



MIC Test Strip Technical Sheet **Mould**

Specimen

Blood, CSF, sterile body fluids and tissues, nasopharynx, respiratory, urinary and gastrointestinal tracts.

	<i>Aspergillus</i> spp.	<i>Fusarium</i> spp.	<i>Rhizopus</i> spp.	other species
Medium	R.P.M.I. Agar (Ref. 11509)			
Inoculum	0.5 McFarland (Ref. 80400)	1 McFarland (Ref. 80401)	1 McFarland (Ref. 80401)	
	Suspension of conidia and hyphae (mature growth 5-7 days) in saline with Tween 80.			
Incubation	35 °C / moist (in loosely folded plastic bags) / ambient temperature / 24-72 hours, depending on the genus.			
	16-24 hours	35 °C / 24-48 hours followed by room temperature for another 24-48 hours.	16-24 hours.	extend incubation time as needed and inspect plates daily for growth and presence of an inhibition ellipse.
Evaluating the results	No CLSI interpretive criteria are available for moulds, please consult the literature.			
Reading precautions	1. Practice plates interpretations at varying 1-3 days incubation to learn more about growth and endpoint appearance. 2. Interpret results after 16-24 hours, confirm at 48 hours if needed. Slow growers may need up to 72 hours. 3. Read the M.I.C. where the inhibition ellipse intersects the M.I.C. scale. For amphotericin, read complete inhibition of growth and azoles at 80% inhibition. 4. Ignore filaments bending into the ellipse which may be caused by overgrowth in case of prolonged incubation.			

		Quality Control (M.I.C. µg/mL, 48 hours)			EUCAST INTERPRETATION M.I.C. Criteria (µg/mL)		Example of ANTIBIOGRAM
		<i>C. parapsilosis</i> ATCC® 22019	<i>A. flavus</i> ATCC® 204304	<i>A. fumigatus</i> ATCC® MY A-3626	S	R	90 mm petri dish
AMB	AMPHOTERICIN B	0.5-4	0.5-4	0.5-4	≤1	>2	✓
FC	FLUCYTOSINE	0.12-0.5	-	-			
FLU	FLUCONAZOLE	1-4	-	-			
ITC	ITRACONAZOLE	0.12-0.5	0.25-0.5	0.25-2	≤1	>2	✓
KE	KETOCONAZOLE	0.06-0.5	-	-			
POS	POSACONAZOLE	0.06-0.25	0.06-0.5	-	≤0.12	>0.25	
VO	VORICONAZOLE	0.03-0.25	0.5-4	0.25-1	≤1	>2	

References

- CLSI M38-A2. Reference Method for Broth Dilution Antifungal Susceptibility Testing of Filamentous Fungi; Approved Standard-Second edition.
- CLSI M27-A3. Reference Method for Broth Dilution Antifungal Susceptibility Testing of Yeasts; Approved Standard - Third Edition.
- CLSI M27-S4. Reference Method for Broth Dilution Antifungal Susceptibility Testing of Yeasts; Fourth Informational supplement.
- EUCAST. Antifungal clinical breakpoint tables for interpretation of MICs, Version 5.0, January 2013.

MIC Test Strip, Patent No. 1395483

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IVD

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MIC Test Strip Technical Sheet Yeast

Candida spp. and *Cryptococcus neoformans*

Specimen

Blood, CSF, sterile body fluids and tissues, nasopharynx, urinary, respiratory and gastrointestinal tract.

	<i>Candida</i> spp.	<i>Cryptococcus neoformans</i>
Medium	R.P.M.I. Agar (Ref.11509)	
Inoculum	0.5 McFarland (Ref. 80400)	1 McFarland (Ref. 80401)
Suspension in physiological solution	Ensure to "double-dip" when inoculating plates i.e. after swabbing the plate the first time, soak the swab and streak the plate again.	
Incubation	35 °C / ambient temperature (plates in plastic bag) / 24-48 hours. Confirm <i>C. glabrata</i> and <i>C. tropicalis</i> after 48 hours.	35 °C / ambient temperature (plates in plastic bag) / 48-72 hours
Interpretation of results	Amphotericin B: interpret at complete inhibition of all growth. Flucytosine: interpret at almost complete (90%) inhibition. Azoles: interpret at the first point of significant inhibition/marked decrease in growth density. Refer to 80% inhibition principle to visually select the M.I.C. endpoint. Echinocandins: interpret trailing endpoints at the first visual point of significant inhibition i.e. 80% inhibition.	

		Quality Control (M.I.C. µg/mL) 48 hours incubation			CLSI INTERPRETATIVE CRITERIA (M.I.C. µg/mL)			EUCAST INTERPRETATIVE CRITERIA (M.I.C. µg/mL)		Example of ANTIBIOGRAM 140 mm petri dish
		<i>C. krusei</i> ATCC® 6258	<i>C. parapsilosis</i> ATCC® 22019	<i>C. albicans</i> ATCC® 90028	S	I	R	S	R	
AMB	AMPHOTERICIN B	0.5-2	0.25-1	0.125-0.5				≤1	>1	✓
AND	ANIDULAFUNGIN	0.016-0.125	0.5-4	0.002-0.008	≤0.25	0.5	≥1	≤0.03	>0.03	
	<i>C. albicans</i>				≤0.12	0.25	≥0.5	≤0.06	>0.06	
	<i>C. glabrata</i>				≤0.25	0.5	≥1	≤0.06	>0.06	
	<i>C. tropicalis</i>				≤0.25	0.5	≥1	≤0.06	>0.06	
	<i>C. krusei</i>				≤2	4	≥8			
	<i>C. parapsilosis</i>				≤2	4	≥8			
	<i>C. guilliermondii</i>									
CAS	CASPOFUNGIN	0.25-1	0.25-2	0.064-0.25	≤0.25	0.5	≥1			
	<i>C. albicans</i>				≤0.12	0.25	≥0.5			
	<i>C. glabrata</i>				≤0.25	0.5	≥1			
	<i>C. tropicalis</i>				≤0.25	0.5	≥1			
	<i>C. krusei</i>				≤2	4	≥8			
	<i>C. parapsilosis</i>				≤2	4	≥8			
	<i>C. guilliermondii</i>									
FLU	FLUCONAZOLE	128-≥256	1-8	0.125-0.5	≤2	4	≥8	≤2	>4	✓
	<i>C. albicans</i>				-	32	≥64			
	<i>C. glabrata</i>				≤2	4	≥8			
	<i>C. parapsilosis</i>				≤2	4	≥8			
	<i>C. tropicalis</i>									
FC	FLUCYTOSINE	>32	0.064-0.25	0.5-2						✓

		Quality Control (M.I.C. µg/mL) 48 hours incubation			CLSI INTERPRETATIVE CRITERIA (M.I.C. µg/mL)			EUCAST INTERPRETATIVE CRITERIA (M.I.C. µg/mL)		Example of ANTIBIOGRAM 140 mm petri dish
		<i>C. krusei</i> ATCC® 6258	<i>C. parapsilosis</i> ATCC® 22019	<i>C. albicans</i> ATCC® 90028	S	I	R	S	R	
ITC	ITRACONAZOLE	0.25-1	0.064-0.25	0.064-0.25						✓
KE	KETOCONAZOLE	0.25-1	0.032-0.125	0.08-0.032						
POS	POSACONAZOLE	0.125-0.5	0.032-0.25	0.032-0.125				0.06	0.06	
VO	VORICONAZOLE	0.25-1	0.016-0.064	0.04-0.016				0.12	0.12	✓
CLSI	<i>C. albicans</i>				≤0.12	0.25-0.5	≥1			
	<i>C. krusei</i>				0.5	1	≥2			
	<i>C. parapsilosis</i>				≤0.12	0.25-0.5	≥1			
	<i>C. tropicalis</i>				≤0.12	0.25-0.5	≥1			

References

- CLSI M27-A3. Reference Method for Broth Dilution Antifungal Susceptibility Testing of Yeasts; Approved Standard - Third Edition.
- CLSI M27-S4. Reference Method for Broth Dilution Antifungal Susceptibility Testing of Yeasts; Fourth Informational supplement.
- EUCAST. Antifungal clinical breakpoint tables for interpretation of MICs, Version 5.0, January 2013.
- Antifungal MTS quality control data are not identical to CLSI specifications in all cases. MTS ranges at 48 hours are based on extensive data generated from in house testing.

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