

**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>Ambrosiozyma monospora</i> Robnett, C. J. (1995)		
Common Name ( if available) :		
Synonyms:		
<i>Endomycopsis monospora</i> Saito (1932)		
<i>Endomycopsis fibuligera</i> (Lindner) Dekker var. <i>monospora</i> (Saito) Lodder et Kreger-van Rij (1952)		
<i>Pichia fasciculata</i> (Batra) Boidin, Abadie et Lehoudey (1965)		
Author( s): Same as given in synonyms.		Status
Ref. <b>The Yeast</b> ed. III (1984)		
Classification:		
Phylum: Ascomycota	Sub- Phylum: Saccharomycotina	
Super class	Class: Saccharomycetes	
Sub- Class		
Super Order:	Order: Saccharomycetales	
Super Family	Family: Saccharomycopsidaceae	
Sub-Family		
Genus: <i>Ambrosiozyma</i>	Species: <i>monospora</i>	
Authority:		
Reference No. Can. J. Bot. 73, S824-S830 (1995)		
Geographical Location:		
Latitude:	Place: Andaman sea near Nicobar Island (Isolated from water samples at 30 m depth)	
Longitude:	State: EEZ of Indian Coast	

Environment

Fresh water : Yes/ No

Habitat :

Salinity :

Brackish : Yes/ No

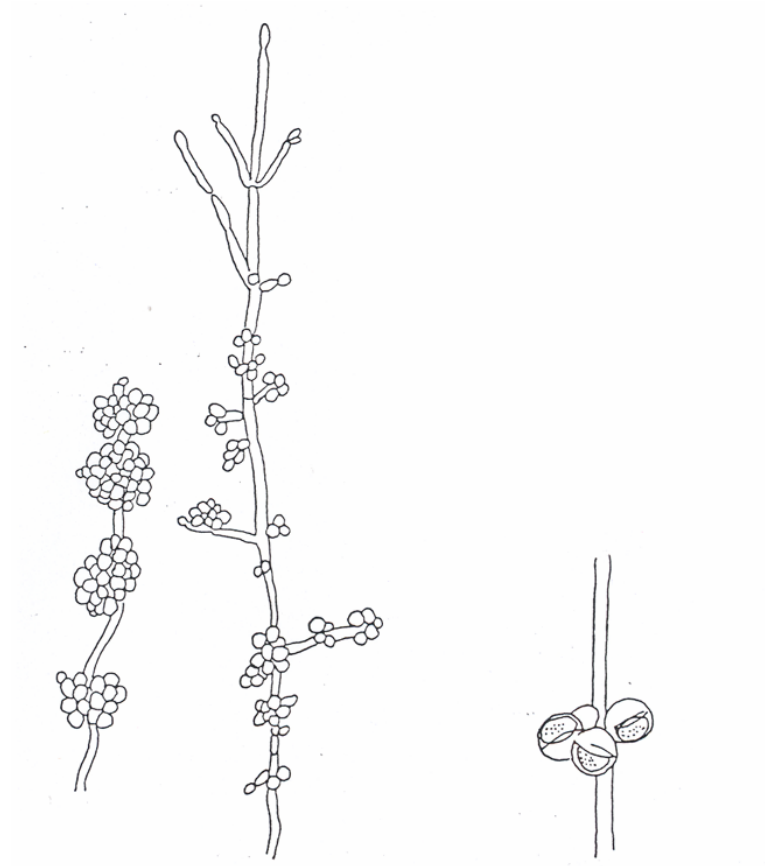
Migrations :

Temperature :

Salt water : Yes/ No

Depth range :

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



***A. monospora***  
**Slide culture**  
**on Potato agar**

***A. monospora***  
**ascospores on**  
**Gorodkova agar**

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 *Ambrosiozyma monospora***

**Growth in Malt extract:** After 2 days at 25°C the culture consist of mycelial hyphae with side branches, with a diameter of 1.5 – 5.5 µm, and spherical to short oval, budding yeast cells measuring (7 – 9) X (7 – 13) µm; single, in pairs or in chains.

Pseudomycelium may also be present. The culture has a fragrant odour. A loose, flocky sediment is formed. After one month at 17°C a thick, lumpy sediment, filling up the liquid and a broad ring are present.

**Growth on Malt agar:** After one month at 17°C the streak culture is yellow to yellowish brown, tough, raised, dull, delicately wrinkled over the whole surface. The margin is fringed with mycelia.

**Slide cultures on Potato and Corn Meal agar:** True, branched mycelium is formed.

The septa have a dolipore, visible as a small dark dot under the light microscope.

Spherical to short oval blastospores occur in chains or in clusters at the end of mycelial hyphae or alongside them. Small protuberances may occur on the hyphae. Pseudomycelia may be present.

**Formation of Ascospores:** The asci are spherical or oval. They are situated in groups at the end of the mycelial hyphae or alongside them at the septa. Single spores give cultures which sporulate again (Batra 1963). The spores are hat shaped; one to two are formed per ascus. They measure, including the brim (3 – 4) X (6 – 8) µm. They are liberated from the ascus. The presence of many spores gives the culture a brown appearance. Spores were observed on Gorodkova -, YM-, Potato- and Corn meal agar.

Diagnostic characteristics: -

a) Biochemical

**Fermentation:-**

Glucose	+ s or w	Maltose	+ s or w or -
Galactose	-	Lactose	-
Sucrose	+ s or w or -	Raffinose	-

**Assimilation of carbon compounds**

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

**Splitting of arbutin: +**

**Assimilation of nitrate: -**

**Growth in vitamin - free medium: -**

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

**Growth at 37 °C : + w**

b) rRNA Sequence

```
1 aaaccaacag ggattgcctt agtagcggcg agtgaagcgg caagagctca aatttgaat
61 ctggtacctt cggtgcccga gttgtaattt gaagaataca atcttggaaat tggctcttgt
121 ctatgttcct tggaacagga cgtcacagag ggtgagaatc ccgtgcgatg aggatacctt
181 ttctttataa gatgtgttcg acgagtcgag ttgtttggga atgcagctct aagtgggtgg
241 taaattccat ctaaagctaa atattggcga gagaccgata gcgaacaagt acagtgatgg
301 aaagatgaaa agaacttga aaagagagtg aaaaagtacg tgaattggt gaaagggag
361 ggtatttgat cagacttggg atttgggtat ctcttctcct tgtgggaggg gctctagcct
421 ttactgggc cagcatcagt tcttgtggca agataatcgc agttgaatgt ggctcttcgg
481 agtgttatag cttctgttga tgttgcctac ggggactgag gtctgcgggt tttccctag
541 atgctggcgt aatgatcaaa caccgc
```

([rRNA </entrez/viewer.fcgi?val=1100929&itemID=1&view=gbwithparts>](http://rRNA/entrez/viewer.fcgi?val=1100929&itemID=1&view=gbwithparts)  
/product="26S ribosomal RNA")

1..>566

Sex attributes:

Descriptive characters:

Meristic characteristics :

Feeding habit:

Main food :

Feeding type :

Additional remarks :

In the genus *Ambrosiozyma* abundant true mycelia are formed in addition to budding yeast cells and pseudomycelia. Mycelial septa has a central pore surrounded by a thickening of the wall (dolipore) which is plugged and appears as a dark dot in the middle of the septum.

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.
<b>SPAWNING INFORMATION:</b>	
Locality: Season: Fecundity: Comment:	Main Ref:
<b>MAJOR PUBLICATIONS (INDIAN):</b> (include review articles, monographs, books etc.) 1. Unpublished work (in NIO's internal report of EIA studies of the Malacca Strait Oil spill) 2. Can. J. Bot. 73, S824-S830 (1995)	
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