NATIONAL BIORESOURCE DEVELOPMENT BOARD
Dept. of Biotechnology
Government of India, New Delhi

For office use:

MARINE BIORESOURCES
FORMS DATA ENTRY**:** Form- 1(general **)** Ref. No.:
(please answer only relevant fields; add additional fields if you require)

Fauna : Flora √ Microorganisms

General Category : Eukaryota , Fungi , Ascomycota , (Ascosporogenous yeast)

Scientific name &Authority: *Debaryomyces hansenii var.fabryi*
(Zopf)Lodder et Kreger van Rij (1952)
Common Name (if available) :
Imperfect State : *Candida famata* (Harrison) Meyer etYarrow
Synonyms: *Saccharomyces hansenii* (Zopf 1889)
Debaryomyces subglobosus (Zach) Lodder et Kreger-van Rij (1952)
Torulopsis armenti Kocková-Kratochvilová, Sláviková et Beránek (1977)
Author(s) : Same as given after the synonyms. Status
Ref. **The Yeast** ed. III (1984)

Classification:
Phylum: Ascomycota Sub- Phyllum: Saccharomycotina
Super class Class: Saccharomycetes
Sub- Class
Super Order: Order: Saccharomycetales
Super Family Family: Saccharomycetaceae
Sub-Family
Genus: *Debaryomyces* Species: *hansenii*
Authority:
Reference No. Syst. Appl. Microbiol. 22(1): 79-86(1999).

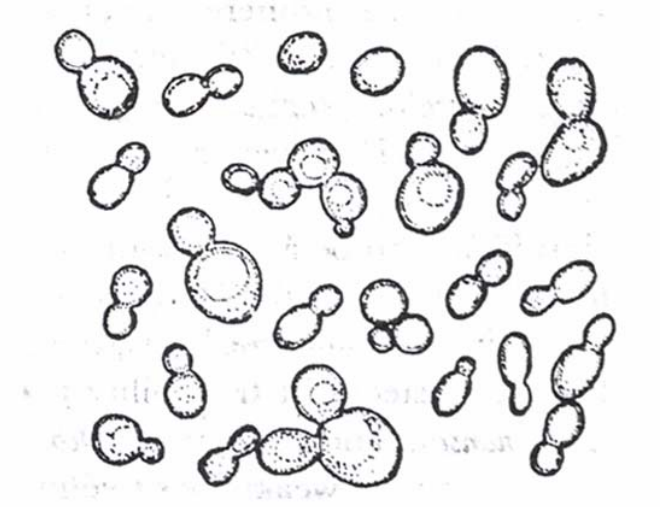
Geographical Location:
Latitude: Place: Arabian Sea ,Cochin Backwaters and Bay of Bengal.
Hussainsagar, Hyderabad, India (PARYAVARAN ABSTRACTS, 1998, Vol.No.3&4)
(Isolated from water samples(30 m) and benthic sediment samples 50m)
Western Ghats of India (K.Bhalla *et al*., 2002)

Longitude: State: EEZ of Indian Coast and Andhra Pradesh, India

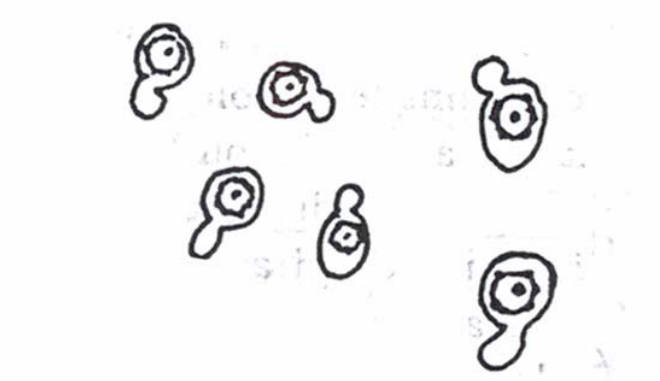
Environment

Fresh water : Yes/ No	Habitat :	Salinity :
Brackish : Yes/ No	Migrations :	Temperature :
Salt water : Yes/ No	Depth range :	

Picture (scanned images or photographs of adult / larval stages)



Deb. Hansenii
3 days in Malt extract
budding cells



Deb. Hansenii
14 days on V8 agar
Ascospores with ridges, inside the cells

Ref: The Yeast ed III (1984)

SALIENT FEATURES :

Morphological:

Standard description of *Debaryomyces hansenii*

Growth in Malt extract: After two days at 25°C the cells are spherical to short-oval (2 – 7) X (2.4 – 8.5)μ m; single, in pairs or in short chains. A sediment, a ring and, in some strains, a smooth or wrinkled, dry pellicle or islets are formed. After one month at 17°C a sediment, a ring, occasionally, a smooth or wrinkled pellicle is present.

Growth on Malt agar: After one month at 17°C the streak culture is greyish-white to yellowish, soft, shiny or dull, smooth or partly or entirely striped or wrinkled.

Slide cultures on Potato and Corn Meal agar: Pseudomycelium is absent or it is very primitive. Exceptionally it is well developed.

Formation of Ascospores: Usually conjugation between mother cell and bud precedes ascus formation; conjugation between separate cells may also occur. The spores are spherical with a warty wall. The wartiness is not always distinct under light microscope. In scanning micrographs the warts appear as small blunt protuberances or as small ridges (Kurtzman et.al ., 1975). Usually one, seldom two spores are formed per ascus. The presence of many spores gives the culture a brown color.

Spores were observed on V8-, Gorodkowa-, acetate- and potato agar at 20°C.

Diagnostic characteristics: -

a) Biochemical

Fermentation:-

Glucose	+vw or -	Maltose	+vw or -
Galactose	+vw or -	Lactose	-
Sucrose	+vw or -		

Assimilation of carbon compounds

Galactose	+	Raffinose	+	Erythritol	v
Sucrose	+	Soluble starch	+	Ribitol	+
Maltose	+	D-Xylose	+	D-Mannitol	+
Cellobiose	+	L-Arabinose	+	Succinic acid	+
Trehalose	+	D-Ribose	v	Citric acid	v
Lactose	v	L-Rhamnose	v	Inositol	-

Splitting of arbutin: +

Assimilation of nitrate: -

Assmilation of nitrite: v

Assimilation of creatine: + (-)

Growth in vitamin - free medium: -

Growth on 50%(w/w) glucose – yeast extract agar: +

Growth at 37 °C : v

G+C: 37.3-39.1 mol.%

Ref. **The Yeast** ed.III (1984)

b) rRNA sequence

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FT                   /product="18S ribosomal RNA"
XX
SQ   Sequence 1784 BP; 480 A; 347 C; 458 G; 499 T; 0 other;
     agtagtcata tgcttgtctc aaagattaag ccatgcatgt ctaagtataa gcaatttata        60
     cagtgaaact gcgaatggct cattaaatca gttatcgttt atttgatagt acctttacta       120
     cttggataac cgtggtaatt ctagagctaa tacatgctaa aaatcccgac tgtttggaag       180
     ggatgtattt attagataaa aaatcaatgc ttttcggagc tctttgatga ttcataataa       240
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     tcttgtaatt ggaatgagta caatgtaaat accttaacga ggaacaattg gagggcaagt       540
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     cgcccgtcgc tactaccgat tgaatggctt agtgaggcct ccggattggt ttaaagaagg      1680
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     gtcgtaacaa ggtttccgta ggtgaacctg cggaaggatc atta                        1784
//
(FT   rRNA <wgetz?-e+-id+6lScS1MWq1Z+[EMBL_features-id:AB013567_2]> <1..1784)
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Sex attributes:

Descriptive characters:

Eggs and larvae: Ref . No.:
Characteristics:
Abundance:

Biochemical aspects:
Proximate analysis: moisture/ fat/ protein/ carbohydrate/ash Ref. No.
Electrophoresis: Ref. No.

SPAWNING INFORMATION:
Locality: Main Ref:
Season:
Fecundity:
Comment:

MAJOR PUBLICATIONS (INDIAN):
(include review articles, monographs, books etc.)
1. In the Proceedings of 1st Workshop on the Scientific Results of FORV Sagar Sampada.
2. PARYAVARAN ABSTRACTS, 1998, Vol.No.3&4
3. K.Bhalla *et al*., 2002

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