

European Subcommittee on Antifungal Susceptibility Testing (EUCAST AFST)

Routine and extended internal quality control for
antifungal susceptibility as recommended by EUCAST

Version 1.0, valid from 2015-11-04

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Notes

1. In EUCAST quality control (QC) tables, both ranges and targets are listed. Repeat testing of EUCAST quality control strains should yield individual MIC values randomly distributed within the recommended ranges. If the number of tests is ≥ 10 , the mode MIC should be the target value.

2. EUCAST quality control strains for routine QC are used to monitor test performance. Control tests should be set up and checked daily, at least for antifungal agents which are part of routine panels.

3. For information about the reference methods for susceptibility testing of yeast and moulds see

http://www.eucast.org/ast_of_fungi/methods_of_antifungal_susceptibility_testing/susceptibility_testing_of_yeasts/ and

http://www.eucast.org/ast_of_fungi/methods_of_antifungal_susceptibility_testing/susceptibility_testing_of_moulds/, respectively.

***Candida krusei* ATCC 6258 ^a**

Antifungal Agent	MIC (mg/L) ^b	
	Target	Range
Amphotericin B	0.25-0.5	0.125-1.0
Anidulafungin	0.03	0.015-0.06
Caspofungin	NA ^c	NA ^c
Fluconazole	32.0	16.0-64.0
Flucytosine	2.0	1.0-4.0
Isavuconazole	0.03	0.015-0.06
Itraconazole	0.06	0.03-0.125
Micafungin	0.06	0.03-0.125
Voriconazole	0.06-0.125	0.03-0.25
Posaconazole	0.03	0.015-0.06

^a ATCC: American Type Culture Collection.

^b *Candida* QC strains requires reading in a spectrophotometer after one day of incubation.

^c Not available

***Candida parapsilosis* ATCC 22019 ^a**

Antifungal Agent	MIC (mg/L) ^b	
	Target	Range
Amphotericin B	0.25-0.5	0.125-1.0
Anidulafungin	0.5	0.25-1.0
Caspofungin	NA ^c	NA ^c
Fluconazole	1.0	0.5-2.0
Flucytosine	0.25	0.125-0.5
Isavuconazole	0.015	0.008-0.03
Itraconazole	0.06	0.03-0.125
Micafungin	1.0	0.5-2.0
Voriconazole	0.03	0.015-0.06
Posaconazole	0.03	0.015-0.06

^a ATCC: American Type Culture Collection.

^b *Candida* QC strains requires reading in a spectrophotometer after one day of incubation.

^c Not available

***Candida albicans* CNM-CL F8555 ^a**

Antifungal Agent	MIC (mg/L) ^b	
	Target	Range
Amphotericin B	0.125-0.25	0.06-0.5
Anidulafungin	NA ^c	NA ^c
Caspofungin	NA ^c	NA ^c
Fluconazole	64.0	32.0-128.0
Flucytosine	0.125	0.06-0.25
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.5	0.25-1.0
Micafungin	NA ^c	NA ^c
Voriconazole	1.0	0.5-2.0
Posaconazole	0.25	0.125-0.5

^a CNM-CL: Yeast collection of the Spanish National Centre of Microbiology. Available from the EUCAST Development Laboratory (EDL) for fungi:

<http://www.eucast.org/organization/developmentlaboratories/>

^b *Candida* QC strains requires reading in a spectrophotometer after one day of incubation.

^c Not available

***Candida krusei* CNM-CL-3403 ^a**

Antifungal Agent	MIC (mg/L) ^b	
	Target	Range
Amphotericin B	0.5	0.25-1.0
Anidulafungin	NA ^c	NA ^c
Caspofungin	NA ^c	NA ^c
Fluconazole	32.0	16.0-64.0
Flucytosine	4.0	2.0-8.0
Isavuconazole	NA ^b	NA ^c
Itraconazole	0.25	0.125-0.5
Micafungin	NA ^c	NA ^c
Voriconazole	0.25	0.125-0.5
Posaconazole	0.125	0.06-0.25

^a CNM-CL: Yeast collection of the Spanish National Centre of Microbiology. Available from the EUCAST Development Laboratory (EDL) for fungi:

<http://www.eucast.org/organization/developmentlaboratories/>

^b *Candida* QC strains requires reading in a spectrophotometer after one day of incubation.

^c Not available

***Aspergillus fumigatus* ATCC 204305 ^a**

Antifungal Agent	MIC (mg/L) ^a	
	Target	Range
Amphotericin B	0.5	0.25-1.0
Caspofungin	NA ^c	NA ^c
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.25	0.125-0.5
Micafungin	NA ^c	NA ^c
Voriconazole	0.5	0.25-1.0
Posaconazole	0.06-0.125	0.03-0.25

^a ATCC: American Type Culture Collection.

^b *Aspergillus* QC strains should be read visually at a no growth inhibition endpoint after 2 days of incubation.

^c Not available

***Aspergillus flavus* ATCC 204304 ^a**

Antifungal Agent	MIC (mg/L) ^b	
	Target	Range
Amphotericin B	1.0	0.5-2.0
Caspofungin	NA ^c	NA ^c
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.25	0.125-0.5
Micafungin	NA ^c	NA ^c
Voriconazole	1.0	0.5-2.0
Posaconazole	0.25	0.125-0.5

^a ATCC: American Type Culture Collection.

^b *Aspergillus* QC strains should be read visually at a no growth inhibition endpoint after 2 days of incubation.

^c Not available

***Aspergillus flavus* CNM-CM-1813 ^a**

Antifungal Agent	MIC (mg/L) ^b	
	Target	Range
Amphotericin B	2.0	1.0-4.0
Caspofungin	NA ^c	NA ^c
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.25	0.125-0.5
Micafungin	NA ^c	NA ^c
Voriconazole	1.0	0.5-2.0
Posaconazole	0.25	0.125-0.5

^a CNM-CM: Spanish National Centre for Microbiology, Filamentous Fungi Culture Collection. Available from the EUCAST Development Laboratory (EDL) for fungi: <http://www.eucast.org/organization/developmentlaboratories/>

^b *Aspergillus* QC strains should be read visually at a no growth inhibition endpoint after 2 days of incubation.

^c Not available