



EUCAST

European Committee
on Antimicrobial
Susceptibility Testing

European Committee on Antimicrobial Susceptibility Testing

Routine and extended internal quality control for MIC
determination and agar dilution for yeasts, moulds and
dermatophytes as recommended by EUCAST

Version 8.0, valid from 2026-01-01

This document should be cited as: "The European Committee on Antimicrobial Susceptibility Testing. Routine and extended internal quality control for MIC determination and agar dilution for yeasts, moulds and dermatophytes as recommended by EUCAST. Version 8.0, 2025. <http://www.eucast.org>."

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Notes

Version 8.0, valid from 2026-01-01

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. Ranges and targets are established by EUCAST.
3. EUCAST quality control strains for routine QC are used to monitor the entire test performance (material, inoculum, incubation, reading etc). At least 2 quality control strains with different target MICs should be tested at regular intervals, or if panels are used irregularly with every panel set up for clinical use or research purposes. Mould QC strains should always be included for antifungal susceptibility testing of mould, specially when using the resistance agar-screening methods (E.Def 10.2).
4. QC ranges are presented both as one summary table and in separate tables for each strain. Both tables contain the same data.
5. For information about the reference methods for susceptibility testing of yeast and moulds see "Methods in antifungal susceptibility testing of yeasts E.Def 7.4", "Methods in antifungal susceptibility testing of moulds E.Def 9.4 and 10.2", and "Methods in antifungal susceptibility testing of dermatophytes E.Def 11.0", respectively.
6. Abbreviations: ATCC: American Type Culture Collection. CNM-CL: Yeast collection of the Spanish National Centre of Microbiology. SSI: Statens Serum Institute. DPL: David Perlin.
7. Strain availability information: The QC strains (except the ATCC strains) are deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where they are available.

Changes from previous version

Version 8.0, valid from 2026-01-01	Changes Cells containing a change or an addition from EUCAST QC Tables v. 7.0 are marked yellow (Format changes are not marked yellow).
7. CNM-CL F8555	Target and range concentrations for fluconazole have been updated.
9. ATCC 64548	A specific sheet for strain <i>Candida albicans</i> ATCC 64548 was missing and has been added.
10. ATCC 64550	A specific sheet for strain <i>Candida albicans</i> ATCC 64550 was missing and has been added.



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Version 8.0, valid from 2026-01-01

Routine quality control

<i>Candida krusei</i> ATCC 6258*
<i>Candida parapsilosis</i> ATCC 22019*
<i>Candida albicans</i> CNM-CL F8555*
<i>Candida krusei</i> CNM-CL 3403*
<i>Candida albicans</i> ATCC 64548
<i>Candida albicans</i> ATCC 64550
<i>Aspergillus fumigatus</i> ATCC 204305
<i>Aspergillus flavus</i> ATCC 204304
<i>Aspergillus flavus</i> CNM-CM 1813*
<i>Aspergillus fumigatus</i> SSI-4524*
<i>Aspergillus fumigatus</i> SSI-5586*
<i>Trichophyton indotineae</i> (prev. <i>Trichophyton interdigitale</i>) SSI-9363*
<i>Trichophyton rubrum</i> SSI-7583*
<i>Aspergillus fumigatus</i> DPL1035 homozygous/SSI-1794*
<i>Aspergillus fumigatus</i> NIH4215* (ATCC MYA-1163)
<i>Aspergillus fumigatus</i> DPL32458*
<i>Aspergillus fumigatus</i> DPL55985**

*The QC strains indicated with an * are available from the Culture Collection University of Gothenburg <https://www.ccug.se/>

**This QC strain is soon available at the Culture Collection University of Gothenburg <https://www.ccug.se/>

European Subcommittee on Antifungal Susceptibility Testing (EUCAST AFST)

**Routine and extended internal quality control for antifungal susceptibility as recommended by EUCAST
Version 8.0, valid from 2026-01-01**

This document should be cited as: "The European Committee on Antimicrobial Susceptibility Testing. Routine and extended internal quality control for MIC determination and agar dilution for yeasts, moulds and dermatophytes as recommended by EUCAST. Version 8.0, 2025. <http://www.eucast.org>."

QC strains	Drug MICs (mg/L)																			
	Amphotericin B		Anidulafungin		Fluconazole		5-FC		Isavuconazole		Itraconazole		Miconazole		Posaconazole		Rezafungin##		Terbinafine	
	Target	Range	Target	Range	Target	Range	Target	Range	Target	Range	Target	Range	Target	Range	Target	Range	Target	Range	Target	Range
<i>Candida krusei</i> ATCC 6258	0.25-0.5	0.125-1	0.03	0.016-0.06	32	16-64	2	1-4	0.03	0.016-0.06	0.06	0.03-0.125	0.06	0.03-0.125	0.03	0.016-0.06	0.008-0.016	0.004-0.03	-	-
<i>Candida parapsilosis</i> ATCC 22019	0.25-0.5	0.125-1	0.5	0.25-1	1	0.5-2	0.25	0.125-0.5	0.016	0.008-0.03	0.06	0.03-0.125	1	0.5-2	0.03	0.016-0.06	0.25-0.5	0.125-1	-	-
<i>Candida albicans</i> CNM-CL F8555	0.125-0.25	0.06-0.5	-	-	32	16-64	0.125	0.06-0.25	-	-	0.5	0.25-1	-	-	0.25	0.125-0.5	0.004	0.002-0.008	-	-
<i>Candida krusei</i> CNM-CL 3403	0.5	0.25-1	-	-	32	16-64	4	2-8	-	-	0.25	0.125-0.5	-	-	0.125	0.06-0.25	0.008-0.016	0.004-0.03	-	-
<i>Candida albicans</i> ATCC 64548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	0.0005-0.002	-	-
<i>Candida albicans</i> ATCC 64550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004	0.002-0.008	-	-
<i>Aspergillus fumigatus</i> ATCC 204305	0.5	0.25-1	-	-	-	-	-	-	-	-	0.25	0.125-0.5	-	-	0.06-0.125	0.03-0.25	-	-	-	-
<i>Aspergillus flavus</i> ATCC 204304	1	0.5-2	-	-	-	-	-	-	-	-	0.25	0.125-0.5	-	-	0.25	0.125-0.5	-	-	0.5	0.25-1
<i>Aspergillus flavus</i> CNM-CM 1813	2	1-4	-	-	-	-	-	-	-	-	0.25	0.125-0.5	-	-	0.25	0.125-0.5	-	-	0.5	0.25-1
<i>Trichophyton indotineae</i> SSI-9363*#	-	-	-	-	-	-	-	-	-	-	[0.06]	[0.03-0.25]	-	-	-	-	-	-	[0.016]	[0.016-0.06]
<i>Trichophyton rubrum</i> SSI-7583*	-	-	-	-	-	-	-	-	-	-	[0.016]	[0.008-0.03]	-	-	-	-	-	-	[0.016]	[0.008-0.03]

* Targets and ranges for *Trichophyton* isolates are tentative hence in brackets. # *T. indotineae* was previously regarded as a variant of *T. interdigitale*

These Rezafungin QC values only apply for rezafungin MICs obtained with Tween-20 supplemented growth medium as specified in the E.Def 7.4 method document.

QC strains	Drug MICs (mg/L)																			
	Voriconazole																			
	Target	Range																		
<i>Candida krusei</i> ATCC 6258	0.06-0.125	0.03-0.25																		
<i>Candida parapsilosis</i> ATCC 22019	0.03	0.016-0.06																		
<i>Candida albicans</i> CNM-CL F8555	1	0.5-2																		
<i>Candida krusei</i> CNM-CL 3403	0.25	0.125-0.5																		
<i>Candida albicans</i> ATCC 64548	-	-																		
<i>Candida albicans</i> ATCC 64550	-	-																		
<i>Aspergillus fumigatus</i> ATCC 204305	0.5	0.25-1																		
<i>Aspergillus flavus</i> ATCC 204304	1	0.5-2																		
<i>Aspergillus flavus</i> CNM-CM 1813	1	0.5-2																		
<i>Trichophyton indotineae</i> SSI-9363*#	[0.25]	[0.125-1]																		
<i>Trichophyton rubrum</i> SSI-7583*	[0.03]	[0.008-0.03]																		

* Targets and ranges for *Trichophyton* isolates are tentative hence in brackets. # *T. indotineae* was previously regarded as a variant of *T. interdigitale*

European Subcommittee on Antifungal Susceptibility Testing (EUCAST AFST)

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E.Def 10.2 Growth scoring and interpretation on azole and echinocandin screening agar plates for EUCAST recommended QC strains (two days of incubation)

Design of 4-well Azole plate:

Isitraconazole (4 mg/L)	Voriconazole (2 mg/L)
Posaconazole (0.5 mg/L)	Growth control (-)

Scores for QC strains on azole agar (48 h):

Aspergillus fumigatus SSI-4524

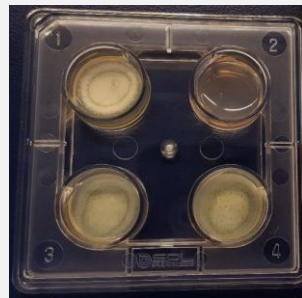
2-3 0.5-2



0-1 3

Aspergillus fumigatus SSI-5586

2-3 0



2-3 3

Score definition Azole agar: 0: no visible growth; 0.5: 1-5 tiny colonies; 1: weak/minimal growth (either as >5 tiny colonies or confluent weak growth where the azole agar has been inoculated (covering ≤ half the well)); 2: clearly visible growth with hyphal extension but not covering the entire well (and less than the control well); 3: un-inhibited prominent growth covering the majority of the well and similar to that in the control well.

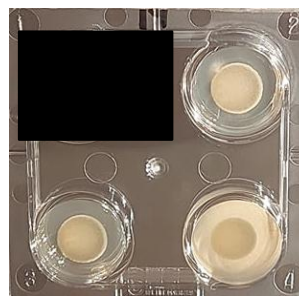
Design of 4-well Echinocandin plate:

	Anidulafungin (0.25 mg/L)
Micafungin (0.125 mg/L)	Growth control (-)

Reading QC strains on echinocandin agar (48 h):

Aspergillus fumigatus ATCC 204305

Disk like*



Disk like* Fluffily radiating hyphae

Aspergillus fumigatus DPL103/SSI-1794

Fluffily radiating hyphae



Fluffily radiating hyphae Fluffily radiating hyphae

*Disk like morphology on echinocandin agar (discrete radiating hyphae but much less than in control well)

Score definition Echinocandin agar: disk like growth on the candin agars versus normal growth with radiating fluffily hyphae on the control agar is an indication of activity and thus susceptibility. In contrast radiating fluffily hyphae extending from the centre growth on the candin agars indicates resistance. (Additional QC strains for echinocandin agar screening are shown in page 17-19.)

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

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 7.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	Target	Range
Amphotericin B	0.25-0.5	0.125-1
Anidulafungin	0.03	0.016-0.06
Caspofungin	NA ^c	NA ^c
Fluconazole	32	16-64
Flucytosine	2	1-4
Isavuconazole	0.03	0.016-0.06
Itraconazole	0.06	0.03-0.125
Micafungin	0.06	0.03-0.125
Posaconazole	0.03	0.016-0.06
Rezafungin ^{###}	0.008-0.016	0.004-0.03
Voriconazole	0.06-0.125	0.03-0.25

^a ATCC: American Type Culture Collection.

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

^c Not available.

^{###} These Rezafungin QC values only apply for rezafungin MICs obtained with Tween-20 supplemented growth medium as specified in the E.Def 7.4 method document.

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

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 7.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	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	0.5-2
Flucytosine	0.25	0.125-0.5
Isavuconazole	0.016	0.008-0.03
Itraconazole	0.06	0.03-0.125
Micafungin	1	0.5-2
Posaconazole	0.03	0.016-0.06
Rezafungin ^{##}	0.25-0.5	0.125-1
Voriconazole	0.03	0.016-0.06

^a ATCC: American Type Culture Collection.

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

^c Not available.

^{##} These Rezafungin QC values only apply for rezafungin MICs obtained with Tween-20 supplemented growth medium as specified in the E.Def 7.4 method document.

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

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 7.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	Target	Range
Amphotericin B	0.125-0.25	0.06-0.5
Anidulafungin	NA ^c	NA ^c
Caspofungin	NA ^c	NA ^c
Fluconazole	32	16-64
Flucytosine	0.125	0.06-0.25
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.5	0.25-1
Micafungin	NA ^c	NA ^c
Posaconazole	0.25	0.125-0.5
Rezafungin ^{##}	0.004	0.002-0.008
Voriconazole	1	0.5-2

^a CNM-CL: Yeast collection of the Spanish National Centre of Microbiology. The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where will be available.

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

^c Not available.

^{##} These Rezafungin QC values only apply for rezafungin MICs obtained with Tween-20 supplemented growth medium as specified in the E.Def 7.4 method document.

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

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 7.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	Target	Range
Amphotericin B	0.5	0.25-1
Anidulafungin	NA ^c	NA ^c
Caspofungin	NA ^c	NA ^c
Fluconazole	32	16-64
Flucytosine	4	2-8
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.25	0.125-0.5
Micafungin	NA ^c	NA ^c
Posaconazole	0.125	0.06-0.25
Rezafungin ^{##}	0.008-0.016	0.004-0.03
Voriconazole	0.25	0.125-0.5

^a CNM-CL: Yeast collection of the Spanish National Centre of Microbiology. The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where will be available.

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

^c Not available.

^{##} These Rezafungin QC values only apply for rezafungin MICs obtained with Tween-20 supplemented growth medium as specified in the E.Def 7.4 method document.

***Candida albicans* ATCC 64548^a**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 7.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	Target	Range
Amphotericin B	-	-
Anidulafungin	-	-
Caspofungin	-	-
Fluconazole	-	-
Flucytosine	-	-
Isavuconazole	-	-
Itraconazole	-	-
Micafungin	-	-
Posaconazole	-	-
Rezafungin ^{##}	0.001	0.0005-0.002
Voriconazole	-	-

^a ATCC: American Type Culture Collection.

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

^c Not available.

^{##} These Rezafungin QC values only apply for rezafungin MICs obtained with Tween-20 supplemented growth medium as specified in the E.Def 7.4 method document.

***Candida albicans* ATCC 64550^a**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 7.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	Target	Range
Amphotericin B	-	-
Anidulafungin	-	-
Caspofungin	-	-
Fluconazole	-	-
Flucytosine	-	-
Isavuconazole	-	-
Itraconazole	-	-
Micafungin	-	-
Posaconazole	-	-
Rezafungin ^{##}	0.004	0.002-0.008
Voriconazole	-	-

^a ATCC: American Type Culture Collection.

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

^c Not available.

^{##} These Rezafungin QC values only apply for rezafungin MICs obtained with Tween-20 supplemented growth medium as specified in the E.Def 7.4 method document.

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

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 9.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	Target	Range
Amphotericin B	0.5	0.25-1
Anidulafungin	NA ^c	NA ^c
Caspofungin	NA ^c	NA ^c
Fluconazole	NA ^c	NA ^c
Flucytosine	NA ^c	NA ^c
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.25	0.125-0.5
Micafungin	NA ^c	NA ^c
Posaconazole	0.06-0.125	0.03-0.25
Rezafungin	NA ^c	NA ^c
Voriconazole	0.5	0.25-1

^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.

See EUCAST E.Def 10.2 for echinocandin screening agar method

QC strain which is a phenotypically wild type for echinocandins

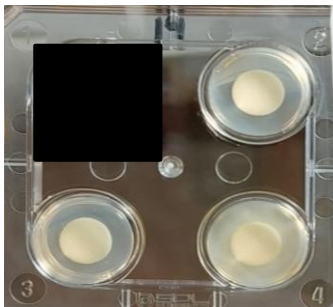
Well 2 anidulafungin (0.25 mg/L), well 3 micafungin (0.125 mg/L), and well 4 drug free control well.

Reading criteria

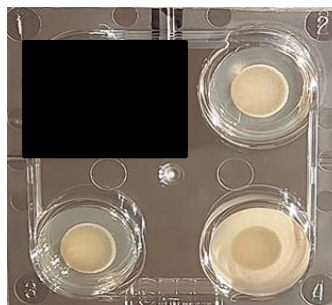
Echinocandin wild-type phenotype:

Aspergillus strains with wild-type phenotype grow with a dense disk like appearance on echinocandin agars without the typical fluffy radiation halo around the main colony found only on drug free agar.

Reverse 24 h



Reverse 48 h



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

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 9.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	Target	Range
Amphotericin B	1	0.5-2
Anidulafungin	NA ^c	NA ^c
Caspofungin	NA ^c	NA ^c
Fluconazole	NA ^c	NA ^c
Flucytosine	NA ^c	NA ^c
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.25	0.125-0.5
Micafungin	NA ^c	NA ^c
Posaconazole	0.25	0.125-0.5
Rezafungin	NA ^c	NA ^c
Terbinafine	0.5	0.25-1
Voriconazole	1	0.5-2

^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**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 9.4 for MIC methodology

Antimicrobial agent	MIC ^b (mg/L)	
	Target	Range
Amphotericin B	2	1-4
Anidulafungin	NA ^c	NA ^c
Caspofungin	NA ^c	NA ^c
Fluconazole	NA ^c	NA ^c
Flucytosine	NA ^c	NA ^c
Isavuconazole	NA ^c	NA ^c
Itraconazole	0.25	0.125-0.5
Micafungin	NA ^c	NA ^c
Posaconazole	0.25	0.125-0.5
Rezafungin	NA ^c	NA ^c
Terbinafine	0.5	0.25-1
Voriconazole	1	0.5-2

^a CNM-CM: Spanish National Centre for Microbiology, Filamentous Fungi Culture Collection. The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where will be available.

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

^c Not available.

QC for EUCAST antifungal testing

***A. fumigatus* SSI-4524^a**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 10.2 for Azole screening test

QC strain harbouring TR34/L98H substitution for quality control of azole-containing agar plates.

Well 1 (itraconazole 4 mg/L), well 2 (voriconazole 2 mg/L), well 3 (posaconazole 0.5 mg/L), and well 4 (drug free control well).

Score definition

0: no visible growth;

0.5: 1-5 tiny colonies;

1: weak/minimal growth (either as >5 tiny colonies or confluent weak growth where the agar has been inoculated (covering \leq half the well));

2: clearly visible growth with hyphal extension but not covering the entire well (and less than the control well);

3: un-inhibited prominent growth covering the majority of the well and similar to that in the control well.

2-3	0.5-2
0-1	3



^a SSI: Statens Serum Institut, Copenhagen, Denmark

The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where it is available.

QC for EUCAST antifungal testing

***A. fumigatus* SSI-5586^a**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 10.2 for azole screening test

QC strain harbouring G54W substitution for quality control of azole-containing agar plates.

Well 1 (itraconazole 4 mg/L), well 2 (voriconazole 2 mg/L), well 3 (posaconazole 0.5 mg/L), and well 4 (drug free control well).

Score definition

0: no visible growth;

0.5: 1-5 tiny colonies;

1: weak/minimal growth (either as >5 tiny colonies or confluent weak growth where the agar has been inoculated (covering \leq half the well));

2: clearly visible growth with hyphal extension but not covering the entire well (and less than the control well);

3: un-inhibited prominent growth covering the majority of the well and similar to that in the control well.

2-3	0
2-3	3



^a SSI: Statens Serum Institut, Copenhagen, Denmark

The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where it is available

***Trichophyton indotineae* (prev. *Trichophyton interdigitale*) SSI-9363^a**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 11.0 for MIC methodology

Antimicrobial agent	MIC (mg/L)	
	Target	Range
Amorolfine	(0.125-0.25)	(0.03-0.25)
Amphotericin B	NA ^b	NA ^b
Anidulafungin	NA ^b	NA ^b
Caspofungin	NA ^b	NA ^b
Fluconazole	NA ^b	NA ^b
Flucytosine	NA ^b	NA ^b
Isavuconazole	NA ^b	NA ^b
Itraconazole	0.06	(0.03-0.25)
Micafungin	NA ^b	NA ^b
Posaconazole	NA ^b	NA ^b
Rezafungin	NA ^b	NA ^b
Terbinafine	(0.016)	(0.016-0.06)
Voriconazole	(0.25)	(0.125-1)

^a SSI: Statens Serum Institut, Copenhagen, Denmark. The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where it is available.

^b Not available.

Values indicated in brackets () are tentative

***Trichophyton rubrum* SSI-7583^a**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 11.0 for MIC methodology

Antimicrobial agent	MIC (mg/L)	
	Target	Range
Amorolfine	(0.125)	(0.03-0.125)
Amphotericin B	NA ^b	NA ^b
Anidulafungin	NA ^b	NA ^b
Caspofungin	NA ^b	NA ^b
Fluconazole	NA ^b	NA ^b
Flucytosine	NA ^b	NA ^b
Isavuconazole	NA ^b	NA ^b
Itraconazole	(0.016)	(0.008-0.03)
Micafungin	NA ^b	NA ^b
Posaconazole	NA ^b	NA ^b
Rezafungin	NA ^b	NA ^b
Terbinafine	(0.016)	(0.008-0.03)
Voriconazole	(0.03)	(0.008-0.03)

^a SSI: Statens Serum Institut, Copenhagen, Denmark. The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where it is available.

^b Not available.

Values indicated in brackets () are tentative

***A. fumigatus* NIH4215^a**

Also known as: ATCC MYA-1163

Version 8.0, valid from 2026-01-01

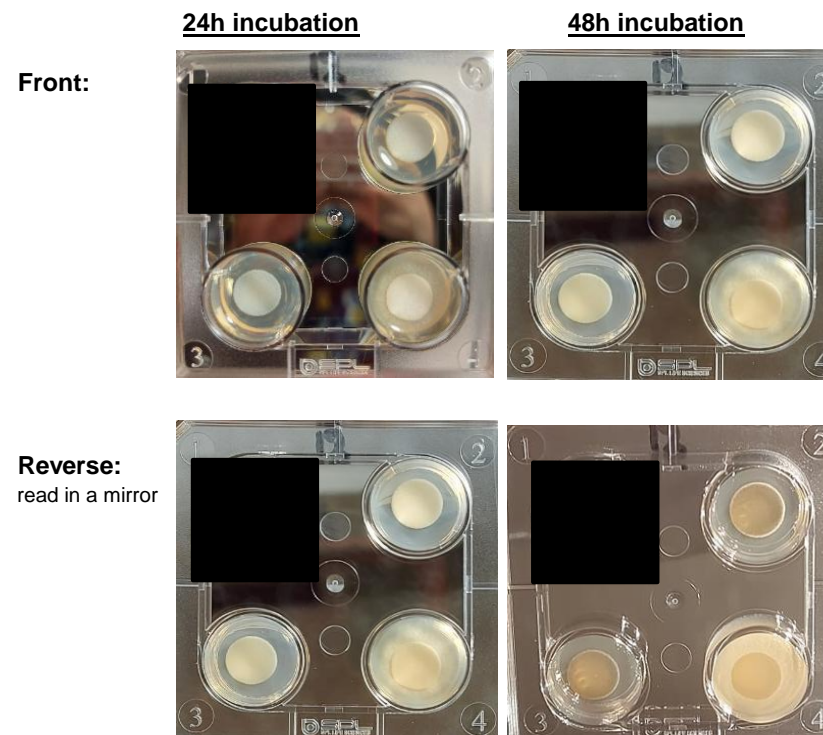
See EUCAST E.Def 10.2 for echinocandin screening test

QC strain which is a phenotypically wild type for echinocandins

Well 2 anidulafungin (0.25 mg/L), well 3 micafungin (0.125 mg/L), and well 4 drug free control well.

Echinocandin wild-type phenotype:

Aspergillus strains with wild-type phenotype grow with a dense disk like appearance on echinocandin agars without the typical fluffy radiation halo around the main colony found only on drug free agar.



^a The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where it is available

***A. fumigatus* DPL1035 (homozygous) ^a**

Also known as: SSI-1794

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 10.2 for echinocandin screening test

QC strain harbouring a substitution for quality control of echinocandin-containing agar plates. The strain is laboratory engineered and derives from David Perlin's laboratory. Well 2 anidulafungin (0.25 mg/L), well 3 micafungin (0.125 mg/L), and well 4 drug free control well.

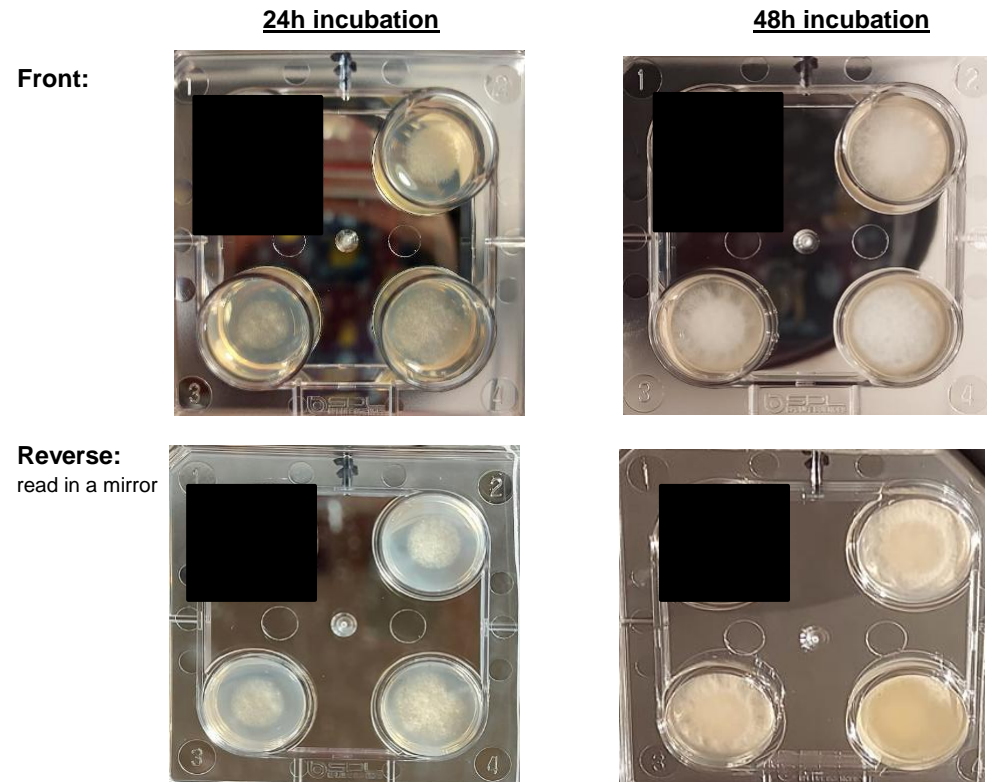
Reading criteria

Echinocandin non wild-type phenotype with anidulafungin and micafungin EUCAST MEC 16 and 4 mg/L, respectively:

The candid strain with non wild-type phenotype produce the fluffy radiating ring both on drug free and drug containing agars after 48h incubation. Similar growth between drug-free and drug-containing wells is observed after 24h.

For comparison to a wild type Echinocandin S strain (see QC ATCC MYA-1163 and QC ATCC 204305):

Aspergillus wildtype strains grow with a dense disk like appearance on candidin agars without the typical fluffy radiation halo around the main colony found only on drug free agar.



^a SSI: Statens Serum Institut, Copenhagen, Denmark

^a The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where it is available

QC for EUCAST antifungal testing

***A. fumigatus* DPL32458^a**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 10.2 for echinocandin screening test

Strain deriving from a patient failing echinocandin therapy. Suitable as a QC strain for echinocandin-containing agar plates. The strain derives from David Denning's laboratory.

Well 2 anidulafungin (0.25 mg/L), well 3 micafungin (0.125 mg/L), and well 4 drug free control well.

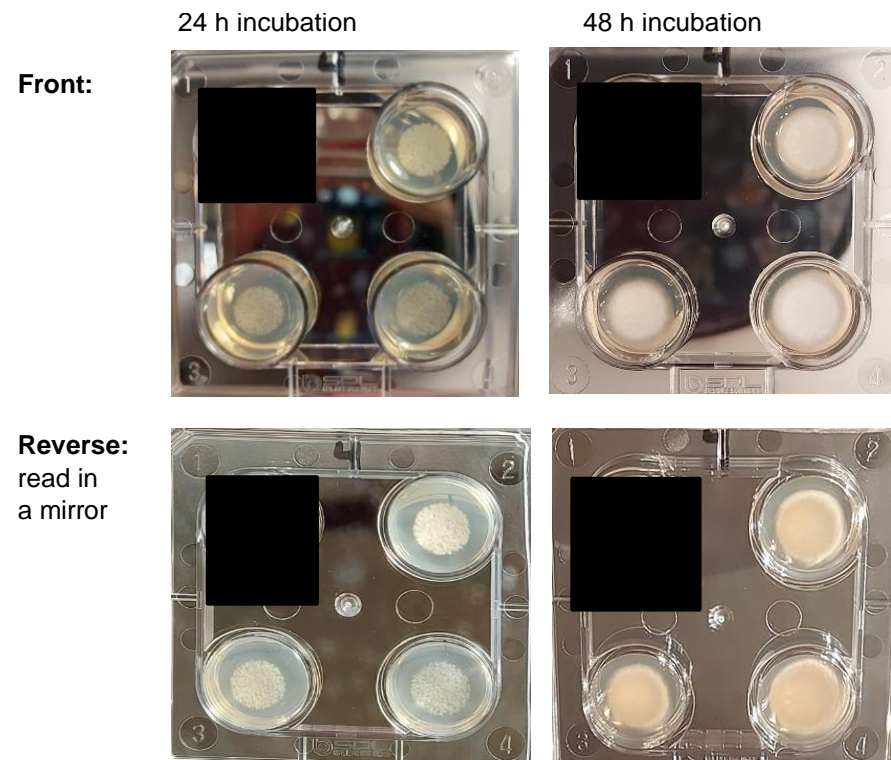
Reading criteria

Echinocandin non wild-type phenotype with anidulafungin and micafungin EUCAST MEC 16 and 8 mg/L, respectively:

The candid strain with non wild-type phenotype produce the fluffy radiating ring both on drug free and drug containing agars after 48h incubation. Similar growth between drug-free and drug-containing wells is observed after 24h.

For comparison to a wild type Echinocandin S strain (see QC ATCC MYA-1163 and QC ATCC 204305):

Aspergillus WT strains grow with a dense disk like appearance on candid agars without the typical fluffy radiation halo around the main colony found only on drug free agar.



^a The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where it is available

QC for EUCAST antifungal testing

***A. fumigatus* DPL55985^a**

Version 8.0, valid from 2026-01-01

See EUCAST E.Def 10.2 for echinocandin screening test

Echinocandin resistant laboratory selected strain. Suitable as a QC strain for echinocandin-containing agar plates. The strain derives from David Perlin's laboratory.

Well 2 anidulafungin (0.25 mg/L), well 3 micafungin (0.125 mg/L), and well 4 drug free control well.

Reading criteria

Echinocandin non wild-type phenotype (anidulafungin and micafungin EUCAST MEC 4 and 8 mg/L, respectively)
The strain produce a comparable fluffy radiating ring both on drug free and drug containing agars after 48h incubation. Similar colony morphology comparing drug-free and drug-containing wells is also observed after 24h.

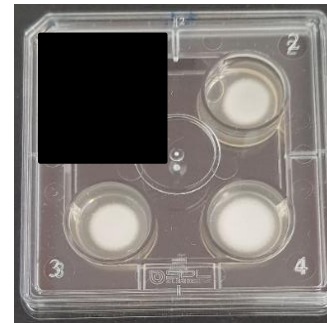
For comparison to a wild type Echinocandin S strain (see QC ATCC MYA-1163 and QC ATCC 204305):

Aspergillus wildtype strains grow with a dense disk like appearance on candidin agars without the typical fluffy radiation halo around the main colony found only on drug free agar.

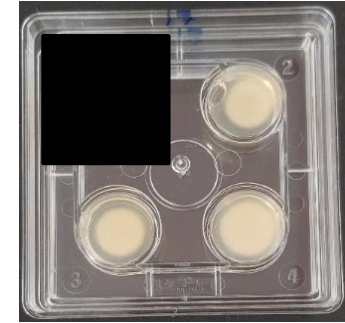
Front 24 h incubation



Front 48 h incubation



Reverse 48 h incubation
(read in a mirror)



^a The QC strain is deposited in the Culture Collection University of Gothenburg <https://www.ccug.se/> from where it is available