

Aerococcus spp (LTR79316)

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Organism
Aerococcus spp.

- *A. christensenii*
- *A. urinaehominis*
- *A. sanguinicola*
- *A. viridans*
- *A. urinae*

Clinical

Aerococcus spp. may be found on skin and environmental surfaces. Their clinical significance in mixed cultures is uncertain. They have been associated with bacteremia, endocarditis, meningitis, osteomyelitis and urinary tract infections.

**Usual
susceptibility
pattern**

These organisms are usually susceptible to beta lactams and vancomycin.

Susceptibility to aminoglycosides, clindamycin, tetracyclines and quinolones is variable. High level resistance to penicillin and ceftriaxone has been described in *A. viridans*. Carbapenem resistance has also been reported. *A. urinae* is typically resistant to TMP-SMX. *A. sanguinicola* and *A. viridans* isolates more commonly display resistance to quinolones than *A. urinae*. *A. urinae* is usually susceptible to nitrofurantoin. Susceptibility testing to TMP-SMX is not reliable as it is dependent on the testing medium and urinary folate levels. It is safest to report *Aerococcus spp* as resistant.

**Susceptibility
method**

Disc diffusion or Etest method using Mueller-Hinton agar with 5% sheep blood incubated in 5% CO₂ at 35°C for 20-24 hours. Incubation should be prolonged for 48 hours for slow growing organisms.

For Etest use 1 McFarland suspension in broth.

Aerococcus spp., Continued

Susceptibility reporting

	Blood/Sterile Body Site	Urine	Other	Comments
Amoxicillin		✓		Report same as penicillin
Ceftriaxone	✓		2	Etest method 2 nd line if pen I/R
Ciprofloxacin		2		Etest method 2 nd line if pen or nitro I/R Do not report in patients < 18 y
Nitrofurantoin		✓		Disc diffusion
Penicillin	✓	*	✓	Etest method *Test but do not report
TMP-SMX		R		
Vancomycin	✓		2	Etest method 2 nd line if pen I/R See special consideration

Note

On isolates where susceptibility results are reported, add comment:

“Susceptibility testing for this organism was performed by a non-reference method and/or required modifications to the standard test conditions. Results are probable but not definite.” &2130 &2338

Urine isolates -

Urine isolates of *Aerococcus urinae* should always have susceptibility testing done as per Dr. Solomon. Add the comment:

“This organism is generally susceptible to B-lactams (amoxicillin and penicillin) and nitrofurantoin. *Aerococcus urinae* is resistant to trimethoprim/sulfamethoxazole.” &2136

For other specimen sources - Consult microbiologist regarding the need for susceptibility testing.

Special considerations

<u>Vancomycin:</u>	This organism should be susceptible to this antibiotic. Consult Supervisor if I/R. If I/R, the identification of the organisms and its susceptibility need to be confirmed by repeat testing. If confirmed, consider submitting isolate to a reference laboratory.
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Aerococcus spp., Continued

Interpretation For Etest, report actual MIC result. For interpretation (S, I, or R) report according to the nearest higher doubling dilution (**Appendix 1**).

Use **CLSI** interpretive document for **Aerococcus sp.**

For-nitrofurantoin: Use **CLSI** interpretive document for **Enterococcus spp.**