INHIBITORY MOLD AGAR (IMA) w/ and w/o ANTIBIOTICS

INTENDED USE

Remel Inhibitory Mold Agar (IMA) w/ and w/o Antibiotics are solid media recommended for use in qualitative procedures for primary isolation and cultivation of *Histoplasma capsulatum*, dermatophytes, and other pathogenic fungi.

SUMMARY AND EXPLANATION

Inhibitory Mold Agar was formulated by Ulrich as a general purpose medium for cultivation of fungi.[1] It is also recommended for selective isolation of pathogenic yeasts and molds (e.g., *Cryptococcus neoformans*, *H. capsulatum,* and *Trichophyton* spp.) from clinical specimens contaminated with commensal microbial flora.[2,3]

PRINCIPLE

Casein and meat peptones supply nitrogenous compounds, amino acids, and peptides necessary for the growth of fungi. Dextrose, starch, and dextrin are ready sources of energy. Sodium chloride and metallic salts are essential electrolytes and help to maintain osmotic equilibrium. Yeast extract is a source of vitamins. Chloramphenicol is a broad-spectrum antibiotic which inhibits many gram-positive and gram-negative bacteria. Gentamicin, ciprofloxacin, and vancomycin are antibiotics which inhibit commensal microbial flora.

REAGENTS (CLASSICAL FORMULA)*

Base Medium:

Dextrose	5.0	g	Magnesium Sulfate	0.8	g
Yeast Extract	5.0	g	Manganese Sulfate	0.16	g
Casein Peptone	3.0	g	Chloramphenicol	0.125	g
Meat Peptone	2.0	g	Ferrous Chloride	0.04	g
Sodium Phosphate	2.0	g	Sodium Chloride	0.04	g
Starch	2.0	g	Agar	15.0	g
Dextrin	1.0	g	Demineralized Water	1000.0	ml

pH 6.7 ± 0.2 @ 25°C

The following combinations of optional ingredients are available per liter of medium:

1. Gentamicin	50.0	mg	2. Ciprofloxacin	100.0	mg
			Vancomycin	10.0	mg

*Adjusted as required to meet performance standards.

PROCEDURE

1. Inoculate and streak the specimen as soon as possible after it is received in the laboratory. Consult appropriate references for information regarding specimen processing and inoculation.[4,5]
2. Inoculate selective and nonselective media for isolation of fungi from potentially contaminated sources.
3. Incubate the plates at 25-30°C in an inverted position with increased humidity for 30 days or longer in an aerobic atmosphere.
4. Examine plates for fungal colonies exhibiting typical color and morphology.

QUALITY CONTROL

All lot numbers of Inhibitory Mold Agar w/ and w/o Antibiotics have been tested using the following quality control organisms and have been found to be acceptable. This quality control testing meets or exceeds CLSI standards.[6] Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, patient results should not be reported.

CONTROL	INCUBATION	RESULTS
Inhibitory Mold Agar:		
**Candida albicans* ATCC® 10231	Aerobic, up to 72 h @ 25-30°C	Growth
Cryptococcus neoformans ATCC® 34877	Aerobic, up to 72 h @ 25-30°C	Growth
**Trichophyton mentagrophytes* ATCC® 9533	Aerobic, up to 72 h @ 25-30°C	Growth
Escherichia coli ATCC® 25922	Aerobic, up to 72 h @ 25-30°C	Inhibition (partial to complete)
Staphylococcus aureus ATCC® 25923	Aerobic, up to 72 h @ 25-30°C	Inhibition (partial to complete)
Inhibitory Mold Agar w/ Gentamicin:		
**Candida albicans* ATCC® 10231	Aerobic, up to 72 h @ 25-30°C	Growth
Cryptococcus neoformans ATCC® 34877	Aerobic, up to 72 h @ 25-30°C	Growth
**Trichophyton mentagrophytes* ATCC® 9533	Aerobic, up to 72 h @ 25-30°C	Growth
**Escherichia coli* ATCC® 25922	Aerobic, up to 72 h @ 25-30°C	Inhibition (partial to complete)
Pseudomonas aeruginosa ATCC® 27853	Aerobic, up to 72 h @ 25-30°C	Inhibition (partial to complete)
Staphylococcus aureus ATCC® 25923	Aerobic, up to 72 h @ 25-30°C	Inhibition (partial to complete)
Inhibitory Mold Agar w/ Ciprofloxacin and Vancomycin:		
**Candida albicans* ATCC® 10231	Aerobic, up to 72 h @ 25-30°C	Growth
Cryptococcus neoformans ATCC® 34877	Aerobic, up to 72 h @ 25-30°C	Growth
**Trichophyton mentagrophytes* ATCC® 9533	Aerobic, up to 72 h @ 25-30°C	Growth
**Escherichia coli* ATCC® 25922	Aerobic, up to 72 h @ 25-30°C	Inhibition (partial to complete)
Pseudomonas aeruginosa ATCC® 27853	Aerobic, up to 72 h @ 25-30°C	Inhibition (partial to complete)
Staphylococcus aureus ATCC® 25923	Aerobic, up to 72 h @ 25-30°C	Inhibition (partial to complete)

*CLSI recommended organisms

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LIMITATIONS

1. The use of Shrink-Seals (REF R522600) or gas-permeable tape to secure the plates is recommended to prevent exogenous contamination, avoid moisture loss, and protect personnel from exposure to pathogenic molds.[4]
2. Medium may contain small amounts of dark particles, which do not impair its performance.

BIBLIOGRAPHY

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5. Forbes, B.A., D.F. Sahm, and A.S. Weissfeld. 2007. Bailey and Scott's Diagnostic Microbiology. 12th ed. Mosby Elsevier, St. Louis, MO.
6. Clinical and Laboratory Standards Institute (CLSI). 2004. Quality Control for Commercially Prepared Microbiological Culture Media; Approved Standard, 3rd ed. M22-A3. CLSI, Wayne, PA.

Refer to the front of Remel *Technical Manual of Microbiological Media* for **General Information** regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

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