EUCAST European Committee on Antimicrobial Susceptibility Testing

Vibrio spp.

Calibration of zone diameter breakpoints to MIC values

Version 1.3
January 2026

Vibrio spp.
MIC and zone diameter correlates

- The following histograms present inhibition zone diameter distributions from EUCAST antimicrobial susceptibility testing. In most, the different colours of the bars indicate different MIC values. In some, the colours of the bars indicate a resistance gene or a resistance mechanism.

- The distributions include data for wild-type isolates and for isolates with acquired resistance mechanisms. A large number of isolates with MIC values close to the edge of the wild-type distribution and/or close to EUCAST clinical breakpoints were intentionally included. These distributions can not be used to infer resistance rates or the performance of the tests with routine isolates.

- For some agents, isolates were tested on more than one occasion, including parallel tests with disks and media from several manufacturers. When this is the case, data are presented as both the “number of isolates tested” and the “total number of MIC-zone diameter correlates”, including replicate tests and parallel tests with disks and media from different sources.

Vibrio spp.
Materials and methods

- Antimicrobial susceptibility testing was performed on an international collection of *Vibrio* species, including *V. alginolyticus* (n=79), *V. cholerae* (n=87), *V. fluvialis* (n=53), *V. parahaemolyticus* (n=77) and *V. vulnificus* (n=75). Disk diffusion was performed according to EUCAST methodology and MIC determination was performed with broth microdilution.

- Note that the breakpoints in this presentation are valid only for *V. alginolyticus*, *V. cholerae*, *V. fluvialis*, *V. parahaemolyticus* and *V. vulnificus.*

- The distributions of MIC vs. zone diameter in this presentation are the result of a collaboration between EUCAST, Centers for Disease Control and Prevention, USA; ICMR - National Institute of Cholera and Enteric Diseases, India; Public Health Agency of Sweden, Sweden; UK Health Security Agency, UK; Norwegian Institute of Public Health, Norway; University of Cádiz, Spain and Finnish Institute for Health and Welfare, Finland.

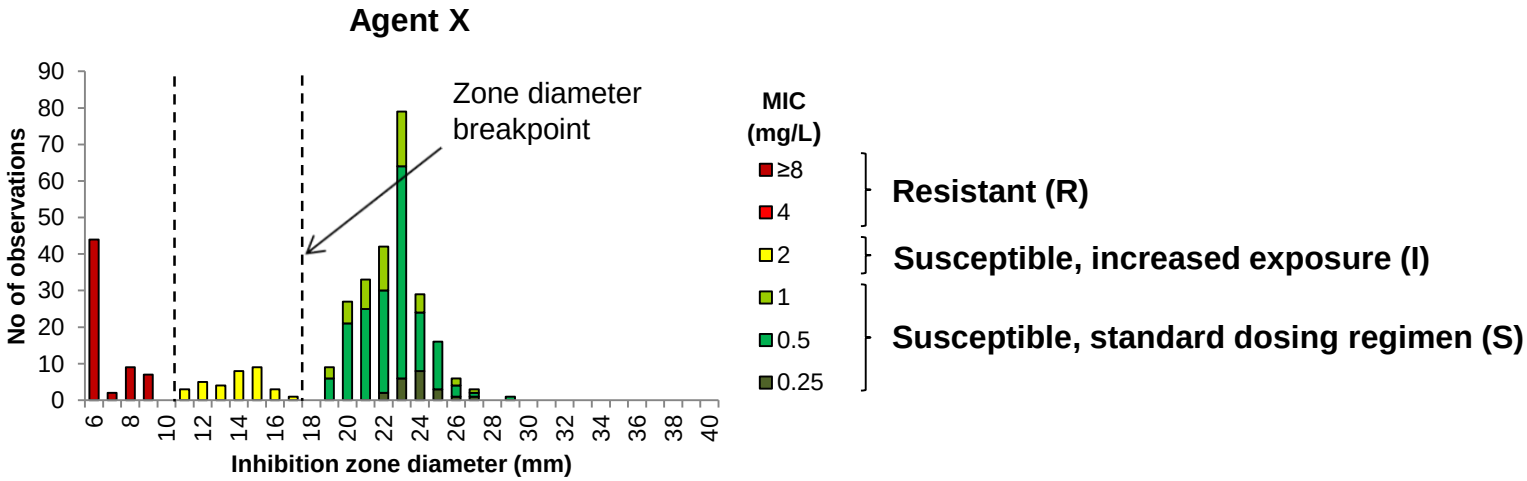
- This presentation is based on EUCAST Clinical Breakpoint Tables v. 16.0.

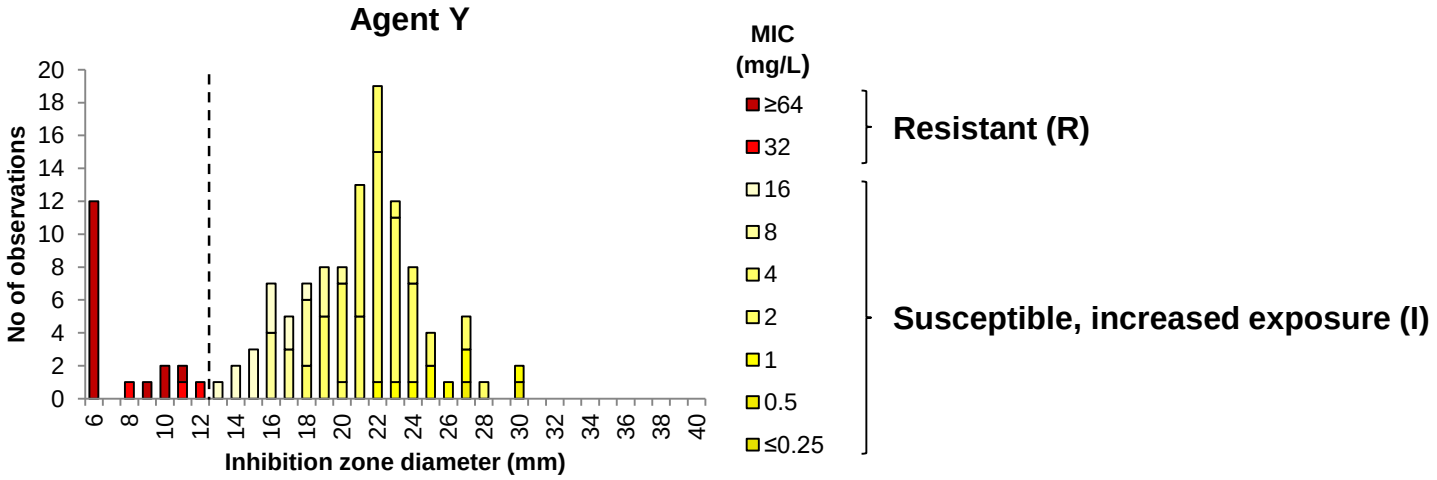
Changes from previous version (1.2)

Changes
• No changes. Breakpoints checked against latest version of EUCAST Clinical Breakpoint Tables.

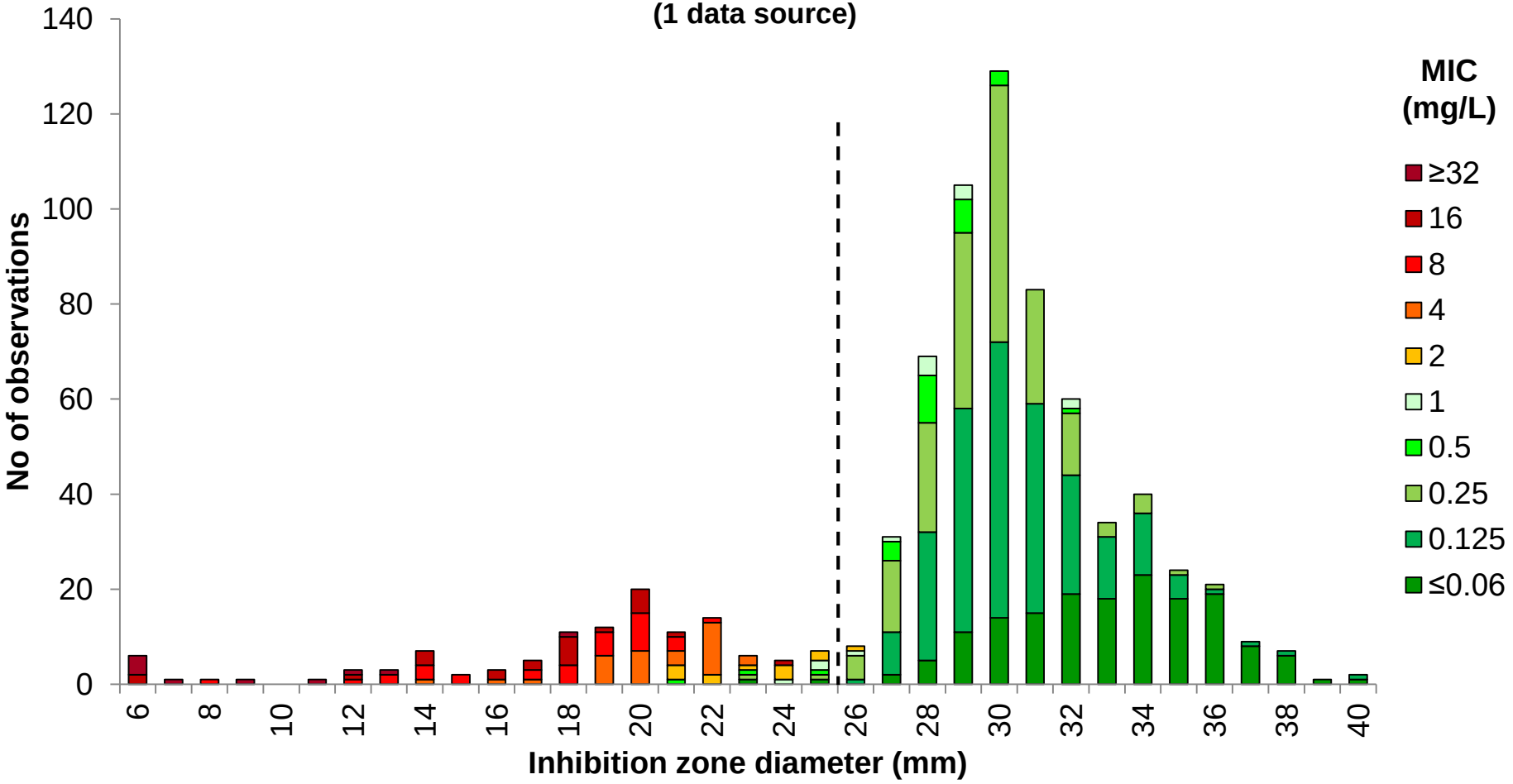
Explanation of graphs:

- These graphs show zone diameter distributions with MIC values or resistance mechanisms as coloured bars. Colours are related to current EUCAST MIC breakpoints.



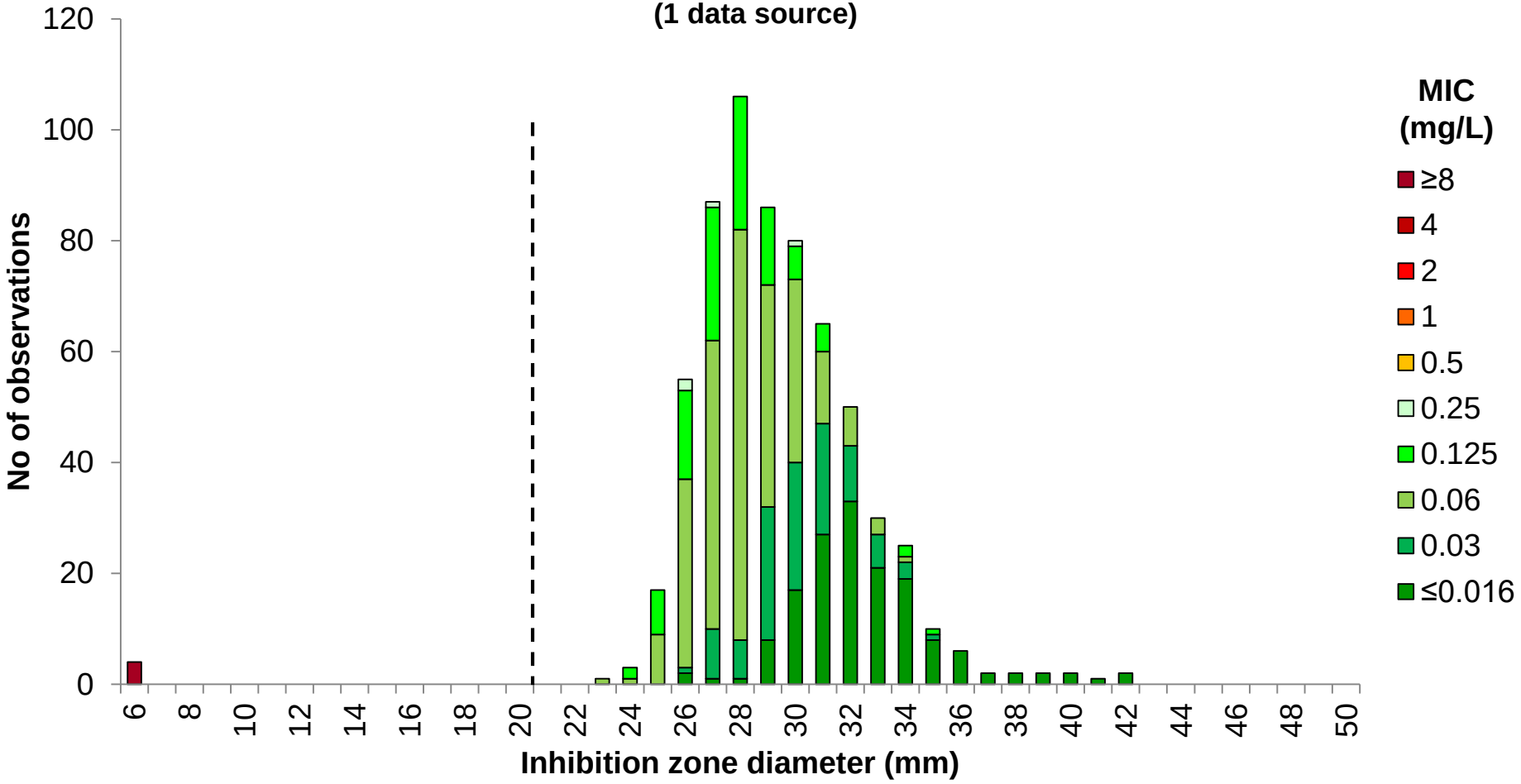


Piperacillin-tazobactam 30-6 µg vs. MIC
Vibrio spp., 371 isolates (742 correlates)



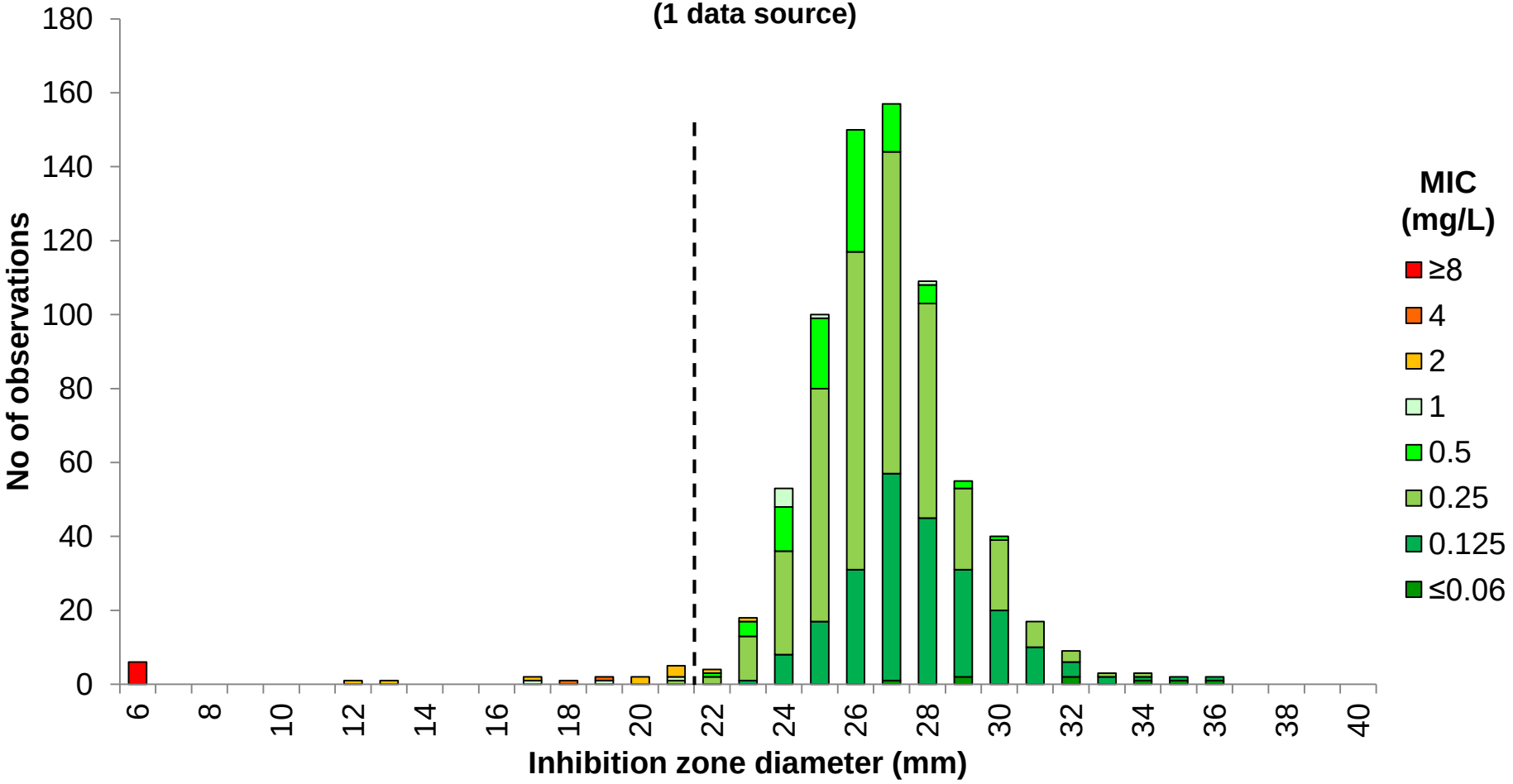
Breakpoints	
MIC	S≤1, R>1 mg/L
Zone diameter	S≥26, R<26 mm

Cefotaxime 5 µg vs. MIC
Vibrio spp., 318 isolates (636 correlates)



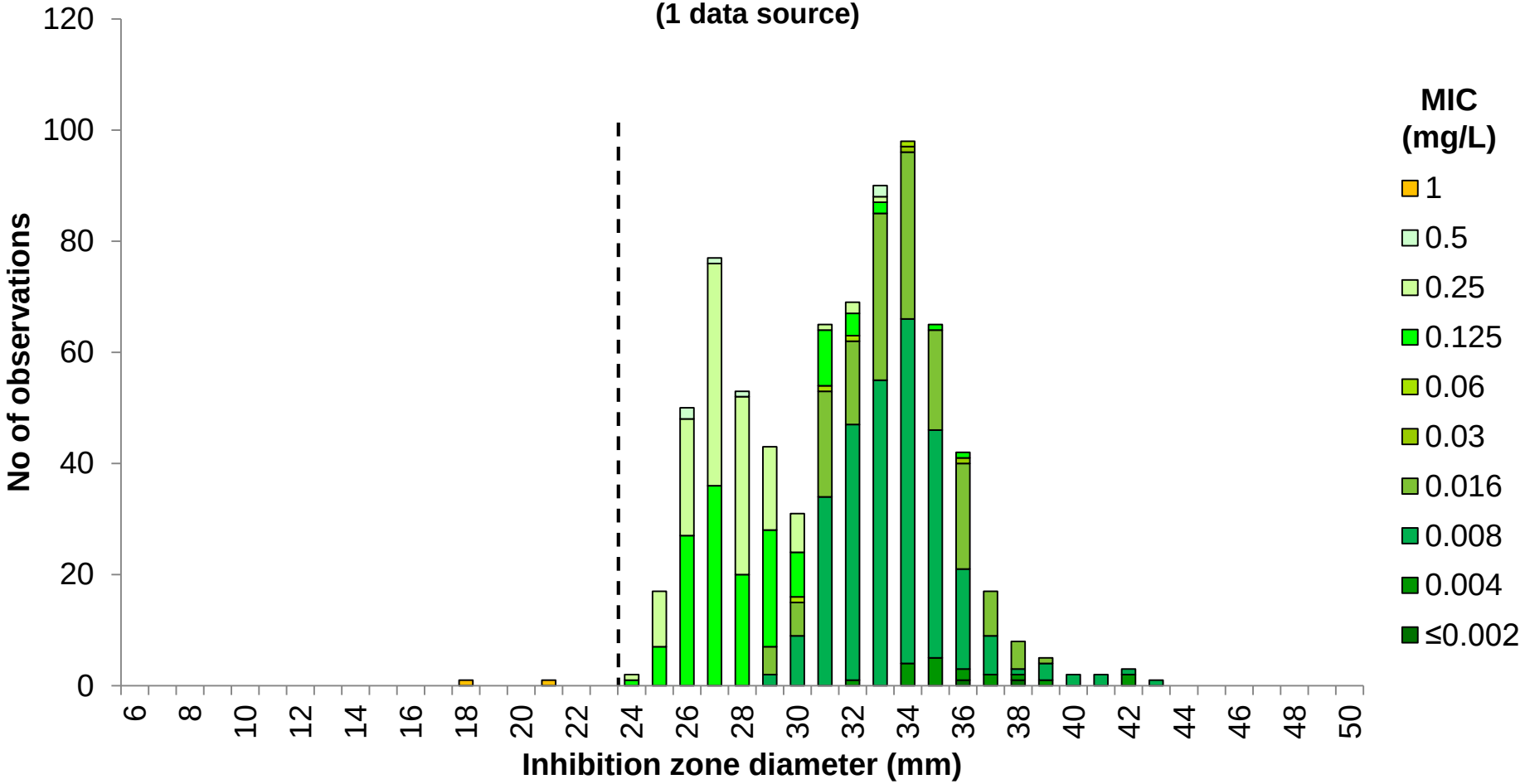
Breakpoints (not *V. fluvialis*)	
MIC	S≤0.25, R>0.25 mg/L
Zone diameter	S≥21, R<21 mm

Ceftazidime 10 µg vs. MIC
Vibrio spp., 371 isolates (742 correlates)



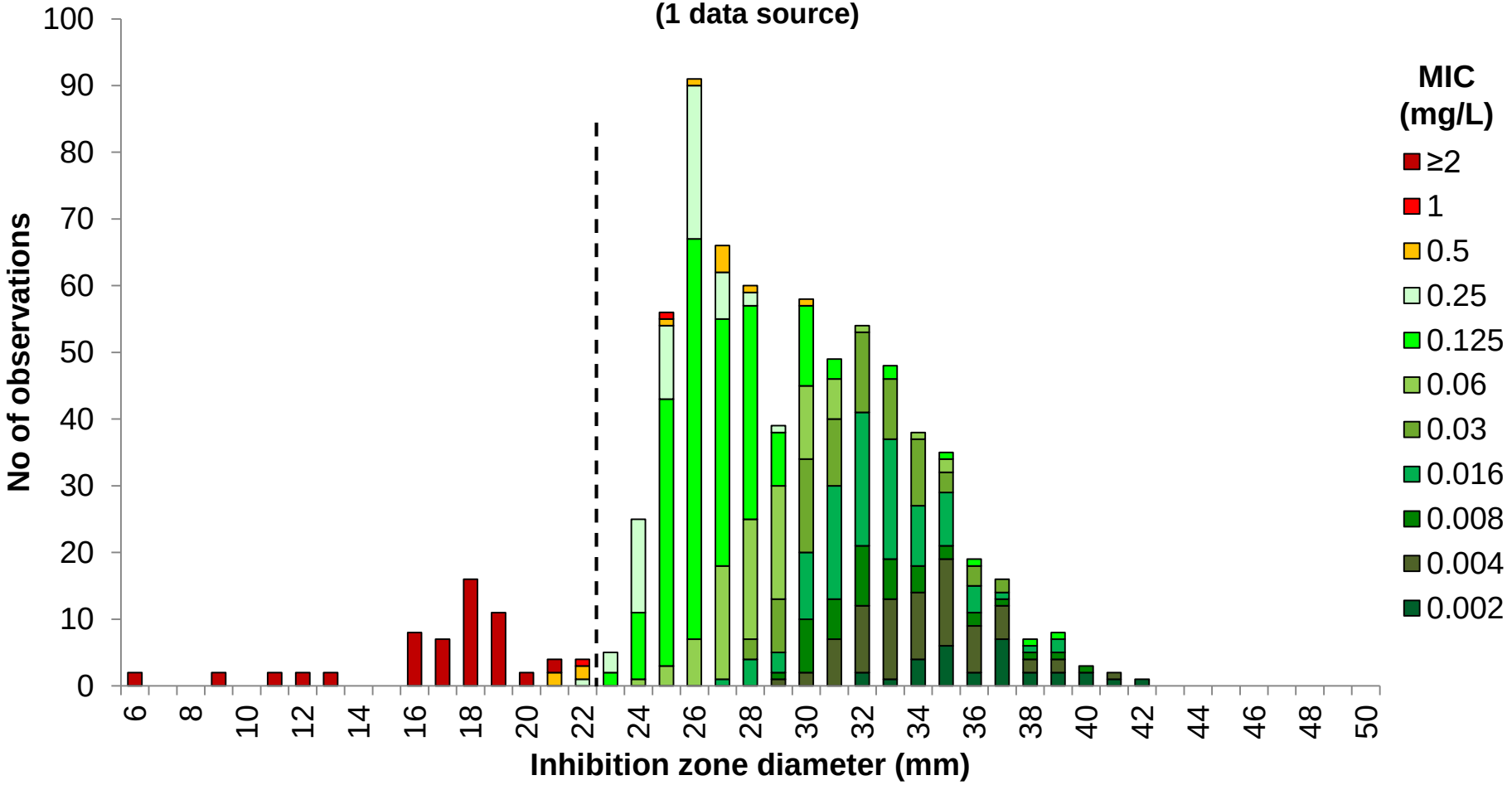
Breakpoints	
MIC	S≤1, R>1 mg/L
Zone diameter	S≥22, R<22 mm

Meropenem 10 µg vs. MIC
Vibrio spp., 371 isolates (742 correlates)



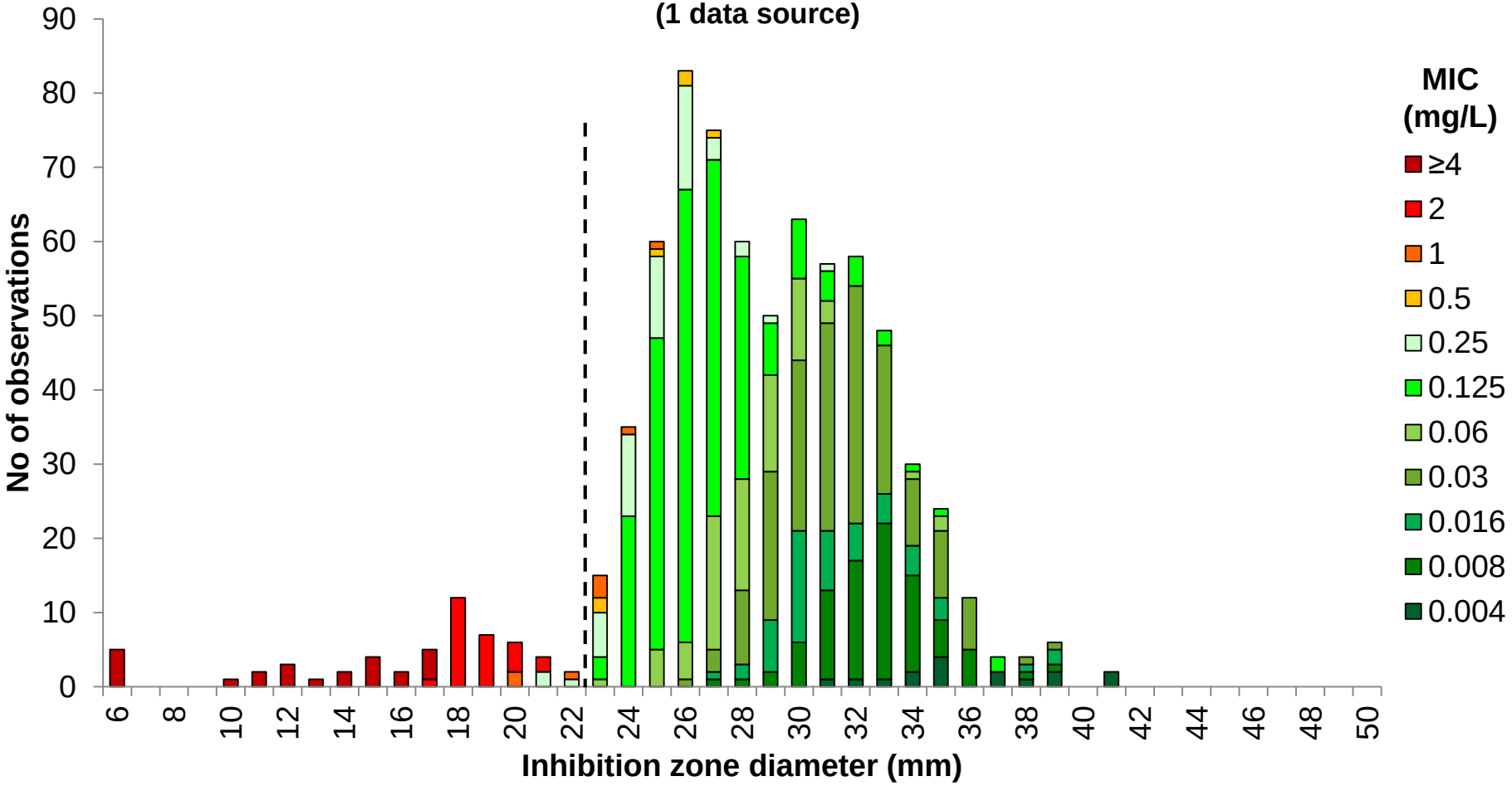
Breakpoints	
MIC	S≤0.5, R>0.5 mg/L
Zone diameter	S≥24, R<24 mm

Ciprofloxacin 5 µg vs. MIC
Vibrio spp., 371 isolates (742 correlates)



Breakpoints	
MIC	S≤0.25, R>0.25 mg/L
Zone diameter	S≥23, R<23 mm

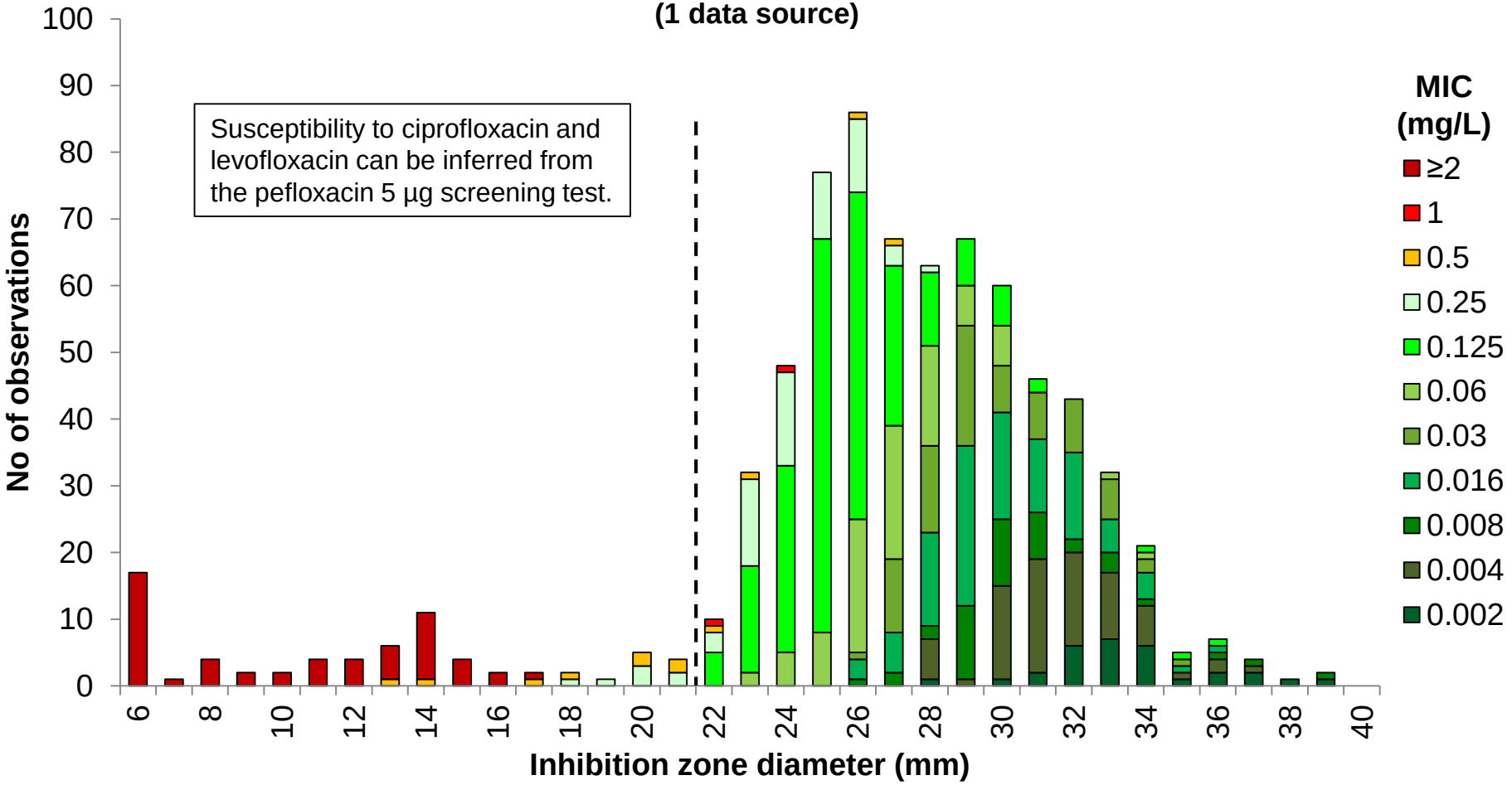
Levofloxacin 5 µg vs. MIC
Vibrio spp., 371 isolates (742 correlates)



Breakpoints	
MIC	S≤0.25, R>0.25 mg/L
Zone diameter	S≥23, R<23 mm

Pefloxacin 5 µg vs. Ciprofloxacin MIC
Vibrio spp., 371 isolates (742 correlates)

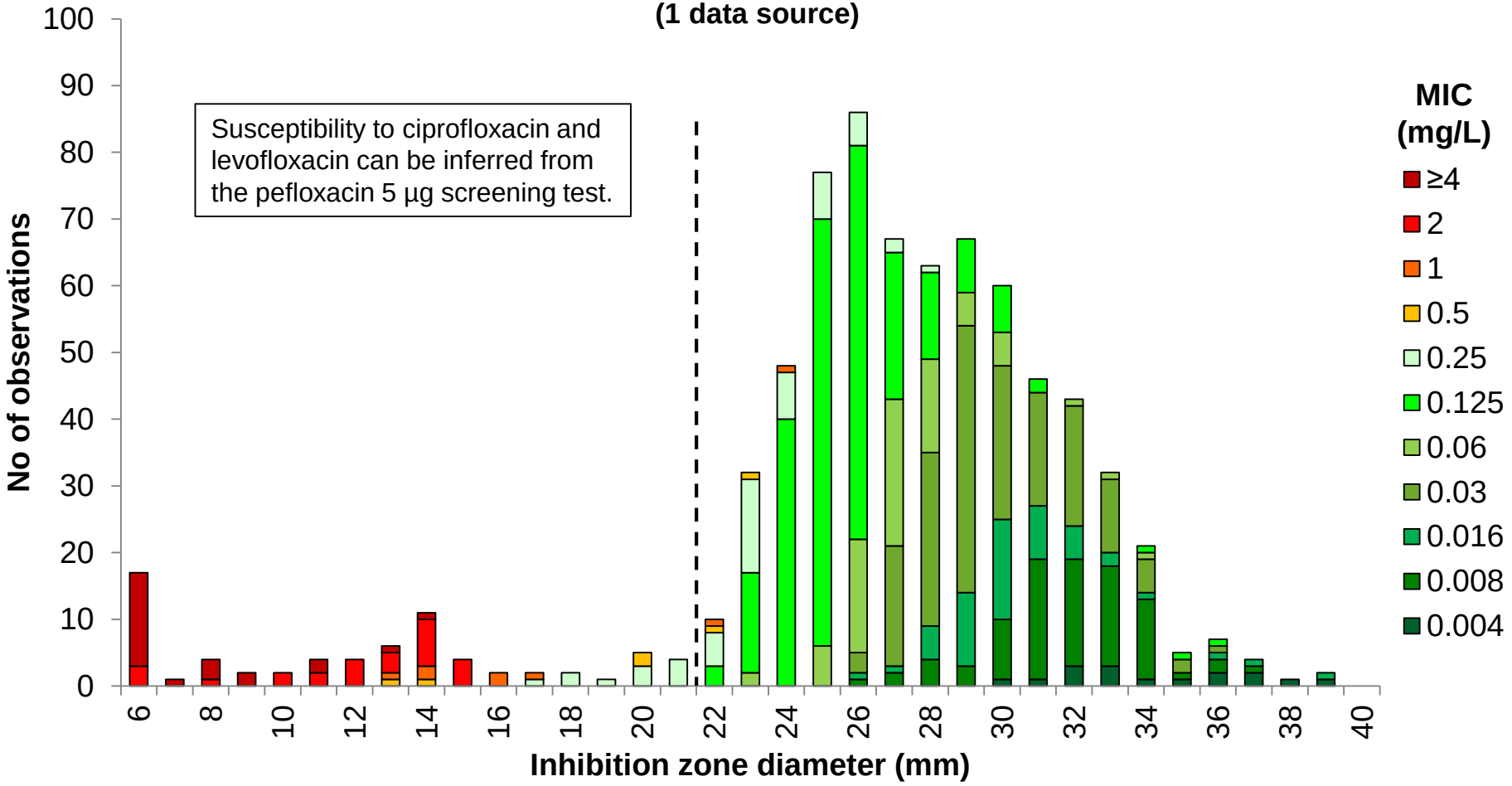
(1 data source)



Breakpoints

Ciprofloxacin MIC	S≤0.25, R>0.25 mg/L
Pefloxacin zone diameter (screen)	S≥22, R<22 mm

Pefloxacin 5 µg vs. Levofloxacin MIC
Vibrio spp., 371 isolates (742 correlates)

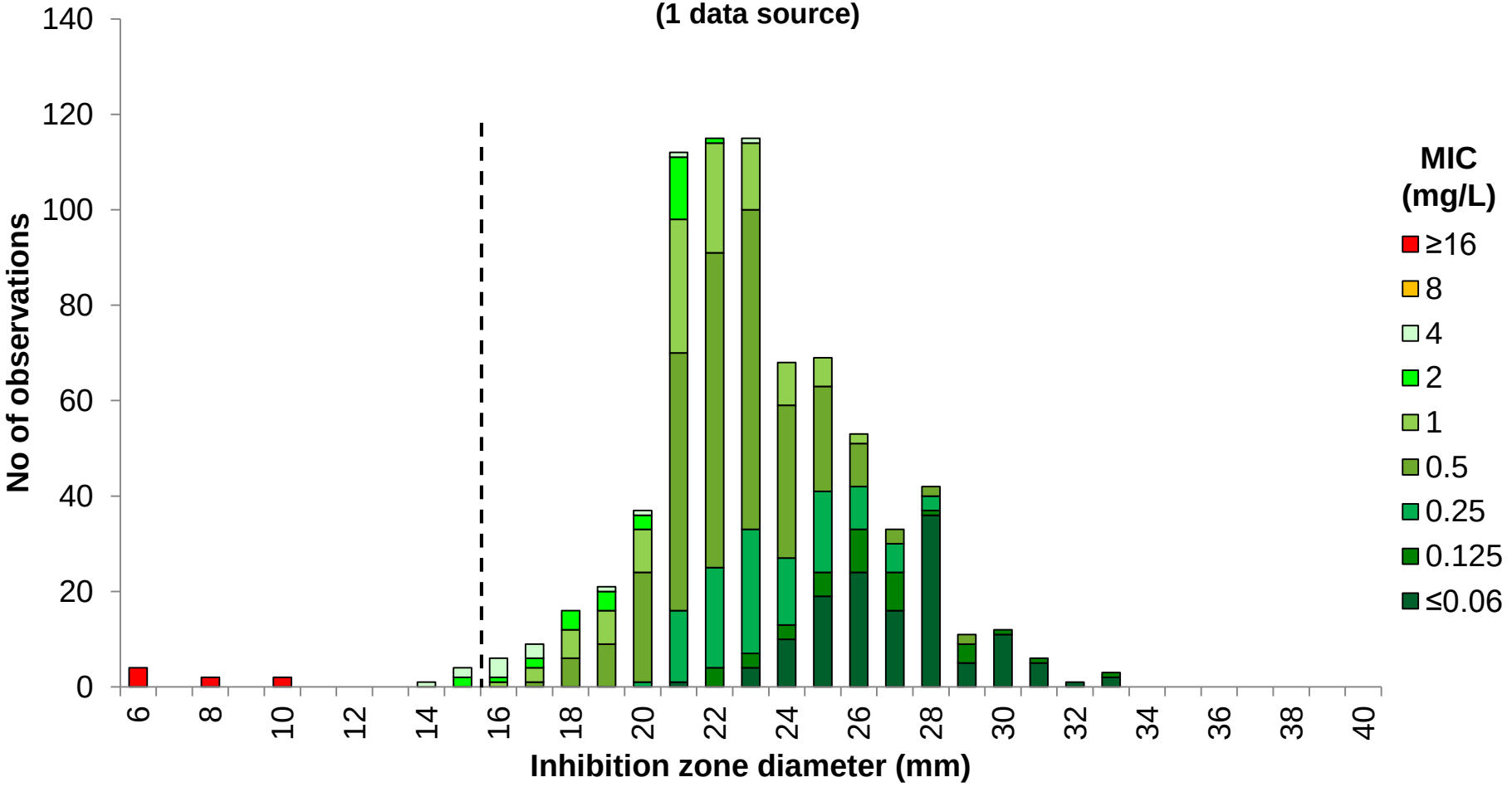


Breakpoints

Levofloxacin MIC	S≤0.25, R>0.25 mg/L
Pefloxacin zone diameter (screen)	S≥22, R<22 mm

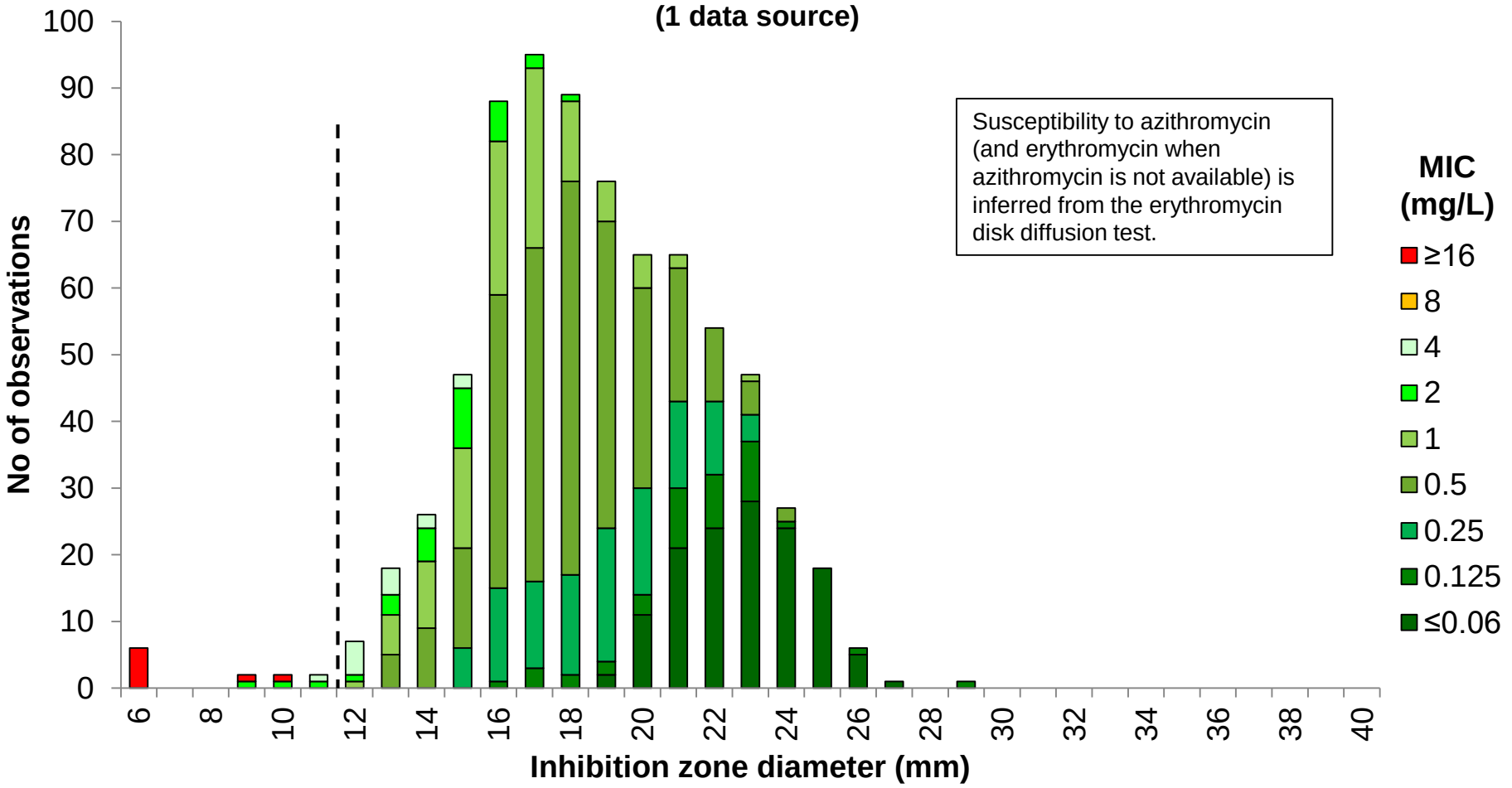
Azithromycin 15 µg vs. MIC
Vibrio spp., 371 isolates (742 correlates)

(1 data source)



Breakpoints	
MIC	S≤4, R>4 mg/L
Zone diameter	S≥16, R<16 mm

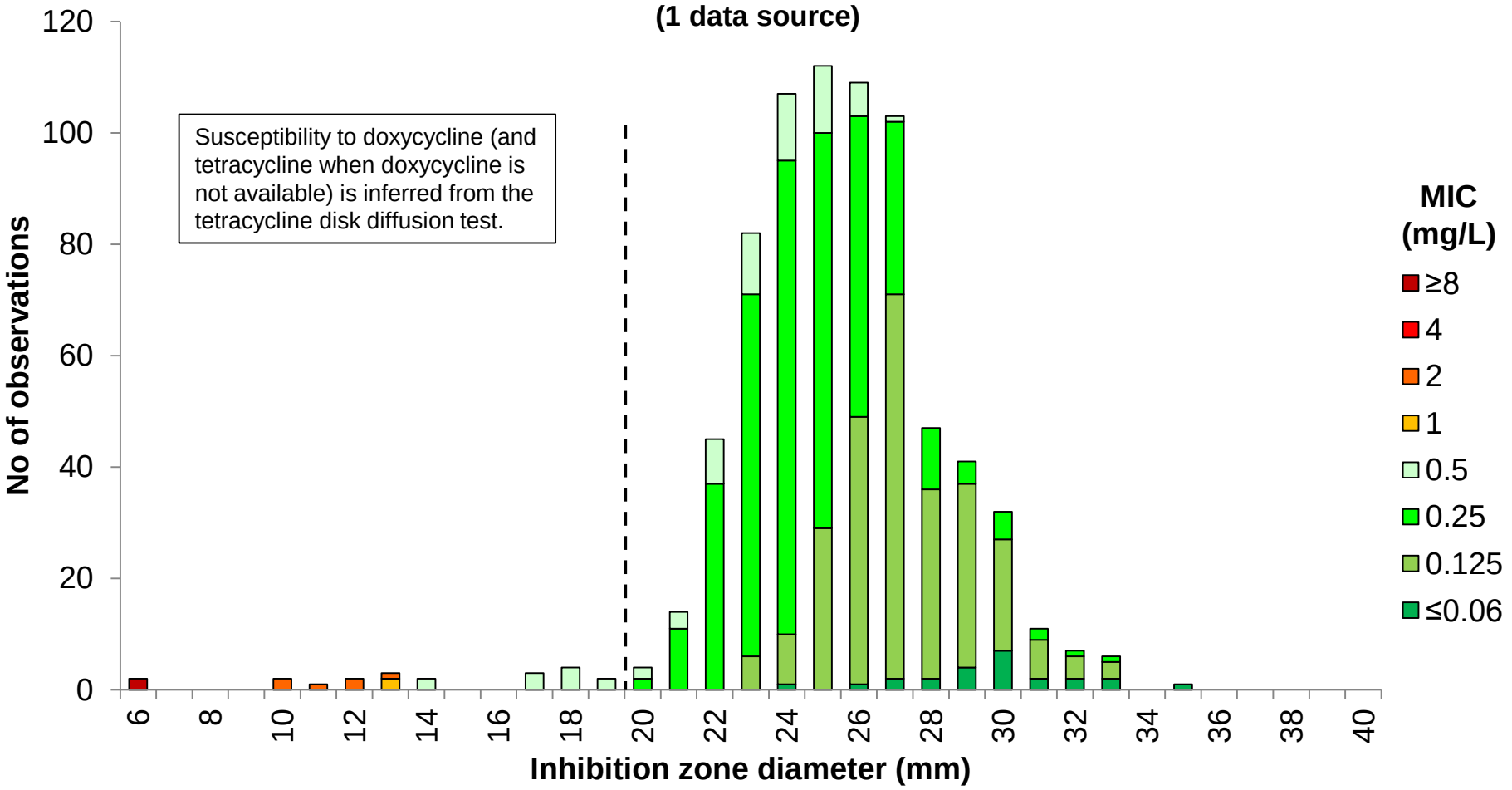
Erythromycin 15 µg vs. Azithromycin MIC
Vibrio spp., 371 isolates (742 correlates)



Breakpoints

Azithromycin MIC	S≤4, R>4 mg/L
Erythromycin zone diameter (screen)	S≥12, R<12 mm

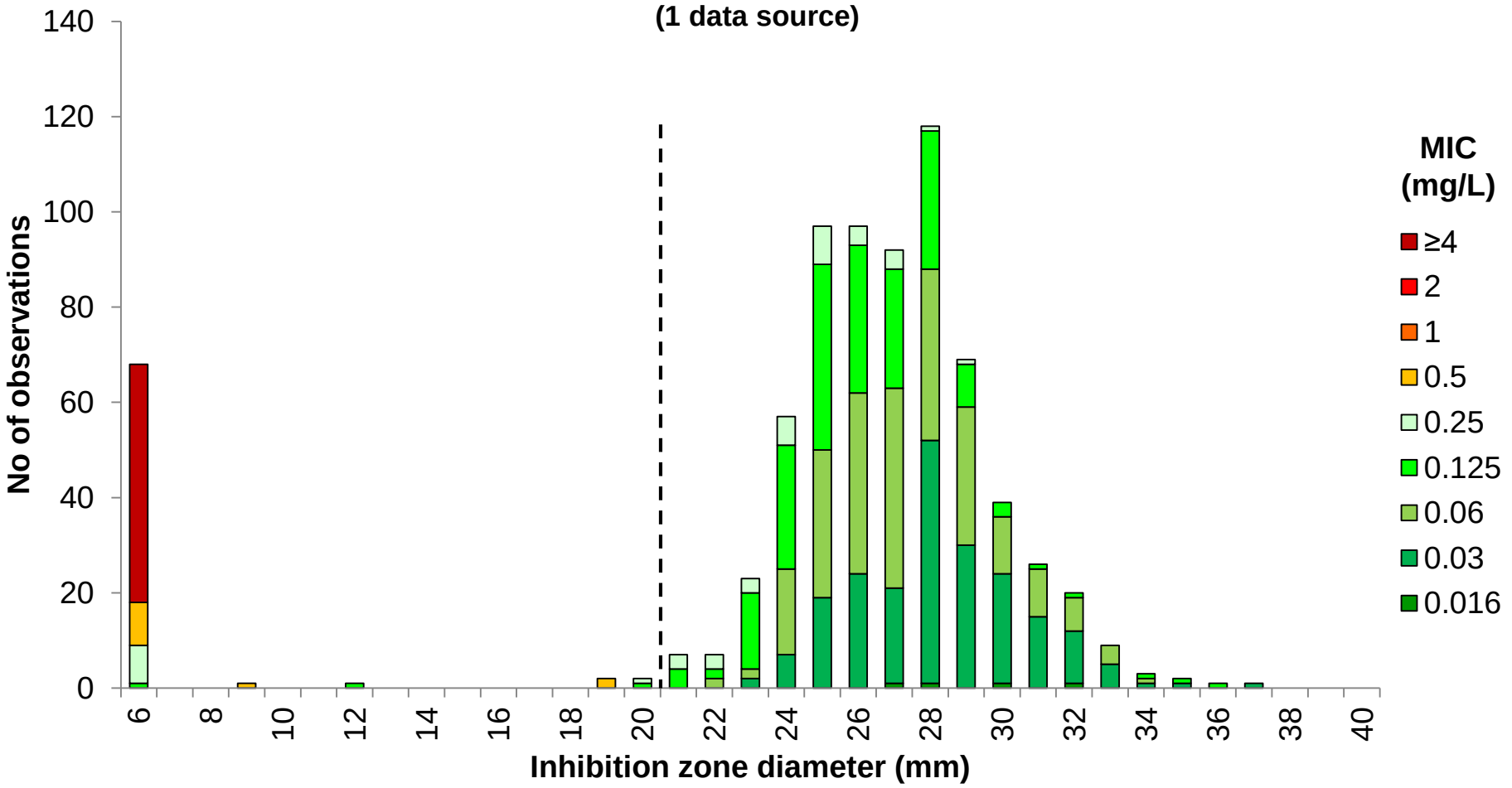
Tetracycline 30 µg vs. Doxycycline MIC
Vibrio spp., 371 isolates (742 correlates)



Breakpoints

Doxycycline MIC	S≤0.5, R>0.5 mg/L
Tetracycline zone diameter (screen)	S≥20, R<20 mm

Trimethoprim-sulfamethoxazole1.25-23.75 µg vs. MIC
Vibrio spp., 371 isolates (742 correlates)



Breakpoints	
MIC	S≤0.25, R>0.25 mg/L
Zone diameter	S≥21, R<21 mm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