

## Guidance document

# EUCAST breakpoints in brackets

1 December, 2021

Recently EUCAST introduced the concept of “breakpoints in brackets” to warn against the use of specific agents without the use of additional therapeutic measures. For these agents, clinical evidence as monotherapy is usually lacking but they may still be used for a specific indication or in combination with another active agent or measure. Breakpoints in brackets are in essence ECOFFs that distinguish between isolates with and without acquired resistance. Because they sometimes serve more than a single species they may represent a “best fit” ECOFF. When in doubt as to the validity of the bracketed breakpoint, go to [www.mic.eucast.org](http://www.mic.eucast.org) to find the precise ECOFF for a specific species.

For these agents, the tradition is to use them in combination with other effective measures, often another active agent, to compensate for the inherent inadequacy of the agent.

On occasion, the agents may be used alone when they are significantly concentrated at the site of infection. For instance, treatment of urinary tract infections with “complicated” bacteria difficult to treat with other agents because of resistance development.

Also on occasion, a country will consider their long tradition and vast experience with an agent permits them to use the agent without additional measure because traditions for use are adapted to avoid the inadequacies of the agent. In such cases the National AST committee (NAC) will inform laboratories of relevant practices.

However, the EUCAST process for evaluating properties and activity of the agents does not permit formal single-agent breakpoints to encourage use of the agent without additional therapeutic measures. This document describes the general concept of placing breakpoints in brackets but does not go into detail for each of the agents – for details, see links below.

Isolates with **resistance** (MIC above or zone diameter below the R-breakpoint in bracket) can be reported R (resistant) but reporting S or I should be avoided and if considered necessary, there should be a comment to explain the need for adjunctive measures as mentioned above.

1. Aminoglycosides ([see guidance document](#))
  - a. *Enterobacterales*
    - i. Amikacin, gentamicin and tobramycin for systemic infections
  - b. *Pseudomonas* spp.
    - i. Amikacin and tobramycin for systemic infections
  - c. *Acinetobacter* spp
    - i. Amikacin, gentamicin and tobramycin for systemic infections
  - d. *Staphylococcus* spp
    - i. Amikacin, gentamicin and tobramycin for systemic infections
2. Colistin ([see guidance document](#))
  - a. *Enterobacterales*
  - b. *Pseudomonas* spp
  - c. *Acinetobacter* spp
3. Clindamycin
  - a. *Bacteroides* spp
 

Many *Bacteroides* species when without resistance mechanisms have clindamycin MIC-values of 1, 2 and 4 and some species even higher MICs. All other species with breakpoints for clindamycin have wild type MIC values and breakpoints on or below 0.5 mg/L (for example staphylococci, streptococci, *S. pneumoniae*).

Most infections with *Bacteroides* involve aerobic and anaerobic bacteria and therapeutic traditions mostly call for combination therapy.
4. *Brucella melitensis* – breakpoints for some agents in brackets – see breakpoint table 14.0 and later.
5. *Bacillus anthracis* – breakpoints for some agents in brackets – see breakpoint table 14.0 and later.