MICRONAUT software

Shelf-life and storage

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.

International ISO Standard Method

Merlin Micronaut is a broth microdilution system using the international reference methodology (ISO 20776-1). MIC levels are based on EUCAST guidelines where they are available.

Interpretation, Automation and Maltitof

Micronaut microdilution products are enhanced by software with EUCAST levels and expert rules. Automation is available from entry level to full robotics. Bar-coding provides traceability. Integration with Bruker Maltitof is an option.