

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 (Ascosporegenous yeast)		
Scientific name & Authority: <i>Saccharomyces exiguus</i> Reess ex Hansen (1888) Common Name (if available) : Imperfect State : <i>Candida holmii</i> (Jorgensen) Meyer et yarrow Synonyms: Author(s) : Same as given above. Status Ref. The Yeast ed. III (1984)		
Classification: Phylum: Ascomycota Sub- Phylum: Saccharomycotina Super class Class: Saccharomycetes Sub- Class Super Order: Order: Saccharomycetales Super Family Family: Saccharomycetaceae Sub-Family Genus: <i>Saccharomyces</i> Species: <i>exiguus</i> Authority: Reference No. Antonie Van Leeuwenhoek 73 (4), 331-371 (1998)		
Geographical Location: Latitude: Place: Arabian sea, Central Indian Ocean Basin (CIOB)Cochin Backwaters from water samples down to 10m & to 100m(CIOB) Longitude: State: EEZ of Indian Coast and Indian Ocean.		

Environment

Fresh water : Yes/ No

Habitat :

Salinity :

Brackish : Yes/ No

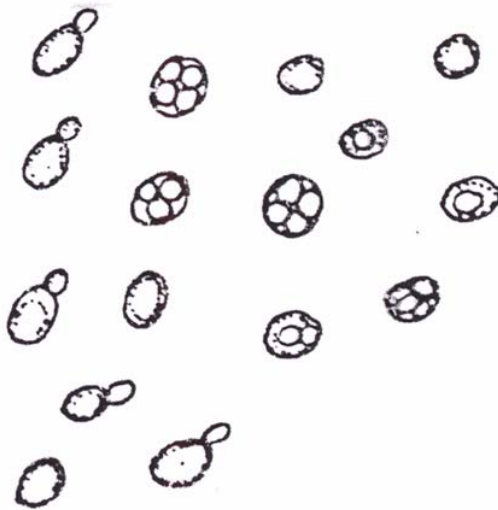
Migrations :

Temperature :

Salt water : Yes/ No

Depth range :

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



Sacch. exiguus
15 days on Malt extract agar
Budding cells and ascospores in the cells

Ref: The Yeast ed III (1984)

DATA ENTRY FORM: Form- 2(Fish / shellfish / others)
(please answer only relevant fields ; add additional fields if you require)
Form –1 Ref.No.:

IMPORTANCE

Landing statistics (t/y) : from to Place : Ref . No.:
Main source of landing : Yes/ No Coast: east/ west
Importance to fisheries :
Main catching method :
Used for aquaculture :yes/ never/ rarely
Used as bait: yes/no/ occasionally
Aquarium fish :yes/ no/ rarely
Game fish : yes/ no
Dangerous fish :poisonous/ harmful/ harmless
Bioactivity : locally known/ reported/ not known Details:
Period of availability: Throughout the year – yes/ no If no, months:

SALIENT FEATURES :

Morphological:

Standard Description of *Saccharomyces exiguus*

Growth in Malt extract: After 3 days at 25°C, the cells are subglobus to ellipsoidal (2.5 –5.0) X (3.5 – 6.5) μ m, single or in pairs. A sediment is present and occasionally a ring. After one month at 20°C a sediment is present and often a ring and a film.

Growth on Malt agar: After one month at 20°C the streak culture is butyrous, cream to tan, smooth with some light striations, flat and rather spreading, glossy, margin usually entire.

Slide Cultures on Corn Meal and Morphology agar: Pseudohyphae are not formed.

Formation of Ascospores: Vegetative cells are transformed direct into asci containing one to four globose to ellipsoidal ascospores.

Sporulation was observed on acetate- and V8 agar.

Diagnostic characteristics: -

a) Biochemical

Fermentation:-

Glucose	+	Maltose	-
Galactose	+	Lactose	-
Sucrose	+		

Assimilation of carbon compounds

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

Assimilation of nitrate: -

Assimilation of ethylamine. HCl : - or +w

Assimilation of cadaverine.2 HCl : -

Growth in vitamin - free medium: - or + w

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

Growth at 37 °C: -

Growth in the presence of 100 ppm cycloheximide : + (-) ; **of 1000% ppm:** -

G+C: 33.2-34.9 mol. %

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

rRNA sequence

```
1 naaccaaccg ggattgcctt agtaacggcg agtgaagcgg caaaagctca aatttgaat
61 ctggtacctt cggtgcccga gttgtaattt gtagagggcg actttggggc ggctccttgt
121 ctatgttcct tgaacagga cgtcatagag ggtgagaatc ccgtgtggcg aggagtgcgg
181 ttccgtgtaa agcgtctcg aagagtcgag ttgtttggga atgcagctct aagtgggtgg
241 taaattccat ctaaagctaa atattggcga gagaccgata gcgaacaagt acagtgatgg
301 aaagatgaaa agaactttga aaagagagtg aaaaagtacg tgaaattggt gaaaggggaag
361 ggcatttgat cagacatggt gttttgtgcc cctcgctcct tgtgggtggg ggaatctcgc
421 agctcactgg gccagcatca gttttggcgg tcggataaaa ccaggggaac gtagcttgct
481 tcaggaagta ttatagcctc tgggaatacg gccagccggg actgaggaac gcgattcgtc
541 aaggatgctg gcataatggt tataatgccg
```

[\(</entrez/viewer.fcgi?val=4038742&itemID=1&view=gbwithparts>](http://entrez/viewer.fcgi?val=4038742&itemID=1&view=gbwithparts)

<1..>570) /product = " 26S ribosomal RNA "

/ note = " approximate sequence numbers relative to Saccharomyces cerevisae are:1-582"

Sex attributes:

Descriptive characters:

Meristic characteristics :

Feeding habit:

Main food :

Feeding type :

Additional remarks :

Size and age :

Maximum length (cm) (male / female/ unsexed)

Ref. No.:

Average length (cm) (male / female / unsexed)

Ref . No.:

Maximum weight : (g) (male / female / unsexed)

Ref.No.:

Average weight :(g) (male / female / unsexed)

Ref No.:

Longevity (y) (wild) : (captivity)

Ref . No.:

Length / weight relationships:

Eggs and larvae: Characteristics: Abundance:	Ref. No.:
Biochemical aspects: Proximate analysis: moisture/ fat/ protein/ carbohydrate/ash Electrophoresis:	Ref. No. Ref. No.
SPAWNING INFORMATION:	
Locality: Season: Fecundity: Comment:	Main Ref:
MAJOR PUBLICATIONS (INDIAN): (include review articles, monographs, books etc.) 1. In the Proceedings of 1 st Workshop on Scientific Results of FORV Sagar Sampada, 1990.	
LIST OF INDIAN EXPERTS(Name, address, phone, fax, e-mail etc.) 1.Dr (Mrs) Ranu Gupta, NIO,RC, PBox.1616, Kochi 682014. e-mail drngupta@rediffmail.com Res.Ph.0484 2538067 2 Dr.G.S.Prasad, IMTECH,Chandigarh.	
ACKNOWLEDGMENT: (List of persons who contributed, modified or checked information) Assisted by Project Assistant, Mrs.Maria Honey.	