



D20-8804

## OrgTRx Quick Reference Guide – Generating CLSI and EUCAST Antibigrams

The Clinical Laboratory Standards Institute (CLSI) and the European Committee on Antimicrobial Susceptibility Testing (EUCAST) guidelines are the most popular breakpoint guidelines used in antimicrobial susceptibility testing worldwide. To assist OrgTRx users to extract data to create antibigrams, this document provides instructions on how to utilise two work boards; one for data reported using CLSI guidelines, and another for data reported using EUCAST.

### Background Information

CLSI interpretive cut offs for antibiotics is based on minimum inhibitory concentration (MIC) distributions, pharmacokinetic–pharmacodynamic (PK-PD) properties and the mechanisms of resistance. CLSI guidelines (M100) need to be purchased each year in hardcopy (<https://clsi.org/standards/products/microbiology/documents/m100/>) or the current edition can be viewed online at: <https://clsi.org/standards/products/free-resources/access-our-free-resources/> (NB – online versions are unable to be downloaded). A limited number of CLSI rationale documents can be downloaded from <https://clsi.org/meetings/ast/rationale-documents/>.

EUCAST bases its clinical breakpoints on epidemiological MIC cut-offs (ECOFFs) and PK-PD properties. All documents on MIC distributions and ECOFFs are freely available on the EUCAST website at: [https://eucast.org/ast\\_of\\_bacteria/guidance\\_documents/](https://eucast.org/ast_of_bacteria/guidance_documents/).

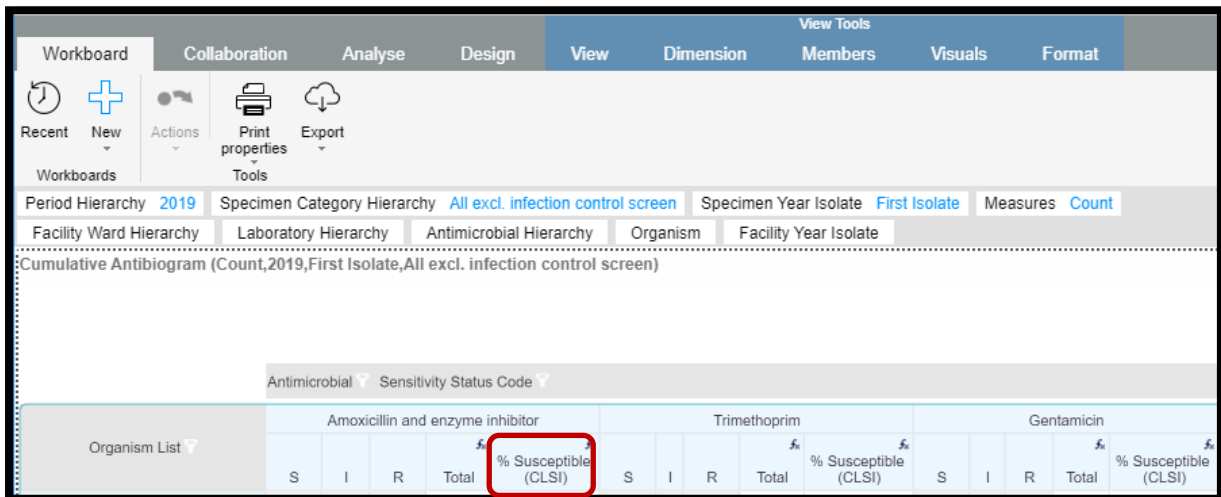
Most laboratories across Australia have either adopted EUCAST guidelines, or are in the process of adopting these guidelines. In 2019, EUCAST introduced the concept of “Susceptible – increased exposure” for agents where the drug exposure can be increased by adjusting the dosing regimen and for which there are clinical data. The letter “I” is currently used to identify this decision, although this will be subject to consultation in 2020.

This change to EUCAST guidelines has implications for the generation of cumulative antibigrams. Pathology services that have implemented EUCAST now need to incorporate both “S” and “I” categories when generating cumulative antibigrams.

**NOTE:** You should only use the EUCAST work board if you test and report using EUCAST guidelines.

## 1 CLSI

The work board below can be accessed via the public work boards and is designed to display % susceptible (CLSI) which only includes the “S” category according to the CLSI guidelines.



Workboard Collaboration Analyse Design View Dimension Members Visuals Format

Recent New Actions Print properties Export

Workboards Tools

Period Hierarchy 2019 Specimen Category Hierarchy All excl. infection control screen Specimen Year Isolate First Isolate Measures Count

Facility Ward Hierarchy Laboratory Hierarchy Antimicrobial Hierarchy Organism Facility Year Isolate

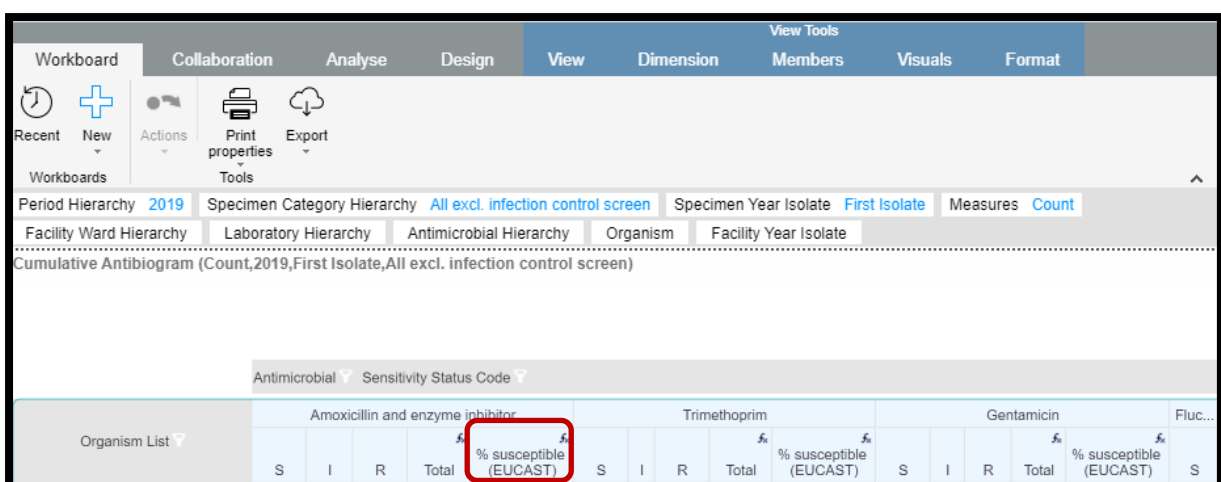
Cumulative Antibiogram (Count,2019,First Isolate,All excl. infection control screen)

Antimicrobial Sensitivity Status Code

Organism List	Amoxicillin and enzyme inhibitor				% Susceptible (CLSI)	Trimethoprim				% Susceptible (CLSI)	Gentamicin				% Susceptible (CLSI)
	S	I	R	Total		S	I	R	Total		S	I	R	Total	

## 2 EUCAST

The work board below can be accessed via the public work boards and is designed to display % susceptible which includes “I” (susceptible – increased exposure) and “S” categories in the % susceptible (EUCAST) column.



Workboard Collaboration Analyse Design View Dimension Members Visuals Format

Recent New Actions Print properties Export

Workboards Tools

Period Hierarchy 2019 Specimen Category Hierarchy All excl. infection control screen Specimen Year Isolate First Isolate Measures Count

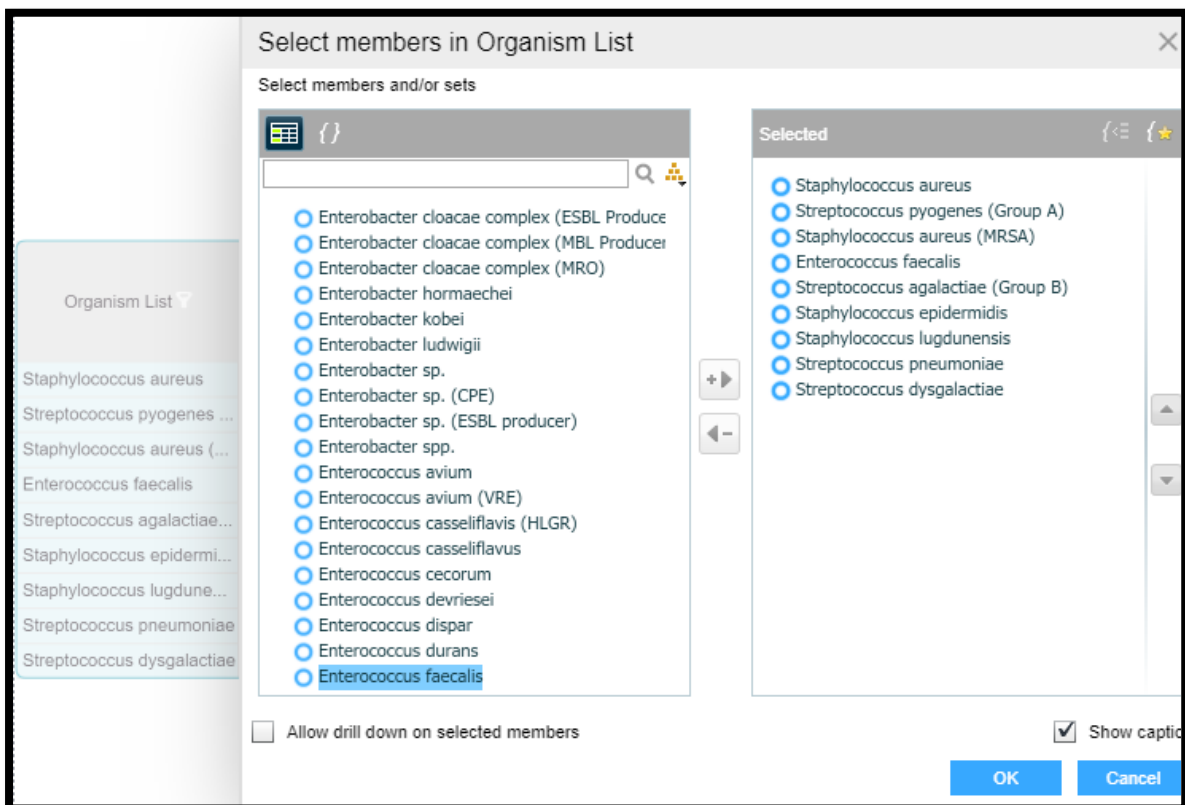
Facility Ward Hierarchy Laboratory Hierarchy Antimicrobial Hierarchy Organism Facility Year Isolate

Cumulative Antibiogram (Count,2019,First Isolate,All excl. infection control screen)

Antimicrobial Sensitivity Status Code

Organism List	Amoxicillin and enzyme inhibitor				% susceptible (EUCAST)	Trimethoprim				% susceptible (EUCAST)	Gentamicin				% susceptible (EUCAST)
	S	I	R	Total		S	I	R	Total		S	I	R	Total	

Both of the work boards have been set up to capture the top 20 organisms ordered by maximum count of antimicrobials and can be customised to suit the needs of users. For example, a work board can be created for gram positive organisms with antimicrobials relevant to those organisms for ease of use and view (see below). You can right click on Organism list and by choosing select members below, you can choose specific organisms of interest.



For guidance on how to select organism and antimicrobials, refer to the OrgTRx User Guide.