AUSCAST
AUSTRALIAN COMMITTEE ON ANTIMICROBIAL SUSCEPTIBILITY TESTING
Australian Society for Antimicrobials

Antimicrobials Susceptibility Testing 2026 Breakpoint Tables

Overview of the most important changes

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on behalf of AUSCAST

Introduction

The annual update to clinical breakpoint tables provides an opportunity for laboratories to review antimicrobial susceptibility testing (AST) methodologies and reporting practices. The revision included updates in breakpoints, dosing advice, breakpoints for new antimicrobials and recommendations for interpretative comments. This article summarises key changes likely to be relevant to Australian and New Zealand laboratories. Further technical details and implementation guidance will be available on the AUSCAST section of the ASA website.

Trimethoprim and Trimethoprim/sulfamethoxazole

Following review of discordance between clinical breakpoints and corresponding ECOFF values, breakpoints for trimethoprim and trimethoprim–sulfamethoxazole have been revised for several organism groups. With the historical breakpoints, isolates with acquired resistance mechanisms could occasionally remain within the susceptible category. EUCAST found no clinical or PK/PD evidence supporting the previous higher breakpoints.

Trimethoprim breakpoints are now only available for *E. coli* and *Klebsiella* spp. (other than *K. aerogenes*) in cases of uncomplicated UTI. There are no breakpoints for *Proteus* spp., but the ECOFF (8 mg/L) can be used to exclude acquired resistance mechanisms in uncomplicated UTI.

Updated trimethoprim–sulfamethoxazole breakpoints now align more closely with ECOFF values and affect several organisms including *Enterobacterales*, *Acinetobacter* spp., *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis*, *Aeromonas* spp. and Streptococcus groups A, C and G (see Table 1). This is likely to only impact on a minority of isolates encountered in everyday practice when considering the MIC distributions for trimethoprim–sulfamethoxazole against these species. In contrast, *Serratia* spp. has a higher ECOFF (2 mg/L) than other *Enterobacterales* meaning that wild-type isolates will only be categorised within the "susceptible, increased exposure" category.

Laboratories using VITEK® 2 GN AST cards should note that revised breakpoints for Enterobacterales and *Acinetobacter* spp. fall below the lowest concentration tested on these cards (1 mg/L). Laboratories may consider applying of the 1 mg/L threshold until updated cards become available, and reflex to disk diffusion testing for selected organisms, clinical scenarios, or isolates from sterile sites.

Cefiderocol

For cefiderocol, EUCAST has determined that current clinical data remain insufficient to establish formal clinical breakpoints for *Stenotrophomonas maltophilia*, *Acinetobacter baumanii group* and *Achromobacter xylosoxidans*. Instead, EUCAST provides interpretive commentary and suggested disk diffusion zone diameter interpretative guidance for these species where cefiderocol may have clinical utility.

Laboratories and clinicians should refer to the AUSCAST Guideline document (Issue 49) and EUCAST Version 16.0 breakpoint tables for further detail. Accredited reference method MIC determination in Australia is also not available, and commercial assays have yet to be approved or endorsed by EUCAST.

Carbapenemase-producing organisms

Clinical breakpoints for carbapenems remain largely unchanged in Version 16.0. However, EUCAST now places greater emphasis on reporting carbapenemase detection alongside susceptibility results, particularly for *Enterobacterales*. EUCAST recommends that laboratories include an interpretive warning comment when carbapenemase production is detected. This pragmatic advice is also reflective of the increasingly use of other agents active against carbapenemase-producing isolates.

The suggested wording is: *"If a carbapenemase is detected, the clinical response to treatment with carbapenems may be impaired, even if categorised S or I. Other antimicrobials are preferred, especially for complicated infections. If other antimicrobials are unavailable, carbapenems can be used at high exposure in combination with a second active agent."*

EUCAST has also opened a public consultation regarding future revisions to carbapenem breakpoints (with and without β-lactamase inhibitors). This proposal follows a review incorporating updated ECOFFs and revised $\%T_{>MIC}$ PK/PD targets. These revisions are expected in June 2026.

Staphylococcus spp.

Cefoxitin testing remains the primary determinant of methicillin resistance and therefore β-lactam susceptibility in *S. aureus*. Changes in this update reflect a review of PK/PD data and clinical outcome studies particularly for methicillin-susceptible *S. aureus* (MSSA).

For several intravenous (IV) cephalosporins including cefazolin, cefepime, cefotaxime, ceftriaxone and cefuroxime, EUCAST has also considered the potential clinical implications of the cefazolin inoculum effect (CzIE) in serious infections. The clinical significance of CzIE remains unclear, and there are currently no widely accepted or reproducible methods to detect this in a clinical microbiology laboratory. Where these cephalosporins are reported for MSSA, they should now be categorised as "susceptible, increased exposure".

Cefazolin is a first-line therapy for most invasive MSSA infections, providing similar efficacy to anti-staphylococcal penicillins with a more favourable safety profile. The dosing regimen aligned with the "susceptible, increased exposure" category is 2 g IV 8-hourly, which is consistent with Australian Therapeutic Guidelines and established clinical practice.

For daptomycin, EUCAST now provides a clinical breakpoint only for *S. aureus*, assuming dosing at 4 - 6mg/kg. For other staphylococcal species, the ECOFF should be used to identify isolates with acquired resistance mechanisms. For

Table 1. Comparison of the 2026 and the 2025 trimethoprim–sulfamethoxazole breakpoints. Yellow shading signifies update. Unchanged breakpoints for *S. maltophilia, L. monocytogenes, Pasteurella, C. diptheriae / ulcerans, A. xylosoxidans, Vibrio, B. melitensis, B. pseudomallei.*

	2026				2025			
	MIC (mg/L)		DD (mm)		MIC (mg/L)		DD (mm)	
	S ≤	R >	S ≥	R <	S ≤	R >	S ≥	R <
Enterobacterales	0.5	0.5	15	15	2	4	14	11
Enterobacterales **(*Serratia* spp.)**	0.001	2	50	15	-	-	-	-
Acinetobacter	0.5	0.5	16	16	2	4	14	11
Staphylococcus	0.5	0.5	24	24	2	4	17	14
Streptococcus **A,B,C,D**	0.5	0.5	16	16	1	2	18	15
S. pneumoniae	1	1	15	15	1	2	13	10
H. influenzae	0.5	0.5	23	23	0.5	1	23	20
M. catarrhalis	1	1	15	15	0.5	1	18	15
Aeromonas spp.	1	1	16	16	2	4	19	16

some species of coagulase-negative staphylococci, the ECOFF values are significantly higher than that for *S. aureus* (see Figure 1). See also the update to the EUCAST guidance document.

Streptococcus pneumoniae & Viridans group *streptococci*

Aminopenicillin breakpoints for *S. pneumoniae* causing meningitis and endocarditis have been revised to the ECOFF (S ≤0.06 mg/L; R >0.06 mg/L). As a result, the *S. pneumoniae* flowchart has been updated. Significantly, when an oxacillin disk screening is used, isolates with a zone diameter <20 mm should be reported as resistant to benzylpenicillin, ampicillin IV and amoxicillin IV in endocarditis and meningitis, and to phenoxymethylpenicillin in all infections.

EUCAST has also revised the status of several antibiotic–streptococcal species combinations where emerging but limited clinical evidence exists. For example, first-generation cephalosporins in the treatment of community-acquired pneumonia due to *S. pneumoniae* have been reclassified from "–" (unsuitable) to "IE" (insufficient evidence). Similarly, the status of daptomycin for Viridans group streptococci has changed from "–" to "IE."

Urinary Tract Infections

EUCAST provides different breakpoint distinctions based on antimicrobial formulation and infection type. Version 16.0 further clarifies definitions relating to urinary tract infections, clearly distinguishing between "uncomplicated UTI" (localised infection) and "infections originating from the urinary tract" (systemic infection). These definitions are intended to assist laboratories when applying infection-specific breakpoints.

EUCAST has also introduced breakpoints for gepotidacin, a first-in-class oral triazaacenaphthylene currently under evaluation in Australian and Europe. It has already received approval in the United Kingdom and United States. Breakpoints have been established for uncomplicated UTI caused by: *E. coli*, *S. saprophyticus* and *Enterococcus faecalis*. Once available in Australia and New Zealand, this agent will expand the range of oral treatment options for uncomplicated urinary tract infections.

Conclusion

EUCAST Version 16.0 introduces several targeted updates aimed at improving alignment between clinical breakpoints, ECOFFs and PK/PD data. Additionally, the EUCAST FAQ document has been updated and is available on the website.

While many breakpoints remain unchanged, the revisions may require adjustments to AST interpretation, reporting practices, advice to stewardship teams, and clinician education. Laboratories should review these changes carefully to ensure appropriate implementation within local workflows.

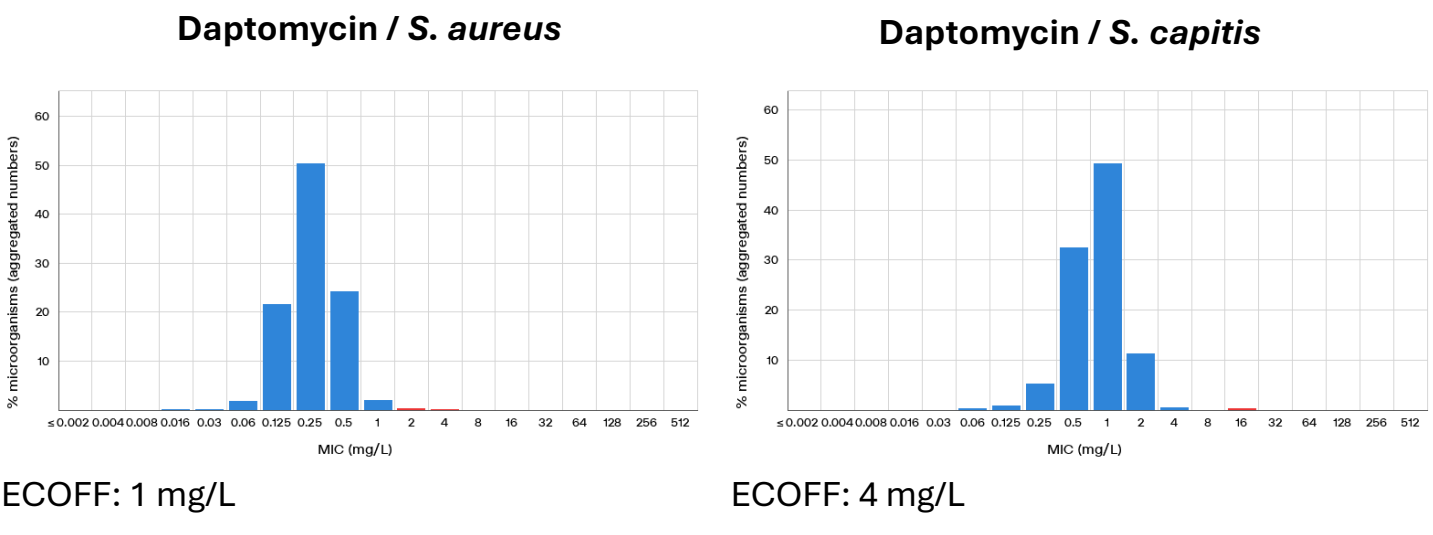


Figure 1 Daptomycin MIC distributions for *S. aureus* and *S. capitis*.



For those laboratories peforming blood culture RAST, note the addition of atreonam-avibactam interpretations for *Enterobacterales* and the revision of trimethoprim-sulfamethoxazole for *A. baumannii* in the latest update.

Additional updates will follow in June 2026. This will include expanded breakpoints for anaerobes, changes in meropenem and ceftazidime-avibvactam breakpoints for *Enterobacterales*, and an update to the resistance screening guidance document.

CLSI Updates M100 version 36

Enterobacterales

Aztreonam-avibactam disk diffusion and MIC breakpoints added. Piperacillin-tazobactam dosing recommendation for prolonged infusion.

Acinetobacter spp.

Revised disk diffusion and MIC breakpoints for aminoglycosides.

Burkholderia cepacia complex

ECVs added in 2025 now removed due to unachievable target attainment with routine dosing against wild type isolates.

Stenotrophomonas maltophilia

Cefiderocol disk diffusion S breakpoint increased from ≥15 to ≥17mm.

Neisseria gonorrhoeae

Disk diffusion breakpoint for ceftriaxone removed (temporarily) and the MIC breakpoint revised.

β-haemolytic *Streptococci*

Trimethoprim-sulfamethoxazole MIC breakpoints added with caveats:

- Do not use MHA + 5% sheep blood as increased thymidine content can lead to false resistant results
- Breakpoints valid only for isolates from skin/soft tissue infections
- No disk diffusion breakpoints

Acknowledgement to Clare Stewart, Senior Scientist at PathWest Laboratory Medicine, Fiona Stanley Hospital.

Information provided as a courtesy to laboratories still using CLSI methods. AUSCAST, as a part of the international EUCAST network, promotes the EUCAST system of susceptibility testing and interpretation in Australia.