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.:

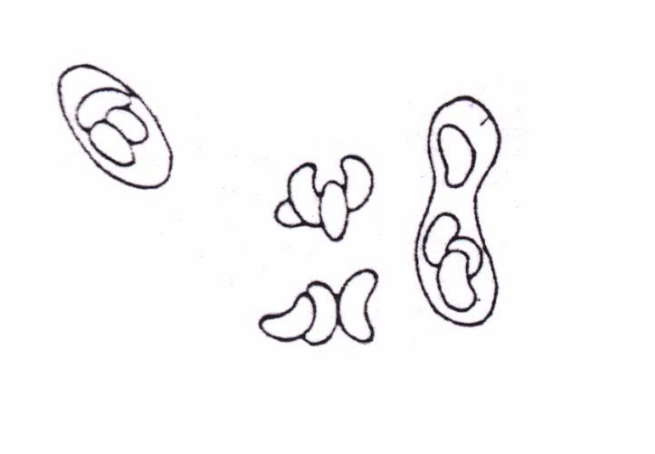
(please answer only relevant fields; add additional fields if you require)

Fauna : Flora √ Microorganisms
General Category : Eukaryota , Fungi, Ascomycota (Ascosporogenous yeast)
Scientific name &Authority: *Kluyveromyces lodderi* (van der Walt et Tscheuschner) van der Walt (1971) Common Name (if available) : Synonyms: *Saccharomyces lodderi* van der Walt et Tscheuschner (1957) *Guilliermondella lodderi* (van der Walt et Tscheuschner) Boidin, Abadie, Jacob et. Pignal (1962) Author(s) : Same as given in synonyms. Status Ref. **The Yeast** ed. III (1984)
Classification: Phylum: Ascomycota Sub- Phyllum Super class Class: Saccharomycotina Sub- Class: Saccharomycetes Super Order: Sub Order: Super Family Family: Saccharomycetaceae Sub-Family Genus: *Kluyveromyces* Species: *lodderi* Authority: Reference No. Int. J. Syst. Bacteriol. 46(2):542-549(1996). FEMS, Yeast Res:39 (4): 417- 423 (2003)
Geographical Location: Latitude: Place: Bar mouth,Chilka Lake (Isolated from water samples at 10 m depth) Longitude: State: Orissa, EEZ of Eastern Coast 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)



K. lodderi
4 days on YM agar
Reniform ascospores

Ref: Ranu Gupta (unpublished work)

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 *Kluyveromyces lodderi*
Growth in Malt extract: After 3 days at 28°C the cells are ellipsoidal to cylindrical (2.5 – 6.0) X (3.0 – 8.0 – 11.0)µm, reproducing by budding, and occur singly, in pairs, short chains or small clusters. Conjugating cells may be present. A sediment formed and occasionally a ring and islets as well. After one month at room temperature a sediment is formed. A ring, islets or a dull, thin pellicle may also be present.
Growth on Malt agar: After one month at room temperature the streak culture is butyrous, creamish-brown to buff-colored, shiny to some what dull, occasionally sectored or verruculose, flat and some what spreading. The margin may be entire, undulating or lobiform.
Dalmau plate culture on Corn Meal agar: A rudimentary pseudomycelium is usually formed which is frequently better developed under anaerobic conditions.
Formation of Ascospores: Conjugation immediately precedes ascus formation or diploid, vegetative cells may be directly transformed into asci.The asci are evanescen. One to four ascospores are formed per ascus. The ascospores are stoutly reniformed or oblong with obtuse ends. Released ascospores tend to agglutinate.
Sporulation is observed on 2% malt extract agar, YM agar and commonly employed sporulation media.

Diagnostic characteristics: -

a) Biochemical

Fermentation:-

Glucose	+	Maltose	-
Galactose	+	Lactose	-
Sucrose	+	Raffinose	+

Assimilation of carbon compounds

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

Assimilation of nitrate: -

Growth in vitamin - free medium: -

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

Growth at 37 °C : -

G+C: 34.4-37.7 mol.%

Ref. The Yeast ed. III (1984)

b) r RNA sequence

SQ Sequence 1797 BP; 478 A; 343 C; 459 G; 513 T; 4 other;

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ctggttgatc ntgccagtag tcatatgctt gtctcanaga ttnagccatg cntgtctaag      60
tataagcaat ttatacagtg aaactgcgaa tggctcatta aatcagttat cgtttatttg     120
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agaggaacta aaagtcgtaa caaggtttcc gtaggtgaac ctgcggaagg atcatta       1797
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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 relationalships:	

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.)
Unpublished work (Internal Report of NIO's EIA studies)

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