#### 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: Pichia kluyveri Bedford ex Kudriavzev (1960)

Common Name (if available):

Synonyms: *Hansenula kluyveri* (Bradford) Kurdiavzev (1960) Author(s): Same as given in 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: Pichia Species: kluyveri

Authority:

Reference No. Antonie Van Leeuwenhoek 73(4):331-371(1998).

Geographical Location:

Latitude: Place: Arabian sea, Cochin backwaters and Bay of Bengal.

(Isolated from water samples 1-10m depth and benthic soil samples

Longitude: State: EEZ of Indian Coast.

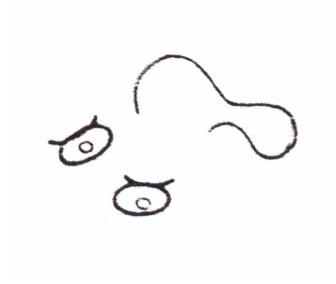
Environment

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 )



P. kluyveri
1 week on Malt extract agar
Hat shaped liberated 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Ref: Ranu Gupta (unpublished work)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

Period of availability: Throughout the year – yes/ no

If no, months:

#### SALIENT FEATURES:

Morphological:

Standard discription of Pichia kluyveri:

**Growth on 5% Malt extract agar**: After 3 days at 25°C, the cells are ovoidal to elongate (2.0 - 5.0) X (4.0 - 11.0)  $\mu$  m, and occur singly, in pairs, or in short chains. Growth Is yellowish-tan, dull and with fine wrinkles.

**Growth on the surface of Assimilation media**: Dry, climbing pellicles are formed. **Dalmau plate culture on Morphology agar**: After 7 days at 25°C, growth under the cover glass shows moderately well branched pseudohyphae, but they produce few blastospores. True hyphae are not formed. Aerobic growth is tannish-white, dull, sometimes almost powdery, and with fine striations radiating from center to colony edge. Margins are entire to finely serrate.

**Formation of Ascospores**: Two to four hat-shaped spores are produced in each ascus, and they are released very soon after formation. Single spore isolates from four-spored asci gave sporogenous colonies suggesting the species to be homothallic. Spores were observed on acetate agar.

I Hagnoctic character	istics:			
Diagnostic characteria) Biochemical	151105			
Fermentation:-				
Glucose +	Maltose -		Trehalose	_
Galactose -	Lactose -			
Sucrose -	Raffinose -			
Assimilation of c	arbon compounds			
Galactose -	Raffinose	-	Erythritol	_
Sucrose -	Soluble starch	-	Ribitol	-
Maltose -	D-Xylose	-	D-Mannitol	-
Cellobiose -	L-Arabinose	-	Succinic acid	+
Trehalose -	D-Ribose	-	Citric acid	+ or w
Lactose -	L-Rhamnose	-	Inositol	-
Additional carbon of	compound tested: L- S	Sorbose	- melibiose -	melizitose - inulin -
	coseamine. HCl +, glu			
	te -, DL- lactic acid +		, or intensy is given	, samem ,
Assimilation of nit		01 11.		
Growth in vitamin				
	dium chloride plus 5%	% gluc	ose in veast_nit	rogen base: +
Growth at 37 °C:	-	, v grac	ose III jeuse IIIe.	ogen waser
<b>G+C:</b> 28.3 - 28.5 m				
Kei The Yeast ea	111 (1984)			
Ref. The Yeast ed.	. 111 (1984)			
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b) r RNA sequence				
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Meristic characteristics :	
Feeding habit:	
Main food :	
Feeding type:	
reeding 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.)

(Internal Reports of NIO's EIA's studies)

Ph.D. Thesis of N. Prabhakaran (CUSAT, Kochi)

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