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.

	***Candida* spp.**	***Cryptococcus neoformans***
Medium	RPMI Agar (Ref.11509)	
Inoculum	Suspension in physiological solution	
	0.5 McFarland (Ref. 80400)	1 McFarland (Ref. 80401)
	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 ± 2°C / moist ambient air (plates in plastic bag) / 24-48 hours. Confirm *C. glabrata* and *C. tropicalis* after 48 hours.	35 ± 2°C / moist ambient air (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 (MIC µg/mL) **48 hours incubation**			**CLSI INTERPRETATION MIC Criteria (µg/mL)**			**EUCAST INTERPRETATION MIC Criteria (µg/mL)**		**Example of ANTIBIOGRAM**
		***C. parapsilosis* ATCC® 22019**	***C. krusei* ATCC® 6258**	***C. albicans* ATCC® 90028**	**S**	**I**	**R**	**S**	**R**	140 mm petri dish
AMB	AMPHOTERICIN B	0.25-1	0.5-2	0.125-0.5						✓
	C. albicans							≤1	>1	
	C. glabrata							≤1	>1	
	C. tropicalis							≤1	>1	
	C. krusei							≤1	>1	
	C. parapsilosis							≤1	>1	
AND	ANIDULAFUNGIN	0.5-4	0.016-0.125	0.002-0.008						
	C. albicans				≤0.25	0.5	≥1	≤0.03	>0.03	
	C. glabrata				≤0.12	0.25	≥0.5	≤0.06	>0.06	
	C. tropicalis				≤0.25	0.5	≥1	≤0.06	>0.06	
	C. krusei				≤0.25	0.5	≥1	≤0.06	>0.06	
	C. parapsilosis				≤2	4	≥8	≤0.002	>4	
	C. guilliermondii				≤2	4	≥8			
CAS	CASPOFUNGIN	0.25-2	0.25-1	0.064-0.25						
	C. albicans				≤0.25	0.5	≥1			
	C. glabrata				≤0.12	0.25	≥0.5			
	C. tropicalis				≤0.25	0.5	≥1			
	C. krusei				≤0.25	0.5	≥1			
	C. parapsilosis				≤2	4	≥8			
	C. guilliermondii				≤2	4	≥8			
FLU	FLUCONAZOLE	1-8	128-≥256	0.125-0.5						✓
	C. albicans				≤2	4	≥8	≤2	>4	
	C. glabrata				-	32	≥64	≤0.002	>32	
	C. parapsilosis				≤2	4	≥8	≤2	>4	
	C. tropicalis				≤2	4	≥8	≤2	>4	
FC	FLUCYTOSINE	0.064-0.25	≥32	0.5-2						✓
ITC	ITRACONAZOLE	0.064-0.25	0.25-1	0.064-0.25						✓
	C. albicans							≤0.06	>0.06	
	C. dubliniensis							≤0.06	>0.06	
	C. parapsilosis							≤0.12	>0.12	
	C. tropicalis							≤0.12	>0.12	
KE	KETOCONAZOLE	0.032-0.125	0.25-1	0.008-0.032						
MYC	MICAFUNGIN	0.25-2	0.032-0.25	0.004-0.032						
	C. albicans				≤0.25	0.5	≥1	≤0.016	>0.016	
	C. glabrata				≤0.06	0.12	≥0.25	≤0.03	>0.03	
	C. tropicalis				≤0.25	0.5	≥1			
	C. krusei				≤0.25	0.5	≥1			
	C. parapsilosis				≤2	4	≥8	≤0.002	>2	
	C. guilliermondii				≤2	4	≥8			
POS	POSACONAZOLE	0.032-0.25	0.125-0.5	0.032-0.125						
	C. albicans							≤0.06	>0.06	
	C. dubliniensis							≤0.06	>0.06	
	C. parapsilosis							≤0.06	>0.06	
	C. tropicalis							≤0.06	>0.06	

		Quality Control (MIC µg/mL) 48 hours incubation			CLSI INTERPRETATION MIC Criteria (µg/mL)			EUCAST INTERPRETATION MIC Criteria (µg/mL)		Example of ANTIBIOGRAM
		C. parapsilosis ATCC® 22019	*C. krusei* ATCC® 6258	*C. albicans* ATCC® 90028	S	I	R	S	R	140 mm petri dish
VO	VORICONAZOLE	0.016-0.064	0.25-1	0.004-0.016						✓
	C. albicans				≤0.12	0.25-0.5	≥1	≤0.06	>0.25	
	C. krusei				0.5	1	≥2	≤0.06	>0.25	
	C. parapsilosis				≤0.12	0.25-0.5	≥1	≤0.12	>0.25	
	C. tropicalis				≤0.12	0.25-0.5	≥1	≤0.12	>0.25	

Susceptible (**S**), Intermediate (**I**), Resistant (**R**)

Note: Antifungal MTS quality control data are not identical to CLSI or EUCAST specifications in all cases. MTS ranges at 48 hours are based on extensive data generated from in house testing.

Disclaimer: The table is intended for general guidance only and may not contain all the necessary information. Also reported interpretive criteria and QC MIC ranges might be out of date. Always current guidelines from CLSI and/or EUCAST should be consulted.

References

1. CLSI M60. Performance Standards for Antifungal Susceptibility Testing of Yeasts. 2nd Edition, 2020.
2. EUCAST. Antifungal Agents. Breakpoint tables for interpretation of MICs. Version 9.0, 2018.

LIOFILCHEM® s.r.l.
Via Scozia, 64026 Roseto degli Abruzzi (TE) Italy
Tel. +39 0858930745 Fax +39 0858930330 www.liofilchem.com

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