HiCrome[™] Candida Differential Agar / Base, Modified

Recommended for rapid isolation and identification of Candida species from mixed cultures.

Composition **	M1297A	M1456A
Ingredients	Grams/Litre	Grams/Litre
Peptone	_	5.00
Peptone special	15.00	-
Yeast extract	4.00	3.00
Malt extract	—	3.00
Dipotassium hydrogen phosphate	1.00	_
Glucose (Dextrose)	_	10.00
Chromogenic mixture	7.22	3.00
Chloramphenicol	0.50	0.05
Agar	15.00	18.00
Final pH (at 25°C)	6.3±0.2	7.2 ± 0.2

** Formula adjusted, standardized to suit performance parameters

Directions

Suspend 42.72 grams of M1297A in 1000 ml distilled water and 21.02 grams of M1456A in 500 ml distilled water. Heat to boiling to dissolve the medium completely. DO NOT AUTOCLAVE. Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of HiCrome[™] Candida Selective Supplement (FD192) to M1456A. Mix well and pour into sterile Petri plates.

Principle and Interpretation

Perry and Miller (1) reported that *Candida albicans* produces an enzyme β -N-acetyl- galactosaminidase and according to Rousselle et al (2) incorporation of chromogenic or fluorogenic hexosaminidase substrates into the growth medium helps in identification of *C. albicans* isolates directly on primary isolation. HiCromeTM Candida Differential Agar is a selective and differential medium, which facilitates rapid isolation of yeasts from mixed cultures and allows differentiation of *Candida* species namely *C. albicans, C. krusei, C. tropicalis* and *C. glabrata* on the basis of colouration and colony morphology. On this medium, results are obtained within 48 hours and it is useful for the rapid and presumptive identification of common yeasts in Mycology and Clinical Microbiology Laboratory.

Peptone, peptone special, malt extract and yeast extract provides nitrogenous, carbonaceous compounds and other essential growth nutrients. Phosphate buffers the medium well. Chloramphenicol suppresses the accompaning bacterial flora. *C. albicans* appear as light green coloured smooth colonies, *C. tropicalis* appear as blue to purple coloured raised colonies. *C. glabrata* colonies appear as cream to white smooth colonies, while *C. krusei* appear as purple fuzzy

HiCromeVeg[™] Freedom from BSE / TSE worries

HiCrome[™] Candida Differential Agar / Base, Modified (M1297A)/(M1456A) is also available as HiCrome[™] Candida Differential HiVeg[™] Agar / Base, Modified (MV1297A)/(MV1456A) / HiCrome[™] Candida Differential HiCynth[™] Agar Base (MCD1297A) wherein all the animal origin nutrients have been replaced by vegetable based nutrients & Chemically defined peptones respectively.





colonies. *C. glabrata, C. kefyr, C. parapsilosis* colonies appear as cream to white, beige/yellow due to natural pigmentation and some alkaline phosphatase activity. The use of HiCrome Selective Supplement (FD192) in M1456A imparts additional selectivity to the medium.

Type of specimen

Food samples , Clinical samples

Specimen Collection and Handling

For clinical samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards (3, 4). Food samples, follow appropriate techniques for sample collection,

processing as per guidelines and local standards (5). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets

Limitations

- 1. Due to variable nutritional requirements, some strains may show poor growth on this medium.
- Slight colour variation may be observed depending on the presence of enzyme in the organism and substrate utilization provided in the medium.



M1297A HiCrome™ Candida Differential Agar





M1297A M1456A

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Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the recommended temperature.

Quality Control

Appearance of Powder	:	Cream to be free flowing	eige colour 2 powder.	ed, homoge	eneous,
Gelling	:	Firm, comp M1297A or 1	arable with 1.8% Agar §	n 1.5% Agar gel of M1456	gel of 6A.
Colour and Clarity	:	Light ambe	r coloured,	clear to slig	ghtly
of prepared medium		opalescent gel forms in Petri plates.			
Reaction	:	Reaction of M1297A at Reaction of M1456A at	4.27% w/v 25°C. pH:6 4.20% w/v 25°C pH:7	aqueous so 5.3 ± 0.2 aqueous so 2 ± 0.2	olution of
Cultural Response	:	Cultural characteristics observed after an incubation at 30°C for 40-48 hours on additio of HiCrome™ Candida Selective Supplement (FD192) in M1456A.			after an s on addition upplement
Organisms (ATCC)		Inoculum (CFU)	Growth	Recovery	Colour of the colony

	(CFU)			the colony
Candida albicans (10231) (00054*)	50-100	good- luxuriant	≥50%	light green
Candida tropicalis (750)	50-100	good- luxuriant	≥50%	blue to purple
Candida krusei (24408)	50-100	good- luxuriant	≥50%	purple, fuzzy
Candida glabrata (15126)	50-100	good- luxuriant	≥50%	cream to white
Candida parapsilosis (22019)	50-100	good- luxuriant	<u>≥</u> 50%	cream to white (may have mauve center)
Escherichia coli (25922) (00013*)	≥10 ³	inhibited	0%	-
Staphylococcus aureus subsp aurreus (25923) (00034*)	≥10 ³	inhibited	0%	-

Key:* : Corresponds to WDCM number

Storage and Shelf-life

Store between 2-8°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Use before expiry date on the label.

Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (3, 4).

References

- 1. Perry J. L. and Miller G. R., 1987, J. Clin. Microbiol., 25:2424-2425.
- Rousselle P., Freydiere A., Couillerot P., de Montclos H. and Gille Y., 1994, J.Clin. Microbiol., 32:3034-3036.
- 3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
- 4. Jorgensen, J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1
- 5. Salfinger Y., and Tortorello M.L. Fifth (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

Ready Prepared Media					
Code	Product Name	Usage	Packing		
Category : 90 mm Ready Prepared Petri Plates					
MP1297A	HiCrome™ Candida Differential Agar Plate	for rapid isolation and identification of <i>Candida</i> species from mixed cultures.	50 plts		
Category : Ready Prepared Solid Media in Glass Bottles					
SM1297A	HiCrome™ Candida Differential Agar	for rapid isolation and identification of <i>Candida</i> species from mixed cultures.	5X100ml		

