

Vorgehen bei Erregern ohne Spezies-spezifische Breakpoints

Ordensklinikum Linz

Institut für Hygiene, Mikrobiologie und Tropenmedizin, NRZ

Dr. Heidrun Kerschner

Fallbeispiel

- Patient, m, 45 Jahre
- 2 positive Blutkultursets: gramnegative Stäbchen
- Anaerobes Wachstum
- ID mittels Maldi-TOF: *Dialister pneumosintes*
- Klinische Informationen
 - Abszedierende Weichteilinfektion rechter Unterarm
 - i.v. Drogen
 - Schlechter Zahnstatus

Welche Substanzen wie austesten?

- EUCAST clinical breakpoint tables v15.0 bietet Breakpoints für folgende Anaerobier:
 - *Bacteroides spp.*
 - *Prevotella spp.*
 - *Fusobacterium necrophorum*
 - *Clostridium perfringens*
 - *Cutibacterium acnes*
 - *Clostridioides difficile*

Anaerobic bacteria

Expert Rules and Expected Phenotypes

Guidance documents

EUCAST Clinical Breakpoint Tables v. 15.0, valid from 2025-01-01

For abbreviations and explanations of breakpoints, see the Notes sheet

For species not listed below, see EUCAST Guidance Document on how to test and interpret results when there are no breakpoints

When there are no breakpoints in breakpoint tables

What to do when there are no breakpoints in the EUCAST table?

Sometimes breakpoints for a species and/or an agent are lacking in EUCAST tables.

It may be because we have not yet had time to evaluate the agent or the species. Advice on how to deal with these situations is available on the page for [guidance documents](#) (see "When there are no breakpoints").

Do not use breakpoints from other breakpoint setting organisations unless these have been reviewed in modern times.



EUCAST guidance on
When there are no breakpoints in breakpoint tables?
2024-02-29, cefiderocol added September 2024

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In breakpoint tables, there are some species/species groups and antimicrobial agents lacking numerical breakpoints to allow categorical interpretation to S, I or R or a dash to allow the reporting of “resistant” without testing.

- Unterteilung in anaerobe und aerobe Erreger (grampositive und/oder gramnegative Bakterien)
- 20 Substanzen für aerobe Bakterien
- 14 Substanzen für anaerobe Bakterien

What to do when there are no breakpoints?

The isolate has been identified and it is possible to search relevant literature to determine:

- The clinical significance and importance of the species.
- Which agents are relevant to test according to available clinical data (usually case reports).
- Growth characteristics to choose the most appropriate medium for testing (MH, MHF or FAA).



Determine the MIC by the most appropriate method:

- If an MIC cannot be determined, add information to explain why a recommendation cannot be issued.
- If an MIC can be determined, proceed as below.



Compare the MIC to known MIC distributions on <http://mic.eucast.org> or in the literature:

- If the MIC is above the ECOFF (and thus higher than MICs of the wild type distribution), clinical use of the agent should be discouraged (the isolate harbours resistance mechanisms). Add a comment as proposed or report "resistant".
- If the MIC is below or at the ECOFF* or MIC distributions are not available, proceed as below.

*Isolates belonging to the wild type cannot automatically be considered suitable for therapy.



Compare the MIC to the values in the appropriate table in this document

- If MIC is below or equal to the value in the table, clinical use can be considered. However, do not report susceptible, instead add a comment as proposed.
- If MIC is above the value in the table, add a comment to discourage therapy with the agent

Therapiemöglichkeiten lt. Literatur

- Amoxicillin-Clavulansäure
- Meropenem
- Metronidazol
- Clindamycin

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Mit welcher Methode testen?

- ~~Disk diffusion~~ (nur valide, wenn MHK Korrelation für Spezies vorhanden)
- **aerobe Bakterien**
 - Referenzmethode Bouillon-Mikrodilution (MH, MH-F)
- **anaerobe Bakterien**
 - Referenzmethode Agar Dilution (FAA-HB)
- Gradiententests (Achtung: Herstellerangaben validiert für Spezies und AB)

ETEST® auf Brucella Agar

(Dokumente: „Application Guide“ und „Performance, Interpretive Criteria and Quality Control Ranges“)

MHKs wie interpretieren?

MHK in mg/L

Amoxicillin-Clavulansäure	[0,064]
Meropenem	[0,032]
Clindamycin	[0,125]
Metronidazol	[0,5]

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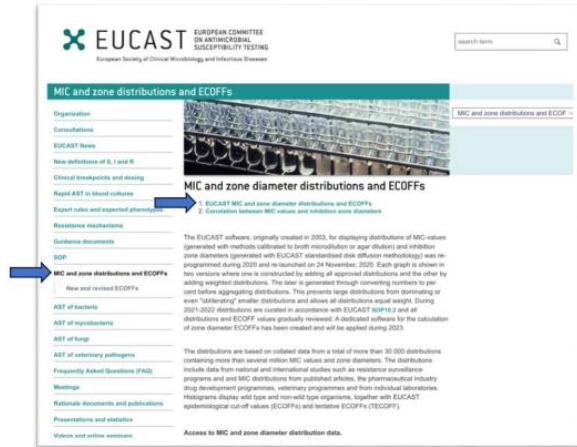
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Vergleich MHK – ECOFF

Addendum “How to identify the wild-type distribution”.

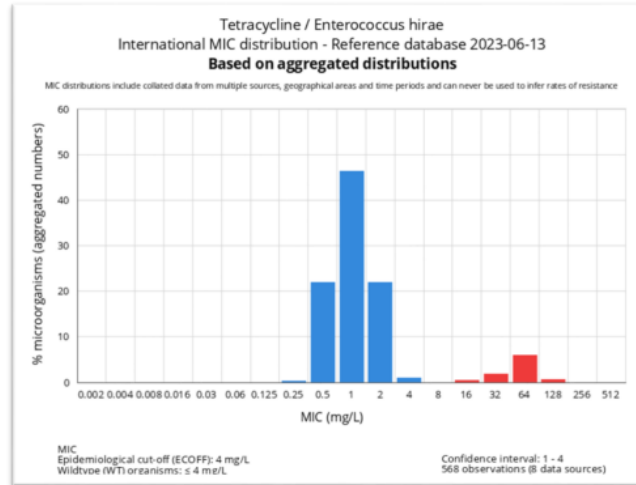
1. Access the EUCAST website (www.eucast.org)
2. Click on “MIC and zone diameter distributions and ECOFFs”.



The screenshot shows the EUCAST website interface. The left sidebar contains a navigation menu with the following items: Organization, Consultations, EUCAST News, New definitions of S, I and R, Clinical breakpoints and dosing, Rapid AST in blood cultures, Expert rules and expanded phenotypes, Resistance mechanisms, Guidance documents, SOP, MIC and zone distributions and ECOFFs (highlighted with a blue arrow), AST of bacteria, AST of yeasts, AST of fungi, AST of respiratory pathogens, Frequently Asked Questions (FAQ), Meetings, Reference documents and publications, Presentations and statistics, and Videos and online seminars. The main content area displays the title 'MIC and zone distributions and ECOFFs' and a sub-section 'MIC and zone diameter distributions and ECOFFs' with a small image of a petri dish.

MIC and zone diameter distributions and ECOFFs

1. EUCAST MIC and zone diameter distributions and ECOFFs
2. Correlation between MIC values and inhibition zone diameters



If the species (or a closely related organism) is not in the list, a useful MIC distribution is not available.

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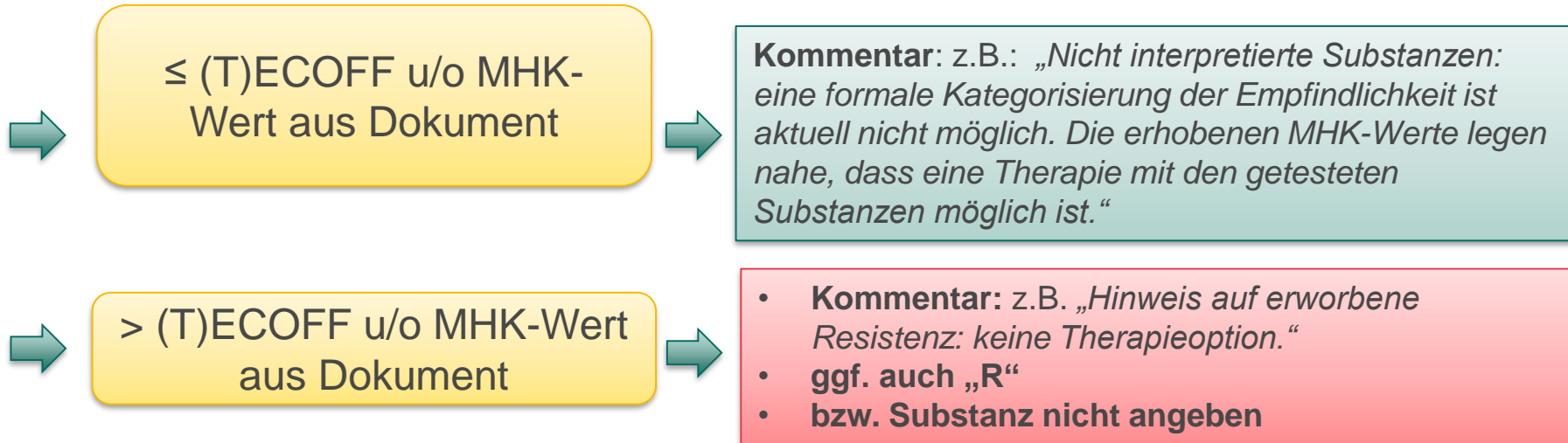
When there are no breakpoints Anaerobe Erreger

Agents and notes for anaerobic bacteria	MIC-values above which therapy with the agent should be discouraged	
Benzylpenicillin	0.5	Breakpoints for anaerobic bacteria in the breakpoint table are 0.06 – 0.5 mg/L. If a beta-lactamase is detected, report resistant without further testing.
Amoxicillin	0.5	Breakpoints for anaerobic bacteria in the breakpoint table are 0.25 – 0.5 mg/L. If a beta-lactamase is detected, report resistant without further testing.
Amoxicillin-clavulanic acid	0.5	Breakpoints for anaerobic bacteria in the breakpoint table are 0.25 – 0.5 mg/L.
Ampicillin-sulbactam	0.5	breakpoints for anaerobic bacteria in the breakpoint table are 0.25 – 0.5 mg/L.
Piperacillin-tazobactam	2	Breakpoints for anaerobic bacteria in the breakpoint table are 0.5 – 2 mg/L.
Meropenem	1	Breakpoints for anaerobic bacteria in the breakpoint table are 0.03 – 1 mg/L.
Imipenem	1	breakpoints for anaerobic bacteria in the breakpoint table are 0.03 – 1 mg/L
Ertapenem	0.25	Breakpoints for anaerobic bacteria in the breakpoint table are 0.06 – 0.5 mg/L
Clindamycin	0.5	Breakpoints for anaerobic bacteria in the breakpoint table are 0.25 mg/L.
Metronidazole	4	Breakpoints for anaerobic bacteria in the breakpoint table are 0.5 - 4 mg/L.
Vancomycin (Gram-positive)	2	Only relevant for a few gram-positive anaerobic bacteria. A breakpoint of 2 mg/L is common for targeted species.
Rifampicin (Gram-positive)	0.125	Breakpoints for species already in the EUCAST breakpoint tables are 0.06 – 0.125 mg/L.
Linezolid (mixed infections)	Pending	Linezolid has been used in the treatment of mixed infections where anaerobic bacteria were considered causative, but rarely for targeted therapy of anaerobic infections.
Moxifloxacin (mixed infections)	Pending	Moxifloxacin has been used in the treatment of mixed infections where anaerobic bacteria were considered causative, but rarely for targeted therapy of anaerobic infections.

MHK in mg/L

Amoxicillin-Clavulansäure	[0,064]
Meropenem	[0,032]
Clindamycin	[0,125]
Metronidazol	[0,5]

What to do when there are no breakpoints?



keine „S“, „I“, („R“) – Bewertung

Fertiger Befund



Ordens
klinikum
Linz

Barmherzige
Schwestern
Elisabethinen

Mikrobiologischer Endbefund (Eingang: 16.08.2025)

Protokoll Nr.: 658247

Material : Blutkultur 2

ERGEBNIS

Kultur

Aerobe Kultur : **kein Wachstum**
Anaerobe Kultur : **Wachstum**
Zeit bis Kultur positiv wurde : **30,1 Stunden**

Mikroskopie

Grampräparat Blutkultur : **gramnegative Stäbchen**

Kultur :

nachgewiesene Keime :

1. **Dialister pneumosintes**

Die erhobenen MHK-Werte legen nahe, dass eine Therapie mit den getesteten Substanzen möglich ist.

Antibiogramm	1
Amoxicillin-Clavulansäure	[0,064]
Meropenem	[0,032]
Clindamycin	[0,125]
Metronidazol	[0,5]

S = Sensibel bei Standardexposition, **I** = Sensibel bei erhöhter Exposition, **R** = Resistent
[] minimale Hemmkonzentration in mg/L

Der Interpretation liegen die empfohlenen Dosierungen gemäß EUCAST zugrunde.