
3.4 YEAST

ARTHROASCUS

ARTHROASCUS

Arthroascus javanensis (Klocker) von Arx.

(Syn. *Endomycopsis javanensis*)

- 3435 NCYC 428 (1971). Type culture. (C.R. Trav. Lab. Carlsberg 7, 267, 1907-1909; Antonie van Leeuwenhoek 38, 304, 1972). ATCC 10628, NRRL Y-1483, CBS 2555, IFO 1848. (Medium 29, 28°C)

CANDIDA

CANDIDA Berkhout

Candida albicans (Robin) Berkhout.

- 3100 NCYC 597 (1960). Mackinnon 572. Type culture. (Lodder J. and N.J.W. Kreger van Rij. The Yeasts - A Taxonomic study, 1954, P.474, North Holland Publication Co. Amsterdam). Produces citric acid (U.S. Patent 3,726,763). ATCC 18804, 20308; IFO1385. (Medium 29, 30°C)
- 3102 ATCC 2091 (1960). (*Endomyces albicans*). Sterility testing (Brit. Pharmacopeia vol.2, 186, 1980). NRRL Y-477, NCYC 854 (Medium 29, 28°C)
- 3103 CFTRI (1960). (Medium 29, 28°C)
- 3466 Same as NCIM 3102.
- 3471 ATCC 10231 (1984). Bronchomycosis. Growth and invasiveness in mouse (Appl. Microbiol. 14, 737, 1966). Steroid interference with antifungal activity (ibid 14, 865, 1966). Ultraviolet Microscopy (J. Bact. 92, 1812, 1966). Calcification (ibid, 122, 1391, 1975). Morphology and physiology of strain sectors (Mycopath. Mycol. Appl. 34, 209, 1968). Assay of haloprogin amphotericin-B and nystatin. (Can. J. Microbiol 20, 1241, 1974). Sterility testing (U.S. Pharmacopoeia, 20th rev, 878, 1980). Assay of antimicrobial preservatives (ibid, 873, 1980, ANSI/ASTM E640-78; Brit. Pharmacopoeia 2, A193, 1980). Fungitoxicity of alcohols and fatty acids (J. Pharm. Sci. 69, 381, 1980) Esterase activity (J. Clin. Microbiol 8, 756, 1978). Lipid composition (Dev. Ind. Microbiol. 21 373, 1980). Produces autoantibiotics, phenethyl alcohol and tryptophol (Science 163, 192, 1969). Effect of antineoplastic drugs (Mycosen 27, 452, 1984). IFO 594, NCYC 1363; CBS 6431. (Medium 29, 28°C)
- 3557 ATCC 24433 (1988). Assay of Amphotericin-B (Am. J. Med. 45, 405, 1968). (Medium 29, 28°C)
- 3628 ATCC 96901 (2004). Fluconazole-resistant, patient 2 (Clin. Infect. Dis. 17: 1018-1021, 1993. (Medium 29, 30°C).
- 3631 Deposited by Microexpress, Goa (2008). Same as NCIM 3471 (Medium 29, 28°C)

Candida apicola (Hajsig) Meyer and Yarrow

- 3367 PRL 123 (1966). (*Torulopsis apicola*). (Medium 29, 28°C)

***Candida bombi* Montrocher**

- 3531 CCY 29-131-1(1987). *R. Montrocher Bombus* sp. (France). Type culture. (Rev. Myco. **32**, 69, 1967). CBS 5836, ATCC 18811. (Medium 29, 28°C)

Candida bombicola

- 3637 Deposited by Dr. Gadre, NCL, Pune (2008). MTCC 1910, ATCC 22214, CBS6009 (Medium 29, 28°C)

***Candida brassicae* Amano et al.**

(See *Candida krusei*)

***Candida brumptii* Langeron and Guerra.**

- 3350 PRL – 302 (1966). (Medium 29, 28°C)
3402 PRL Y3 (1966). (Medium 29, 28°C)

***Candida catenulata* Diddens et Lodder**

- 3337 PRL RS-18 (1966). (*Candida brumptii*). (Medium 29, 28°C)

***Candida colliculosa* (Hartmann) Meyer and Yarrow.**

- 3398 NCYC 140 (1971). (*Torula colliculosa*). (Proc. Trans. Roy. Soc. Can. **22**, 187, 1928). IFO 0663. (Medium 29, 28°C)

***Candida deformans* (Zach) Langeron and Guerra.**

- 3538 CCY-29-80-1 (1987). Type culture. (Syphilis 170, 681, 1934). CBS 2071, NRRL-Y-321, ATCC 22969. (Medium 29, 28°C)

***Candida etchellsii* (Lodder and Kreger van Rij) Meyer and Yarrow.**

- 3387 MACS (1971). (*Torulopsis etchellsii*). (Medium 19 / 29, 28°C)

Candida ethanolitolerans

(See *Torulopsis ethonolitolerans*).

***Candida famata* (Harrison) Meyer and Yarrow (1978).**

(Syn *Torulopsis candida*).

- 3234 NCYC 389 (1959). Isolated from the air. Type strain. (Medium 29, 28°C)
3235 IISc.H2(1957). (Medium 29, 28°C)
3243 IISc.d2(1957). (Medium 29, 28°C)
3244 IISc.d1(1957). (Medium 29, 28°C)
3245 IISc.c1(1957). (Medium 29, 28°C)
3246 IISc.c2(1957). (Medium 29, 28°C)

***Candida flareri* (Cifell and Redaelli) Langeron and Guerra.**

(See *Torulopsis candida*).

***Candida freyschussii* Buckley and Van Uden.**

- 3464 CBS 2162 (1983). Isolated from wet wood pulp. Type culture (Mycopath. Mycol. Appl. **36**, 257, 1968). ATCC 18737, NRRL Y-7898, DSM 70047. (Medium 29, 28°C)

***Candida glabrata* (Anderson) Meyer and Yarrow.**

- 3236 PRL RS-1(1966). (*Torulopsis glabrata*). (Medium 29, 28°C)
3237 NCYC 388 (1961). (*Torulopsis glabrata*). Killer character Type K-4 (Antonie van Leeu. **44**, 59, 1978; J. Fer. Technol. **63**, 421, 1985). (Medium 29, 28°C)
3247 IISc.B1(1957). (Medium 29, 28°C)
3248 IISc.B2(1957). (Medium 29, 28°C)
3249 IISc.C1(1957). (*Torulopsis glabrata*). (Medium 29, 28°C)
3250 IISc.C2(1957). (Medium 29, 28°C)

- 3366 PRL AC-B1 (1966). (*Torulopsis glabrata*). (Medium 29, 28°C)
- 3448 NCYC 350(1959). (*Cryptococcus glabrata*). (Medium 29, 28°C)
- Candida gropengiesseri* (Harrison) Meyer and Yarrow.**
(Syn. *Torulopsis gropengiesseri*)
- 3397 NCYC 148 (1971). From the cocoons of *Periplanta orientalis*. (Proc. Trans. Roy. Soc. Can. **22**, 187, 1928). ATCC 10669; IFO 0659; CBS 156; CCY 26-25-1; NRRL Y-1445 and Y-17142. (Medium 29, 28°C)
- Candida guilliermondii* (Castellani) Langeron and Guerra.**
- 3124 NCYC 145 (1951). (*Torula fermentati*). (Proc. Trans. Roy. Soc. Can. **22**, 187, 1928). (Medium 29, 28°C)
- 3125 IISc B3 (1953). (Medium 29, 28°C)
- 3126 ATCC 9058 (1953). Production of riboflavin (Science **101**, 180, 1945; U.S. Pat. 2,363,227) and citric acid (U.S. Pat. 3,669,839). Produces deaminase (Biochem. Biophys. Acta. **662**, 312, 1981). Citric acid Production on cellulose substrate (Biotechnol. Bioeng. Symp. **12**, 111, 1982). CBS 2021, CCY 29-4-13, IFO 0566, NRRL Y-488. (Medium 29, 28°C)
- 3127 IISc.B3(1953) NDRI Bangalore. Production of riboflavin (Science **101**, 180, 1945). (Medium 29, 28°C)
- 3399 PRL 16 (1971). (Medium 29, 28°C)
- Candida krusei* (Castellani) Berkhout.**
- 3129 Department of Agriculture, Ottawa. Strain 600 (1951) (Medium 29, 28°C)
- 3130 CFTRI Y3 (1953). (Medium 29, 28°C)
- 3515 IFO 1664 (1985). (*Candida brassicae*). Cabbage frass. Type culture of *Candida brassicae* (J. Ferm. Technol. **53**, 263 and 311, 1975). Ethanol assimilation (ibid). ATCC 32196, CBS 6799; CCY 29-109-1. (Medium 29, 28°C)
- 3518 YS-3(1985). Received from NSI, Kanpur. (Medium 29, 28°C)
- 3520 YS-8(1985). Received from NSI, Kanpur (Medium 29, 28°C)
- Candida lambica* (Lindner and Genoud) van uden and Buckley.**
- 3532 CCY 29-97-1 (1987). (*Candida monosa*). T. of *Torula monosa*. (kluyver). Ex brewers yeast (A.J. Kluyver). ATCC 9330, NRRL Y-1495, CBS 603, DSM 70090. (Medium 29, 28°C)
- Candida lipolytica* (Harrison) Didden and Lodder.**
(See *Yarrowia lipolytica*.)
- Candida lusitaniae* van Uden and Do Carmo-Sousa.**
- 3484 CBS 4413 (1984). Type culture (Portug. Acta Biol. **6**, 239, 1959). Produces ethanol from cellobiose (Biotechnol. Lett. **4**, 453, 1982; Biotechnol. Bioeng. **25**, 541, 1983). ATCC 34449; IFO 1019, NRRL Y-5394. (Medium 29, 28°C)
- 3485 Same as NCIM 3484
- 3489 Same as NCIM 3484
- Candida magnoliae* (Lodder and Kreger Van Rij) Meyer and Yarrow.**
- 3470 NRRL YB-4246 (1984). (*Torulopsis magnoliae*). From Honey (J. Bact. **44**:343, 1942). ATCC 13782. (Medium 29, 28°C)

- 3634** Deposited by Dr. Gadre, NCL, Pune (2008). MTCC 3602 (Medium 29, 28°C)
- *3646** Deposited by Dr. Gadre, NCL, Pune (2010). Mutant of NCIM 3470. Strain no. mutant R23. Erythritol production (Medium 29, 8°C)
- *3647** Deposited by Dr. Gadre, NCL, Pune (2010). Mutant of NCIM 3470. Strain no mutant572. Erythritol production (Medium 29, 28°C)
- *3648** Deposited by Dr. Gadre, NCL, Pune (2010). Mutant of NCIM 3470. Strain no. mutant R1. Erythritol production (Medium 29, 28°C)
- *3649** Deposited by Dr. Gadre, NCL, Pune (2010). Mutant of NCIM 3470. Strain no. mutant R9. Mannitol production (Medium 29, 28°C)
- Candida mannitofaciens* (Onishi and Suzuki) Meyer and Yarrow.**
- 3540** CCY 26-61-2 (1987). (*Torulopsis mannitofaciens*). Isolated from Soy sauce mash. Type strain (Antonie van Leeuwenhoek **35**, 258,1969). Metabolism of D-arabinitol, D-mannitol. ATCC 36633, CBS 5981, IFO 1908. (Medium 29, 28°C)
- Candida melibiosica* Buckley and van Uden.**
- 3104** IISc.D3 (1960). (Medium 29, 28°C)
- 3483** CBS 5814 (1984). Human sputum USA. Type culture. (Mycopath. Mycol. Appl. **36**, 257,1968). ATCC 18738. (Medium 29, 28°C)
- Candida mucifera***
- 3627** ATCC 76712 (2004). Type strain (J. Basic Microbiol. **28**, 613, 1988). (Medium 29, 28°C)
- Candida obtusa* (Dietrichson) van Uden and Do Carmo-Sousa ex van Uden and Buckley.**
- (See *Clavispora lusitaniae*).
- Candida parapsilosis* (Ashford) Langeron and Talice.**
- 3323** PRL BMC (1966). (Medium 29, 28°C)
- Candida pseudotropicalis* (Castellani) Basgal**
- 3522** (1986). (Medium 29, 28°C)
- Candida pulcherrima* (Lindner) Windisch.**
- (See *Metschnikowia pulcherrima*.)
- Candida rugosa* (Anderson) Diddens and Lodder**
- 3462** ATCC 10571 (1983). Type strain. CBS 613, NRRL-Y-1496, IFO 0750, CCY-29-15-1. (Medium 29, 28°C)
- 3467** Same as NCIM 3462.
- 3591** ATCC 20263. (Medium 29, 28°C)
- 3592** ATCC 20263. (Medium 29, 28°C)
- Candida sake* (Saito and Ota) van Uden and Buckley.**
- 3533** CCY 29-7-23 (1987). (*Candida tropicalis* var. *lambica*). Lambic beer. CBS 617; ATCC 28136; NRRL Y-1499; IFO 01213. (Medium 29, 28°C)
- Candida shehatae* Buckley and van Uden.**
- 3500** ATCC 34887 (1981). Dead insect invaded pine tree, California. Type culture (Mycopath. Mycol. Appl. **32**, 297, 1967). Xylose fermentation. Produces ethanol from D-xylose (Appl. Environ. Microbiol. **47**, 1221, 1984). CBS 5813. (Medium 29, 28°C)
- 3501** ATCC 22984 (1985). *Yamadozyma stipitis*. Production of ethanol from glucose & xylose, xylitol (Biotechnol. Bioeng. Symp. **15**, 149, 1985; J.

Ferment. Bioeng. **69**, 79, 1990; Appl. Microbiol. Biotechnol., **29**, 282, 1988; *ibid.* **32**, 167, 1989; *ibid.*, **42**, 682, 1995; *ibid.*, **26**, 1990; Can. J. Microbiol. **28**, 258, 1992). NRC 2883. (Medium 29, 28°C)

3549 CCY-29-68-1 (1987). (Medium 29, 28°C)

***Candida* sp.**

(Syn. *Torulopsis* sp.)

3433 NCYC-486 (1957). (*Candida stellata*, *Torulopsis stellata*). From grape must. Type strain (The yeasts: a taxonomic study, 3rd ed., Elsevier, Amsterdam, pp. 809-810, 1984). ATCC 10673, NRRL-Y-1446, CBS 157, IFO 0703. (Medium 29, 28°C)

3629 IIT, Chennai (2005). Deposited by Dr. Satyanarayana. Isolated from rotten apple. Degrades pectin. (Medium 29, 30°C).

***Candida tropicalis* (Castellani) Berkhout.**

3110 IISc.C2(1956). (Medium 29, 28°C)

3111 IISc.K2(1956). (Medium 29, 28°C)

3112 IISc.K4(1956). (Medium 29, 28°C)

3113 IISc.K3(1956). (Medium 29, 28°C)

3114 IISc.G3(1956). (Medium 29, 28°C)

3115 IISc. I 1 (1956). (Medium 29, 28°C)

3116 IISc. II 2 (1956). (Medium 29, 28°C)

3117 IISc.J1(1956). (Medium 29, 28°C)

3118 ATCC 750 (1951). Bronchomycosis, type culture (Lodder, J & N. J. W. Kreger-van Rij "The Yeasts - A Taxonomic Study (1952), 511. North Holland Pub. Co. Amsterdam). Utilises phenol, catechol and 3 and 4-methylcatechol as sole carbon source. (J. Gen. Appl. Microbiol. **19**, 171, 1973). Esterase activity (J. Clin. Microbiol. **8**, 756, 1978). ATCC 4563 and 7349, CBS 94, IFO 1400; NRRL Y-607 and 12568 (Medium 29, 28°C)

3119 ATCC 9968 (1953). (*Monilia murmannica*). Experimental production of food yeast. Pentose fermentation. (Can. J. Microbiol. **28**, 360, 1982). Adjustment of pH in neutral lactic acid fermentation of cornmeal (J. Food Sci. **49**, 1198, 1984). (Medium 29, 28°C)

3120 NCYC470 (1958). (Isolated from cattle). Trans. Br. Myc. Soc. **41**, 320, 1958). (Medium 29, 28°C)

3121 IISc.(1953).van Uden 75/2410. (Medium 29, 28°C)

3122 IISc.(1953).van Uden 176/411. (Medium 29, 28°C)

3123 CFTRI Y-14 (1956). (Medium 29, 28°C)

3333 PRL Y-1410 (1966). (Medium 29, 28 °C)

3348 PRL Y-2020 (1966). *Candida tropicalis*. (Medium 29, 28°C)

3437 NCYC 547 (1971). (*Trichosporon lodderi*) . From shrimp. (Mycologia **44**, 431, 1952). (Medium 29, 28°C)

3516 Y-S1 (1985). (Medium 29, 28°C)

3519 Y-S5(1985). (Medium 29, 28°C)

3548 CCY-29-7-1 (1987). Same as NCIM 3118

3556 ATCC 13803 (1988). Control strain for identification. Assay of amphotericin B (Analytical Microbiology, Vol. **2** F. Kavanagh, ed, Academic press, New York, **149**, 164 and 173, 1972; M. R. McGinnis Laboratory Handbook of Medical Mycology, Acad. press 412, 1980)

- and nystatin (ibid. 150). Production of iditol. (Appl. Environ. Microbiol. **46**, 912, 1983). (Medium 29, 28°C)
- 3573** CHP4 (1991). *Candida tropicalis*. Received from NEERI. (Medium 29, 28°C)
- 3650** Deposited by Dr. Benjamin, Calicut University, Kerala (2012). Isolated from rumen content of Malbari Goat. Strain no. BPU1. Gene bank no. JQ353488. Vegetable oil consumption and peroxisomal beta-oxidation (Medium 29, 28°C).
- 3655** Deposited by Dr. Anu Appaiah, CSIR-CFTRI (2013). Isolated from Coffee pulp. Produces extracellular pectinases under acidic conditions, decomposition of coffee pulp as consortium. GeneBank No. KC 841148 (Medium 29, 28°C)

***Candida utilis* (Henneberg) Lodder and KregerCastellani -van Rij.
(Syn. *Torulopsis utilis*).**

- 3055** NCIM isolate (1950). Food yeast. (Medium 29, 28°C)
- 3289** CFTRI 133 (1966). (Medium 29, 28°C)
- 3329** PRL RS-6 (1966). (Medium 29, 28°C)
- 3336** PRL Y-900 (1966). (Medium 29, 28°C)
- 3400** PRL Y-47 (1971). (Medium 29, 28°C)
- 3401** PRL Y-6 (1971). (Medium 29, 28°C)
- 3469** UPCC 2001 (1984). Thermophilic yeast for the production of biomass. Received from Natural Sciences Research Institute, Philippines. (Medium 29, 28°C)

***Candida versatilis* (Etchells and Bell) Meyer and Yarrow.
(Syn. *Torulopsis versatilis*)**

- 3431** NCYC 409 (1954). (Medium 29, 28°C)

***Candida wickerhamii* (Capriotti) Meyer and Yarrow.
(Syn. *Torulopsis wickerhamii*)**

- 3463** CBS 2928 (1983). (NRRL Y-2563). Type culture (Arch. Mikrobiol. **30**, 383, 1958). Produces ethanol from cellodextrins and cellobiose (Biotechnol. Lett. **4**, 453, 1982; Biotechnol. Bioeng. **25**, 541, 1983; ibid **27**, 1085, 1985; Appl. Environ. Microbiol. **48**, 265, 1984) and B-glucosidase (J. Gen. Appl. Microbiol. **30**, 509, 1984). Mixed culture (with ATCC 24702) fermentation of cellodextrins to ethanol (Biotech. Bioeng. **27**, 1085, 1985). ATCC 36540; NRRL Y-2563; IFO 10322. (Medium 29, 28°C)

CITEROMYCES

CITEROMYCES Santa Maria.

***Citeromyces matritensis* Santa Maria.**

- 3442** NCYC 589 (1971). Mates with ATCC 14081 (Bol. Inst. Nac Invest. Agr. **17**, 269, 1957). ATCC 14080, CBS 2835, CCY-40-1-2. (Medium 29, 28°C)
- 3443** NCYC 590 (1971). Mates with ATCC 14080 (Bol. Inst. Nac. Invest. Agr. **17**, 269, 1957). ATCC 14081; CBS 2836; CCY 40-1-3. (Medium 29, 28°C)

CLAVISPORA

CLAVISPORA Rodrigues de Miranda.

Clavispora lusitaniae

- 3485 CBS 1944 (1984).(*Candida obtusa*).Type culture of *Candida obtusa*. (Lodder J.," The Yeasts - A Taxonomic Study."1018,1970. North Holland Pub.Co., Amsterdam). ATCC 24009. (Medium 29, 28°C)

CRYPTOCOCCUS

CRYPTOCOCCUS Kutzing emend.Phaff and Spencer.

Cryptococcus albidus (Saito) Skinner.

(See *Filobasidium uniguttulatum*)

Cryptococcus albidus var *diffluens* (Zach) Phaff & Fell.

(Syn. *Cryptococcus diffluens*)

- 3371 PRL 71 (1966). (Medium 29, 28°C)

- 3372 PRL 30 (1966). (Medium 29, 28°C)

Cryptococcus laurentii (Kufferath) Skinner.

- 3373 PRL 2R-21 (1966). (Medium 29, 28°C)

Cryptococcus luteolus (Saito) Skinner.

- 3238 NCYC 591 (1960). Type culture. (Am. Midl. Nat. 43, 249, 1950). ATCC 32044;CBS 943;IFO 0411. (Medium 29, 28°C)

Cryptococcus neoformans (Sanfelice) Vuillemin.

- 3378 PRL 518 (1966). (Medium 29, 28°C)

- 3541 CCY-17-1-2 (1987).Type culture (Lodder, J. "The Yeasts- A Taxonomic Study" p.199,1970). ATCC 32045; IFO 0608; CBS 132. (Medium 29, 28°C)

- 3542 CCY-17-1-1 (1987). ATCC 34664. (Medium 29, 28°C)

Cryptococcus sp.

- 3349 PRL 388 (1960). (Medium 29, 28°C)

DEBARYOMYCES

DEBARYOMYCES Lodder and Kreger-van Rij.

Debaryomyces castellii (Capriotti) vander Walt et Johanson.

- 3446 NCYC 604 (1971). From soil (Arch. Microbiol. **39**, 344, 1958) CBS 2923; NRRL-Y-7423; IFO 1359. MTCC 186. (Medium 29, 28°C)

Debaryomyces fibuligera

- 3143 G1. (Medium 29, 28°C)

- 3144 K1. Citric acid producer. (Medium 29, 28°C)

- 3145 R1. Citric acid producer. (Medium 29, 28°C)

Debaryomyces fluxorum Phaff and Knapp.

(See *Pichia fluxuum*.)

Debaryomyces hansenii (Zopf) Lodder and Kreger-van Rij.

(*Debaryomyces kloeckeri*; *Debaryomyces subglobosus*).

- 3142 NCYC 459 (1958).From soil.(*Debaryomyces subglobosus*). (Medium 29, 28°C)

- 3146 IISc.K3 (1957). (Medium 29, 28°C)

- 3147 IISc.K4 (1957). (Medium 29, 28°C)
 3148 IISc.K6 (1957). (Medium 29, 28°C)
 3339 PRL RS-4 (1966). (Medium 29, 28°C)
***Debaryomyces polymorphus* (Klocker) Kurtzman and Smiley.**
 3419 NCYC 56 (1970).(*Pichia polymorpha*).From soil.(C. R. Trav. Lab.Carlsberg **10**, 207,1913). (Medium 29, 28°C)
***Debaryomyces vanriji* (van der Walt and Tscheuschner) Abadie,Pignal & Jacob.**
 3356 PRL 143 (*Pichia vanriji*). (Medium 29, 28°C)
***Debaryomyces vini* Zimmerman.**
 (See *Pichia vini*).

DEKKERA

- DEKKERA Smith and van Grinsven.**
***Dekkera anomala* M.Th.Smith and van Grinsven.**
 (Syn. *Brettanomyces anomala*).
 3364 PRL 1415 (1966). (Medium 29, 28°C)
***Dekkera bruxellensis* van der Walt.**
 (Syn. *Brettanomyces bruxellensis*).
 3534 CCY-59-2-1(1987). Type culture (Antonie van Leeuwenhoek **30**, 275, 1964). CBS 74, IFO 1590, ATCC 36234. (Medium 29, 28°C)
***Dekkera clausenii* Lee and Jong.**
 (Syn. *Brettanomyces clausenii*).
 3365 PRL 1414 (1966). (Medium 29, 28°C)
***Dekkera intermedia* van der Walt.**
 3468 CBS 2796 (1983). From Ex Moselle Wine. (Medium 29, 28°C)
 3481 IFO 1586 (1984). (*Brettanomyces custerssi*, *Dekkera bruxellensis*). Type culture of *B. custerssi* (Ric Sci **20**, 1494, 1950). Taxonomy (Mycotaxon **23**, 279, 1985). Produces ethanol from cellobiose and glucose (US Patent 5,100,791, 1992). CBS 5512, ATCC 34447, IFO 1586. (Medium 29, 28°C)
 3482 CBS 73 (1984).(*Brettanomyces intermedius*, *Dekkera bruxellensis*). From grape must. Type culture (Zentr. Bakteriöl II Abt, **88**, 366, 1933). Type strain of *Micotorula intermedia*. Sexual state (Mycotaxon **23**, 271, 1985). ATCC 34448, IFO 1587. (Medium 29, 28°C)
 3487 Same as NCIM 3481
 3488 IFO 1587 (1984).(*Brettanomyces intermedius*). Same as NCIM 3482 (Medium 29, 28°C)
 3527 NRRL-Y-2394 (1984). (Medium 29, 28°C)
***Dekkera naardenensis* Jong and Lee.**
 3575 MTCC 541 (1991). (*Brettanomyces naardenensis*). Type culture of *B. naardenensis* (Antonie van Leeuwenhoek **36**, 458, 1970).Type culture (Mycotaxon **25**, 148, 1986). Produces ethanol from D-Xylose (Appl. Environ. Microbiol. **47**, 1221, 1984). ATCC 22075, CBS 6042, IFO 1588. (Medium 29, 28°C)

ENDOMYCES

ENDOMYCES

Endomyces magnusii Ludwig.
(See *Trichosporan pullulans*)

ENDOMYCOPSIS

ENDOMYCOPSIS Dekker.

Endomycopsis bispora (Beck) Dekker.
(See *Hansenula beckii*).

Endomycopsis capsularis (Schionning) Dekker.
(See *Saccharomycopsis capsularis*).

Endomycopsis fibuligera (Lindner) Dekker.
(See *Saccharomycopsis fibuligera*).

Endomycopsis javanensis (Klocker) Dekker
(See *Arthroascus javanensis*).

Endomycopsis lipolitica Wickerham et al
(See *Yarrowia lipolytica*).

Endomycopsis selenspora (Nadson and Krassilnikov) Dekker.
(See *Guilliermondella selenspora*).

Endomycopsis vernalis (Ludwig) Dekker.
(See *Trichosporon pullulans*).

FILOBASIDIUM

FILOBASIDIUM Olive.

Filobasidium capsuligenum (Fell et.al.) Rodrigues de Miranda.
(Syn. *Torulopsis capsuligenum*).

3368 ML-186 (1966). (*Leucosporidium capsuligenum*). Mating type alpha. Type culture (Antonie Van Leeuwenhock 35, 444, 1969; ibid 38, 91, 1972; Int. J. Syst. Evol. Microbiol. 50, 1351, 2000). Cryopreservation, psychropilic (Cryo-Lett. 15, 191, 1994). ATCC 22179 & 96591; CBS 4736; IFO 1185; NRRL-Y-6691; NRRL-Y-7450; NCYC-606. (Medium 29, 28°C)

3553 NRRL Y-7450 (1981). Same as NCIM 3368.

Filobasidium uniguttulatum Known-Chung.

3444 NCYC 602 (1971). (*Cryptococcus albidus*; *Cryptococcus uniguttulatus*). Mating type alpha. ATCC 32048; CBS 2770; NRRL-Y-6662. (Medium 29, 28°C)

GEOTRICHUM

GEOTRICHUM

Geotrichum sp.

3620 Deposited by H. H. Patel (2002). Inorganic phosphate solubilization. (Medium 29, 28°C)

GUILLIERMONDELLA

GUILLIERMONDELLA

Guilliermondella selenospora Nadson and Krassilnikov.

(Syn. *Endomycopsis selenospora*).

- 3290 CFTRI 351 (1965). (Medium 29, 28°C)
3535 CCY-42-10-1 (1987). Type culture. (Compte Rendu Hebd. Seances Acad. Sci. **187**, 307, 1928). CBS 2562; ATCC 10629; NRRL-Y-1357; IFO 1850. (Medium 29, 28°C)

HANSENIASPORA

HANSENIASPORA Zikes

Hanseniaspora valbyensis Klocker.

- 3418 NCYC 17 (1964). Type strain (Zentr. Bakteriolog. II Abt. **35**, 375, 1912). ATCC 10631; NRRL-Y-1626; CBS 479; CCY-46-2-2; IFO 0670. (Medium 29, 28°C)

Hanseniaspora vineae Van der Walt and Tscheuschler.

- 3357 PRL 72 (1960). (Medium 29, 28°C)

Hanseniaspora osmophila

- 3636 Deposited by Dr. Gadre, NCL, Pune (2008). MTCC 650 (Medium 29, 28°C)

HANSENULA

HANSENULA H. and P. Sydow.

Hansenula anomala (Hansen) H. and P. Sydow.

(See *Pichia anomala*.)

Hansenula beckii Wickerham.

(Syn. *Endomycopsis bispora*).

- 3413 NCYC 494 (1970). From bark beetle. (Tech. Bull. No. 1029, U.S. Dept. Agric. 1951). (Medium 29, 28°C)

Hansenula beijerinckii van der Walt.

- 3343 PRL 182 (1966). (Medium 29, 28°C)

Hansenula californica (Lodder) Wickerham.

(See *Williopsis californica*.)

Hansenula canadensis (Wickerham) Kurtzman.

- 3414 NCYC 497 (1952). Frass of red pine, Canada. Type culture (USDA Tech. Bull. 1029, 1959). NRRL Y-1888; ATCC 18079; CBS 1992; IFO 0973. (Medium 29, 28°C)

Hansenula capsulata Wickerham.

- 3439 NCYC 498 (1971). Frass coniferous tree, Canada. Type culture (USDA Tech. Bull. 1984). ATCC 24204; CBS 1993; IFO 0721 and 0984; NRRL Y-1842. (Medium 29, 28°C)

Hansenula ciferrii Lodder.

- 3340 PRL 1031 (1966). (Medium 29, 28°C)

***Hansenula polymorpha* Morais and Maia.**

3377 PRL 1798 (1966). (Medium 29, 28°C)

***Hansenula saturnus* (Klocker) H. and P. Sydow.**

(See *Williopsis saturnus*.)

***Hansenula suaveolens* (Kloecker) Dekker.**

(See *Hanseniaspora valbyensis*.)

HORMOASCUS

HORMOASCUS

***Hormoascus ambrosiae* (van der Walt and Scott) van der Walt and v. Arx.**

3545 CCY-60-1-1(1987). (*Pichia ambrosiae*). Isolated from tunnels of *Platypus externedentatus* in *Ficus sycomorus*, S. Africa. Type strain. (Antonie van Leeuwenhoek 37,15,1971). ATCC 24613; CBS 6003; NRRL-Y-7524. (Medium 29, 28°C)

ISSATCHENKIA

ISSATCHENKIA

Issatchenkia orientalis

3621 Deposited by H. H. Patel (2002). Inorganic phosphate solubilizer. Isolated from soil rhizosphere (orion), Bhavnagar. (Medium 29, 28°C)

KLOECKERA

KLOECKERA Janke.

***Kloeckera corticis* (Kloecker) Janke.**

3406 NCYC 31 (1971). (*Kloeckera javanica*). Type culture (The Yeasts, A taxonomic study, 3rd Ed., pp.877-878, 1984). Isolated from bark, lichen & moss from trees, Denmark. NCTC 485, ATCC 10635 and 24233, IFO 0631, NRRL Y-1381 (Medium 29, 28°C)

***Kloeckera javanica* (Kloecker) Janke.**

3407 NCYC 37 (1971). (*Kloeckera willi*) From soil. CBS 2578; IFO 0669; NCTC 488. (Medium 29, 28°C)

KLUYVEROMYCES

KLUYVEROMYCES van der Walt.

***Kluyveromyces fragilis* (Jorgensen) van der Walt.**

(See *Kluyveromyces marxianus*.)

Kluyveromyces lactis

(See *Kluyveromyces marxianus* var *lactis*.)

***Kluyveromyces lodderi* (van der Walt and Tscheschner) van der Walt. (Syn. *Saccharomyces lodderi*).**

3338 PRL 193 (1966). (Medium 29, 28°C)

Kluyveromyces lactis

(See *Kluyveromyces marxianus* var *lactis*).

***Kluyveromyces marxianus* (Hannsen) van der Walt.**

- 3217 IFO 0288 (1959). (*Saccharomyces fragilis*). (Medium 29, 28°C)
3231 NCYC 111 (1972). (*Saccharomyces marxianus*). (Medium 29, 28°C)
3232 NCYC 243 (1972). (*Saccharomyces macedoniensis*). For assay of thiamine (J.Pharm.Pharmac.**21**, 355,1948). (Medium 29, 28°C)
3358 PRL 1242 (1966). (*Saccharomyces fragilis*). (Medium 29, 28°C)
3465 NRRL Y-1109 (1983). (*Kluyveromyces marxianus* var.*marxianus*, *Kluyveromyces fragilis*). Produces β -galactosidase (J. Food Biochem. **4**, 189, 1980). Production of lactase (J. Dairy Sci. **58**, 1620, 1975; US Pat. 4,007,283, 1977). Produces ethanol from glucose (Biotechnol. Bioeng. **25**, 541, 1983). Produces biomass on whey ultrafiltration-permeate of cheddar cheese (J. Sci. Fd. Agr. **26**, 1176, 1975). Fermentation of D-xylose, xylitol & D-xylulose (Can. J. Microbiol. **28**, 360, 1982). Resistance test of adhesives (ASTM Standards Test Method D4783-89). ATCC 8554 and 34439; CBS 5795. (Medium 29, 28°C)
3565 MTCC 242 (1990). From milk sample from cow with mastitis. Thermotolerant upto 46 °C. NCYC 827. (Medium 29, 28°C)

***Kluyveromyces marxianus* var.*lactis* (Dombrowski) Johannsen and van der Walt.**

(Syn *Kluyveromyces lactis*) .

- 3551 NRRL-Y-1140 (1988). Opposite mating type from ATCC 8651 (J.Bact. **63**, 449, 1952). β -galactosidase induction (ibid **142**, 777, 1980). Carries two linear DNA plasmids, pG K11 and pG K12 and associated killer character (ibid **145**, 382, 1981). Transcriptional regulation of β -galactosidase gene (Mol.Cell Biol. **1**, 629, 1981). IFO 1267; CBS 2359; NCIB 1368; ATCC 8585. (Medium 29, 28°C)
3566 MTCC 223 (1990). Plasmids linear two in number, killer associated character. Type strain. β -galactosidase induction (J. Bact. **142**, 775, 1980; ibid, **145**, 82, 1981). See also NCIM 3551. NCYC 1368. (Medium 29, 28°C)

LEUCOSPORIDIUM

LEUCOSPORIDIUM Fell et.al.

***Leucosporidium frigidum* Fell et.al.**

(Syn. *Candida frigida*).

- 3537 CCY-29-144-1 (1987). From Antartic soil. Type culture. (Antonie van Leeuwenhoek **35**, 433, 1969). ATCC 22029; CBS 5270; NCYC 704. (Medium 29, 28°C)

LIPOMYCES

LIPOMYCES Lodder and Kreger van Rij.

***Lipomyces lipofera* Lodder and Kreger-van Rij.**

(Syn. *Torulopsis lipofera*).

- 3252 IISc.I1 (1957). (Medium 29, 28°C)
3254 IISc.I3 (1957). (Medium 29, 28°C)

3255 IISc.I4 (1957). (Medium 29, 28°C)

***Lipomyces starkeyi* Lodder and Kreger-van Rij.**

3440 NCYC 533 (1971). Isolated from soil. Starkey 72 strain. ATCC 58680; NRRL Y-1388; CBS 1807. (Medium 29, 28°C)

METSCHNIKOWIA

METSCHNIKOWIA Kamienski.

***Metschnikowia pulcherrima* Pitt and Miller.**

(Syn. *Candida pulcherrima*).

3105 NCYC 166 (1952). (*Torulopsis pulcherrima*). (Medium 29, 28°C)

3106 CFTRI (1956). (Medium 29, 28°C)

3108 NRRL-Y-987 (1956). Production of citric acid (U.S. Patent.3,717,549). Pentose fermentation (Can. J. Microbiol. **28**, 360, 1982). ATCC 9889. (Medium 29, 28°C)

3109 CFTRI (1957). From apple juice. NCYC 373. (Medium 29, 28°C)

3256 IISc.A1 (1957). (*Torulopsis rosea*). (Medium 29, 28°C)

3257 IISc.A2 (1957). (*Torulopsis rosea*). (Medium 29, 28°C)

3258 IISc.A3 (1957). (*Torulopsis rosea*). (Medium 29, 28°C)

3259 IISc.A4 (1957). (*Torulopsis rosea*). (Medium 29, 28°C)

***Metschnikowia reukaufii* Pitt and Miller.**

(Syn *Candida reukaufii*).

3324 PRL-199 (1966). (Medium 29, 28°C)

3335 PRL 303/64 (1966). (Medium 29, 28°C)

NADSONIA

NADSONIA

***Nadsonia elongata* Konokotina.**

3543 CCY-36-3-1(1987). *Betula* sp. ATCC 10644 and 24180; NRRL Y-1568; CBS 2594. (Medium 29, 28°C)

NEMATOSPORA

NEMATOSPORA

***Nematospora coryli* Peglion.**

(Syn. *Nematospora phaseoli*).

3544 CCY-56-1-3 (1987). ATCC 10661; NRRL Y-1618. (Medium 29, 28°C)

OOSPORIDIUM

OOSPORIDIUM Stautz.

***Oosporidium margaritiferum* Stautz.**

(Syn. *Trichosporon margaritiferum*).

3330 PRL 264 (1966). (Medium 29, 28°C)

3536 CCY-30-4-1(1987). Isolated from slime flux on lime tree. Production of ubiquinone-10 (U.S. Patent 4,070,244, 1978). Type culture

(Lodder J." The Yeasts-A Taxonomic Study" 1162, North Holland Pub. Co. Amsterdam, 1970). ATCC 10676; NRRL Y-1519; CBS 2531; IFO 1208. (Medium 29, 28°C)

PACHYSOLEN

PACHYSOLEN

***Pachysolen tannophilus* Boiden and Adzet.**

- 3445** NCYC 614 (1982). Tanning liquor. Type culture (Bull.Soc.Mycol. France **73**,331,1957). Produces ethanol from D-Xylose (Biotechnol. Lett. **3**, 89 & 415,1981; Biotechnol. Bioeng.**24**, 371,1982; U.S. Pat. **4**,359,534). Conversion of wheat straw cellulose, hemicellulose to ethanol (ibid, **24**,1105,1982). Production of ethanol from D-galactose and glycerol (Enzyme Microbiol.Tech. **4**, 349, 1982). Produces NADPH-linked D-Xylose reductase and NAD-linked xylitol dehydrogenase (Biotechnol. Bioeng. **27**, 302, 1985). Produces xylitol dehydrogenase (FEMS Microbiol.Lett. **25**, 195, 1984). ATCC 32691; CBS 4044; NRRL Y-2460. (Medium 29, 28°C)
- 3502** Forest Product Laboratory USDA, Wisconsin (1985). Strain 4 enriched on nitrate broth and plated out on urea agar. Xylose fermentation. (Medium 29, 28°C)
- 3503** Forest Product Laboratory USDA, Wisconsin (1985). Strain 7 enriched on nitrate broth and plated on nitrate agar. Xylose fermentation. (Medium 29, 28°C)
- 3504** Forest Product Laboratory USDA, Wisconsin (1985). Strain 4 enriched on nitrate broth and plated out on nitrate agar. Xylose fermentation. (Adv.Biochem. Engn. Biotech. **27**, 73, 1983; Appl. Microbiol. Biotechnol. **19**, 256, 1984; Enz. Microbiol.Tech. **6**, 255, 1984). References also applicable for 3502, 3503 and 3504. (Medium 29, 28°C)
- 3505** NRRL Y-2460 (1985). Same as NCIM 3445.
- 3508** Forest Product Laboratory USDA, Wisconsin (1985). UV-27. Xylose fermentation. (Medium 29, 28°C)
- 3550** CCY-53-1-1(1987). Same as NCIM 3445.

PACHYTICHOSPORA

PACHYTICHOSPORA

***Pachytichospora transvaalensis* (van der Walt) van der Walt.**

(Syn. *Saccharomyces transvaalensis*).

- 3328** PRL112 (1970). (Medium 29, 28°C)
- 3381** PRL 112 A(1970). (Medium 29, 28°C)

PICHIA

PICHIA Hansen.

***Pichia ambrosiae*. (van der Walt and Scott)**

(See Hormoascus ambrosiae).

***Pichia angusta* (Teunisson et.al.) Kurtzman.**

(See Hansenula polymorpha).

***Pichia anomola* (Hansen Kurtzman).**

(Syn. *Hansenula anamola*).

3341 PRL 1737 (1966). (Medium 29, 28°C)

3342 PRL Y-566 (1966). (Medium 29, 28°C)

***Pichia carsonii* Phaff and Knapp.**

3416 NCYC 474 (1971). (*Pichia vini*). (*Debaryomyces vini*). From spoiled wine, Germany. Type culture of *P.vini*. (Zentr. Backteriol.II Abt **98**, 36, 1938). ATCC 24214; CBS 810; IFO 0795,1214 and 1215; NRRL Y-1459 and Y-7595. (Medium 29, 28°C)

3420 NCYC 537 (1971). (*Pichia carsonii*, strain 54-200). (*Pichia vini*) From slime flux of *Quercus Kelloggii*. (Antonie van Leeuwenhoek **22**,117,1956). (Medium 29, 28°C)

***Pichia farinosa* (Linder) Hansen.**

3461 ATCC 20210 (1983). Production of xylitol (Appl. Microbiol.**18**, 1031, 1969; U.S. Pat.3,619,369). Produces glycerol. (Biotechnol. Lett. **6**,103,1984). (Medium 19 / 29, 28°C)

3496 Same as NCIM 3461.

***Pichia fermentans* Lodder**

3408 NCYC 98 (1921).(*Saccharomyces exiguus*). (Medium 29, 28°C)

3638 Deposited by Microexpress, Goa (2008). ATCC 10651. (Medium 29, 28°C)

***Pichia fluxuum* (Phaff and Knapp) Kreger-van Rij.**

(Syn. *Debaryomyces fluxorum*).

3417 NCYC 544 (1958). From slime flux of *Quercus Kelloggii*.Type culture (Antonie van Leeuwenhoek, **22**, 117, 1956). CBS 2287; ATCC 24239. (Medium 29, 28°C)

***Pichia guilliermondii* Wickerham.**

3251 Type culture. (Medium 29, 28°C)

***Pichia haplophila* Shifrine and Phaff.**

3421 NCYC 549 (1951). Ex-type strain from bark beetles (Mycologia **48**,45,1956.) (Medium 29, 28°C)

Pichia kudriavzevii

3652 Deposited by Dr. Anu Appaiah, CSIR-CFTRI (2013). Isolated from Coffee pulp. Produces extracellular pectinases under acidic conditions, decomposition of coffee pulp as consortium. GeneBank No. KC 841145 (Medium 29, 28°C)

3653 Deposited by Dr. Anu Appaiah, CSIR-CFTRI (2013). Isolated from Coffee pulp. Produces extracellular pectinases under acidic conditions, decomposition of coffee pulp as consortium. GeneBank No. KC 841146 (Medium 29, 28°C)

3654 Deposited by Dr. Anu Appaiah, CSIR-CFTRI (2013). Isolated from Coffee pulp. Produces extracellular pectinases under acidic conditions, decomposition of coffee pulp as consortium. GeneBank No. KC 841147 (Medium 29, 28°C)

***Pichia ohmeri* (Etchells and Bell) Kreger van Rij.**

3517 Ys2 (1985). Received from National Sugar Institute, Kanpur (Medium 29, 28°C)

***Pichia pastoris* (Guilliermond) Phaff.**

3327 PRL 208 (1966). (Medium 29, 28°C)

- 3490 ATCC 28485 (1984). Exudate of oak. Type culture (Antonie van Leeuwenhoek **22**, 113, 1956). Production of single-cell protein from oxygenated hydrocarbons (U.S.Pat. 4,226,939) CBS 704, NRRL Y-1603. (Medium 29, 28°C)
- 3491 HUT 7288 (1984). Hiroshima University, Dept. of Ferm. Technology, P. B. No. 85200, San Diego, California 92138-9216, USA (Medium 29, 28°C)
- 3632 Deposited by Dr. Kotwal, NCL, Pune (2008). (Medium 29, 28°C)
- 3633 Deposited by Dr. Kotwak, NCL, Pune (2008). (Medium 29, 28°C)
- Pichia pijperi* van der walt and Tscheuschner.**
- 3363 PRL 101 (1966). (Medium 29, 28°C)
- Pichia polymorpha* Klocker.**
(See *Debaryomyces polymorphus*).
- Pichia rhodanensis* (Ramirez & Boidin) Phaff.**
- 3346 PRL 430 (1966). (Medium 29, 28°C)
- Pichia stipitis* Pignal.**
- 3497 CBS 5773 (1985). From insect larvae.Type culture (The Yeasts, A Taxonomic Study 3rd ed.369,1984).Production of ethanol from D-Xylose (Appl. Environ. Microbiol. **47**,1221, 1984 : Biotech. Lett. **7**, 431, 1985). ATCC 58376, NRRL Y-7124. (Medium 29, 28°C)
- 3498 CBS 6054 (1985). Produces ethanol from xylose (Appl.Environ. Microbiol. **47**, 1221, 1984). ATCC 58785. (Medium 29, 28°C).
- 3499 CBS 5774 (1984). Xylose fermentation. (Medium 29, 28°C)
- 3506 CBS 5775 (1985). Xylose fermentation.(Medium 29, 28°C)
- 3507 CBS 5776 (1985). Isolated from insect larvae. Produces ethanol from xylose. (Appl. Environ. Microbiol. **47**, 1221,1984). ATCC 58784. (Medium 29, 28°C)
- Pichia toletana* (Socias et.al.) Kreger van Rij.**
- 3422 NCYC 555 (1971). (*Pichia xylosa*). Isolated from Drosophila miranda. (Antonie van Leeuwenhoek **22**,152,1956). (Medium 29, 28°C)
- Pichia trehalophila* Phaff,Miller and Spencer.**
- 3354 PRL 509 (1966). (Medium 29, 28°C)
- Pichia vanriji***
(See *Debaryomyces vanriji*).
- Pichia vini* (Zimmerman) Phaff.**
(See *Pichia carsonii*).

PROTOTHECA

PROTOTHECA

Prototheca moriformis

- 3334 PRL 60-50 (1966). (Medium 29, 28°C)
- 3347 PRL 60-50A (1966). (Medium 29, 28°C)
- 3546 CCY-70-2-1 (1987). (Medium 29, 28°C)

PSEUDOZYMA

PSEUDOZYMA

Pseudozyma hubeiensis

- *3574 KY-1, Deposited by K. B. Bastawde (1991). Isolated from wood sample Production of 4 (S) hydroxy-1(R)-acetoxy cyclopent-2-ene (Biotech. Lett. **14**, 785, 1992). Production of high levels of cellulase-free xylanase (J. Ind. Microbiol. **13**, 220, 1994; Bioresource Technol. **63**, 187, 1998; Bioresour. Technol. **100**, 6488-6495, 2009). NCYC D3995 (Medium 29, 28°C).

RHODOSPORIDIUM

RHODOSPORIDIUM

Rhodospiridium dibovatum

- 3657 Deposited by Dr. Nene, NCL, Pune (2013). Pigment production. GeneBank No. EU 871504 (Medium 29 or 70, 30°C)
- 3658 Deposited by Dr. Nene, NCL, Pune (2013). Pigment production. GeneBank No. EU 871505 (Medium 29 or 70, 30°C)

***Rhodospiridium toruloides* Banno.**

- 3547 CCY-62-2-2 (1987). (*Rhodotorula gracilis*). From wood pulp from coniferae. Mating type alpha (J. Gen. Appl. Microbiol. **13**, 167, 1967). Production of phenylalanine ammonia-lyase (J. Biol. Chem. **246**, 2977, 1971). Produces phosphodiesterase. (Hokkokogaku **58**, 349, 1980). Lipid production (Proc. Biochem. **18**, 4, 1983 ; J. Ferment. Technol. **60**, 243, 1982; J. Amer. Oil Chem. Soc. **60**, 1281, 1983). ATCC 10788 and 15385; CBS 14; IFO 0559; NCYC 921; NRRL Y-1091. (Medium 29, 28°C)
- 3641 Deposited by Dr. Nene, NCL, Pune (2010). Isolated from geothermal soil, USA. NRRL Y-27012, 13C40. Carotenoids production. (Medium 29, 28°C)
- 3642 Deposited by Dr. Nene, NCL, Pune (2010). Isolated from geothermal soil, USA. NRRL Y-27013, 25C. Carotenoids production. (Medium 29, 28°C)
- 3643 Deposited by Dr. Nene, NCL, Pune (2010). NRRL-Y-17902, CBS 6681. Carotenoids production. (Medium 29, 28°C)

RHODOTORULA

RHODOTORULA Harrison

***Rhodotorula glutinis* (Fresenius) Harrison.**

- 3168 NCYC 155 (1953).(*Torula rubra*). (Proc. Trans. Roy. Soc. Can. **22**, 187, 1928). (Medium 29, 28°C)
- 3169 NCYC 162 (1953). (*Levure de rose*). (Medium 29, 28°C)
- 3170 NCYC 61 (1953).(*Rhodotorula glutinis* var. *rufula*). (Proc. Trans. Roy. Soc. Can. **22**, 187, 1928). (Medium 29, 28°C)
- 3353 PRL R-533 (1966). (Medium 29, 28°C)
- 3379 PRL (1956). NCYC 59. (Medium 29, 28°C)

- *3593** Mutant, deposited by Dr. R. V. Gadre (Not for distribution). Production of β -carotene (Appl. Microbiol. And Biotechnol. **55**, 423-427, 2001; Lett. Appl. Microbiol. **33**, 12-16, 2001; J. Indust. Microbiol. & Biotechnol. **26**, 327-332, 2001; Lett. Appl. Microbiol. **34**, 1-5, 2002; J Appl. Microbiol. **95**, 584-590, 2002). (Medium 29, 28°C).
- *3605** Mutant 32 (2001). Deposited by Dr. R.V. Gadre. Mutant strain of *Rhodotorula glutinis* NCIM 3353. Production of β -carotene (Bioresource Technol. **76**, 53, 2001). (Medium 29, 28°C).
- Rhodotorula graminis* di Menna.**
- 3426** NCYC 502 (1971). Ex type strain from grass (J. Gen. Microbiol. **18**, 269, 1958). (Medium 29, 28°C)
- Rhodotorula marina* Phaff et.al.**
- 3415** NCYC 541 (1971). (*Rhodotorula minuta*). Ex type strain from Shrimp, Texas. (Mycologia **44**, 431, 1952). ATCC 36236; CBS 2365; IFO 0928. (Medium 29, 28°C)
- Rhodotorula minuta* (Saito) Harrison.**
- 3359** PRL RS-55 (1966). (Medium 29, 28°C)
- 3427** NCYC 539 (1971). (*Rhodotorula texensis*). Ex type strain from shrimp (Mycologia **44**, 437, 1952). (Medium 29, 28°C)
- 3656** Deposited by Dr. Sanjay Nene, NCL (2013). For pigment production. GeneBank No. EU 871501 (Medium 29 or 70, 30°C)
- 3659** Deposited by Dr. Sanjay Nene, NCL (2013). For pigment production. GeneBank No. EU 871496 (Medium 29 or 70, 30°C)
- Rhodotorula mucilaginosa* (Jorgensen) Harrison.**
(See *Rhodotorula rubra*).
- Rhodotorula rubra* (Demme) Lodder.**
- 3171** NCYC 66 (1961). (*Rhodotorula mucilaginosa*). (Proc. Trans. Roy. Soc. Can. **2**, 187, 1928). (Medium 29, 28°C)
- 3172** IISc(1958). (*Rhodotorula mucilaginosa*). NCYC 66. (Medium 29, 28°C)
- 3173** NCYC 195 (1961). Pink yeast from canned olives. (Medium 29, 28°C)
- 3174** CFTRI 17 (1956). (Medium 29, 28°C)
- 3175** NCYC 67 (1956). Red yeast. (Medium 29, 28°C)
- 3260** IISc.(1957). (Medium 29, 28°C)
- 3325** PRL 251(1966). (*Rhodotorula mucilaginosa*). (Medium 29, 28°C)
- 3395** NCYC 158 (1971). (*Rhodotorula mucilaginosa*). (Proc. Trans. Soc. Can. **22**, 187, 1928). (Medium 29, 28°C)
- Rhodotorula* sp.**
- 3560** Deposited by A. A. Khatri, Four Eyes Research (P) Ltd. Pune (1990). (Medium 29, 28°C)

SACCHAROMYCES

SACCHAROMYCES Meyen and Hansen.

Saccharomyces bisporus (Naganishi) Lodder and Kreger-van Rij.

(See *Zygosaccharomyces bisporus*).

Saccharomyces carlsbergensis Hansen.

(See *Saccharomyces cerevisiae*)

***Saccharomyces cerevisiae* Hansen.**

- 3044** IISc A6 (1946). Steinberg strain No 675. (Medium 29, 28°C)
3045 IFO 0209 (1946). Wine production. (Medium 29, 28°C)
3046 Hawai (1982). Deposited by Rajwansh. Wine yeast. (Medium 29, 28°C)
3047 Same as NCIM 3046.
3048 IISC 17 (1955). Walker's strain. (Medium 29, 28°C)
3050 NRRL 132 (1951). (Medium 29, 28°C)
3052 ATCC 2375 (1950). *R. Chodat 55 (Saccharomyces ellipsoideus* subsp. *montibensis*).
NRRL Y-145. (Medium 29, 28°C)
3053 ATCC 2359 (1951). *R. Chodat 50 (Saccharomyces ellipsoideus* subsp. *.fuliensis* var. *typica*). NRRL Y-44. (Medium 29, 28°C)
3054 ATCC 2365 (1946). *R. Chodat 56 (Saccharomyces cerevisiae* subsp. *vetrozensis*). NRRL Y-138. (Medium 29, 28°C)
3056 IISc.(1946). (*Saccharomyces carlsbergensis*). Estimation of vitamin B6. (Medium 29, 28°C)
3059 ATCC 4110 (1968). Grain distillery yeast. (Medium 29, 28°C)
3060 NCTC 906 (1942). Type Saaz, pitching yeast. ATCC 2704 and 10751, NRRL Y-239. (Medium 29, 28°C)
3061 IISc.(1949). Kluyver yeast. (Medium 29, 28°C)
3063 NCYC 176 (1957). (*Zygosaccharomyces priorianus*). (Medium 29, 28°C)
3064 NCYC 94 (1957). (*Saccharomyces ellipsoideus*). (Medium 29, 28°C)
3072 NRRL Y-44 (1957). Same as NCIM 3053. ATCC 2359. (Medium 29, 28°C)
3073 NCTC 1809 (1949). Preceptrol culture. F. W. Tanner (*Saccharomyces ilicis*). *Ilex equifolium*. Bottom yeast. ATCC 2341; NRRL Y-35 (Medium 29, 28°C)
3076 NRRL Y-129 (1951). Citrus fermentation (Indust. Eng. Chem. **28**, 1224, 1936). ATCC 2338; NCTC 467.(Medium 29, 28°C)
3077 ATCC 2373 (1948). Citrus fermentation. (Indust. Eng. Chem. **28**, 1224, 1936). Acid tolerant. NRRL Y-144. (Medium 29, 28°C)
3078 NRRL Y-567 (1951). Distillery yeast. (Medium 29, 28°C)
3079 NCTC 906 (1946). Same as NCIM 3060.
3082 IISc 45 (1951). Hansen's strain. (Medium 29, 28°C)
3083 NCTC 467 (1946). Same as NCIM 3076. (Medium 29, 28°C)
3084 Hawai (1982). Same as NCIM 3046. (Medium 29, 28°C)
3085 Hawai (1982). Same as NCIM 3046. (Medium 29, 28°C)
3087 ATCC 2365 (1952). *R. Chodat 56*. Same as NCIM 3054. (Medium 29, 28°C)
3090 ATCC 9763; NRRL Y-567 (1952). Preceptrol culture. L. J. Wickerham. Distillery yeast. Assay of candididin and amphotericin B (Code of Federal Regulations, Title 21, Part 436, 1980; U.S.Pharmacopeia 20th rev, 882, 1980; Brit. Pharmacopeia, **2**, A123, 1980; Analytical Microbiology, **2**, F. Kavanagh ed. Academic Press, New York, 162 and 173; M. R. McGinnis, Laboratory Handbook of Medical Mycology, Academic Press, 412, 1980); nystatin (ibid 164

- and 175: Code of Federal Regulation, Title 21, Part 446,181,1980: Brit. Pharmacopoeia 2, A123, 1980). No vitamin requirement (ibid.). Assay of antifongine (U.S.Pat.3,052,605). Cylinder-plate assay of nystatin and anisomycin in body fluids, feeds, milk and pharmaceutic preparations (Antibiot. Chemother **7**, 639, 1957). Produces arginase (Pl.Cell Physiol. **14**, 641, 1973). Assay of nystatin in feeds (AOAC Methods 42.264 ed. 267, 1980: J. AOAC **57**,536,1974), assay of natamycin (U.S.Pharmacopeia 20th rev. 5th suppl., 1098, 1984). Invertase activity (J. Biol. Chem. **255**, 6387, 1980). Oligosaccharide transfer in microsomes (ibid, **255**,11892,1980). Produces nicotinic acid (Biotech.Bioeng. **24**, 1319,1 982). Production of ethanol from saccharified whole corn mesh (Biotechnol. lett. **4**, 809, 1982). CBS 5900, CCY- 21-4-48, NCTC 10716, NCYC 87. (Medium 29, 28°C)
- 3091** NRRL Y-239 (1952). Same as NCIM 3060.
- 3092** IISC. (1949). (Medium 29, 28°C)
- 3095** NCTC isolate (1943). Alcohol production. (Medium 29, 28°C)
- 3097** NCTC isolate (1948). (Medium 29, 28°C)
- 3101** NCTC isolate (1948). (Medium 29, 28°C)
- 3107** NCTC isolate (1949). Produces alcohol. Java strain. (Medium 29, 28°C)
- 3131** Same as NCIM 3046.
- 3132** Same as NCIM 3046.
- 3157** NCYC 185 (1949).(*Saccharomycopsis fibuligera*) Yeast Frohberg. (Medium 29, 28°C)
- 3176** NCYC 79 (1947).R. Williams, Fleischmann baker's yeast. Assay of biotin (J. Am. Chem. Soc. **62**, 175, 1940). ATCC 7754; CBS 1368; IFO 1346; NRRL Y-977.(Medium 29, 28°C)
- 3177** ATCC 7752 (1965).Preceptrol culture. R. Williams. Gebruder Mayer yeast. Assay of pyridoxol, pyridoxamine and pyridoxine. Produces S-adenosylmethionine synethase (J. Bact. **121**, 267, 1975). ATCC 7752; CBS 1320; IFO 1234; NCTC 4614; NCYC 81; NRRL Y-973. (Medium 29, 28°C)
- 3178** IISc.1 (1957). Lindegren haploid strain No.13894. (Medium 29, 28°C)
- 3180** IISc.3 (1957). Tetraploid strain No.11296 x13894. (Medium 29, 28 °C)
- 3183** IISc.4 (1957). Diploid strain No.11296. (Medium 29, 28°C)
- 3185** IISc.5 (1959). Australian yeast. (Medium 29, 28°C)
- 3186** IISc.6 (1957). Mandya distillery strain.(Medium 29, 28°C)
- 3187** IISc.7 (1957). Kanpur strain. (Medium 29, 28°C)
- 3188** IISc.8 (1953). (Medium 29, 28°C)
- 3189** IISc.9 (1957).Wine yeast. Australian strain No.117. (Medium 29, 28°C)
- 3190** NCYC 77 (1946). Baker's yeast strain, requires thiamine, pantothenate and biotin. (Arch. Biochem. **14**, 369, 1947). (Medium 29, 28°C)
- 3191** ATCC 7753 (1956). R. J. Williams Old process strain. Inositol deficiency. (Antonie van Leeuwenhoek **44**, 25, 1978).CBS 1321, NCYC 86. (Medium 29, 28°C)
- 3193** PRL 1₂b (1951).Glycerol production.(Medium 29, 28°C)

- 3194 PRL F₂0 (1951).Glycerol production.(Medium 29, 28°C)
- 3196 NCYC 82 (1952).(Medium 29, 28°C)
- 3197 NCYC 83 (1952).C.L.strain 21. (Medium 29, 28°C)
- 3198 CFTRI 1 (1950).(Medium 29, 28°C)
- 3199 CFTRI 127 (1963).(Medium 29, 28°C)
- 3200 CFTRI 30 (1963).Wine yeast.(Medium 29, 28°C)
- 3201 CFTRI 5 (1963).Wine yeast.(Medium 29, 28°C)
- 3202 CFTRI 19 (1963).Wine yeast.(Medium 29, 28°C)
- 3203 IISc.(1952). Distillery yeast. Miraj strain.(Medium 29, 28°C)
- 3204 IISc.(1952). Distillery yeast. Daurala strain.(Medium 29, 28°C)
- 3205 IISc.(1952). Distillery yeast. Dhar strain.(Medium 29, 28°C)
- 3206 NCYC 96 (1952). (*Saccharomyces cerevisiae* var. *ellipsoidens*). Production of vinegar from apple juice. (Medium 29, 28°C)
- 3207 NCYC 124 (1956). (*Saccharomyces cerevisiae* var. *ellipsoidens*). A. Klocker (*Saccharomyces turbidens*).(J. Inst. Brew.**56**, 192,1950). (Medium 29, 28°C)
- 3208 Same as NCIM 3206.
- 3209 NCYC 93 (1956). (*Saccharomyces cerevisiae* var *ellipsoidens*). (Medium 29, 28°C)
- 3210 NCYC 113 (1956).(*Saccharomyces vini*).(Medium 29, 28°C)
- 3211 NCYC 125 (1956). (*Saccharomyces cerevisiae* var. *ellipsoidens*). (Exp. Cell Res.**15**, 214, 1958). (Medium 29, 28°C)
- 3212 NCYC 75 (1956). (*Saccharomyces cerevisiae* var. *ellipsoidens*). (Lab. Carlsberg 5, 1, 1900: J. Inst. Brew.**56**,192,1950). (Medium 29, 28°C)
- 3213 ATCC 9896 (1971). Assay of biotin (J. Bact. **92**, 913,1966). Production of urea amidolyase (J. Biol.Chem. **247**, 7539,1972). Yeast protein. (Eur. J. Appl. Microbiol. **2**,231,1976). Peptide transport and extracellular peptidase activity. (J. Bact. **143**, 1066, 1980). K. Dittmer strain Fleishman 139. CCY 21-4-46; NCYC 695. (Medium 29, 28°C)
- 3214 NRRL 1355 (1956). (*Saccharomyces cerevisiae* var. *ellipsoidens*). (Medium 29, 28°C)
- 3215 ATCC 4921 (1954). F. W. Fabian. (*Saccharomyces cerevisiae* var. *ellipsoidens*). French wine yeast. (Medium 29, 28°C)
- 3216 IISc E-2(1956). (*Saccharomyces chevalieri*). (Medium 29, 28°C)
- 3219 NCYC 73 (1961). F. W. Fabian (*Saccharomyces carlsbergensis*). Produces sterol-binding polysaccharides (Phytochemistry **14**, 2347 1975). Ethanol fermentation (Biotechnol. Bioeng. **21**,1401, 1979). Production of ethanol using membrane bioreactor. (Process Biochem. **19**, 204, 1984). NRRL Y-132; ATCC 2345. (Medium 29, 28 °C)
- 3220 NCYC74 (1961). (*Saccharomyces carlsbergensis*). Diploid and heterothallic. Assay of pantothenic acid.(Appl.Microbiol **14**,462, 1966: Analytical Microbiology, F. Kavanagh ed. Academic Press, NewYork 489 and 503,1963). Assay of inositol and pyridoxine (ibid 489). Assay of vitimin B6 in food exatracts (AOAC Methods 43,229 and 234, 1984). Assay of pyridoxal, pyridoxamine,and pyridoxine (Indust. Eng. Chem. **15**, 141, 1923; Med. Lab. Technol. **29**,160, 1972; J. Vitaminol. **18**, 90, 1972). Maltose fermentation (Mol. Gen. Genet. **115**,

- 80, 1972; *ibid*, **123**, 233, 1973). α -glucosidase synthesis (Biochim. Biophys. Acta **294**, 517, 1973; *ibid*, **204**, 590, 1970). NADH oscillations (J. Interdiscipl. Cycle Res. **10**, 41, 1979). Spatio-temporal organization (J. Cell Sci. **43**, 367, 1980). Produces proteinase B inhibitor I^B3 (Eur. J. Biochem. **101**, 325, 1979). Sterol synthesis (Biochem. Biophys. Acta **531**, 86, 1978). Does not carry 2micron DNA plasmid (J. Inst. Brew. **86**, 78, 1980). Produces niacin and niacin-related compounds (J. Nutr. Sci. Vitaminol. **28**, 179, 1982). Production of endodeoxyribo-nuclease-A (Eur. Pat. Off. Publ. NO 006,046,5 A2). Produces ergo-sterol (Biochem. Biophys. Res. Commun. **103**, **272**, 1981). Induction of giant cell (Radiat. Environ. Biophys. **23**, 19, 1984; *ibid*, **24**, 9, 1985). ATCC 9080; CCY-48-76; CBS 2354; IFO 0565; NCYC 74. (Medium 29, 28°C)
- 3221** NRRL Y-132 (1959). (*Saccharomyces carlbergensis*). (Medium 29, 28°C)
- 3222** NRRL Y-379 (1956). (*Saccharomyces carlbergensis*). (Medium 29, 28°C)
- 3223** Ottawa 865 (1952). (*Saccharomyces carlbergensis*). ATCC 10596; IFO 1264 and 0751; NRRL Y-379. (Medium 29, 28°C)
- 3224** Same as NCIM 3220.
- 3225** Same as NCIM 3220.
- 3226** NRRL Y-236 (1950). (*Saccharomyces carlbergensis*). (Medium 29, 28°C)
- 3227** IISc.12 (1955). (*Saccharomyces carlbergensis*). Smith strain. (Medium 29, 28°C)
- 3228** Same as 3219.
- 3230** NCYC 108 (1951). (*Saccharomyces italicus*). From Chianti grape must. (Medium 29, 28°C)
- 3233** NCYC 124 (1970). (*Saccharomyces turbidans*). (J. Inst. Brew. **56**, 192, 1950). (Medium 29, 28°C)
- 3262** IFO 0306 (1956). (*Saccharomyces sake*) Yabe; strain Kiku; HUT-GIB. (Medium 29, 28°C)
- 3269** CFTRI 127 (1970). (Medium 29, 28°C)
- 3273** Same as NCIM 3177.
- 3275** CFTRI Y-76 (1968). (Medium 29, 28°C)
- 3276** NRRL Y-3 (1970). (Medium 29, 28°C)
- 3278** Same as NCIM 3219.
- 3280** Same as NCIM 3223.
- 3281** CFTRI (1966). (*Saccharomyces cerevisiae* var. *ellipsoideus*). Wine production. Burgandy strain (Medium 29, 28°C)
- 3282** CFTRI 102 (1966). Wine yeast. (Medium 29, 28°C)
- 3283** CFTRI 103 (1966). Champagne wine. (Medium 29, 28°C)
- 3284** CFTRI 105 (1966). Cider wine. (Medium 29, 28°C)
- 3285** CFTRI 107 (1966). (Medium 29, 28°C)
- 3286** CFTRI 110 (1966). (*Saccharomyces cerevisiae* var. *ellipsoideus*). (Medium 29, 28°C)
- 3287** CFTRI 111 (1966). Champagne yeast. (Medium 29, 28°C)
- 3288** CFTRI 112 (1966). Alcohol production. (Medium 29, 28°C)

- 3300 CFTRI 369 (1966). Sherry wine.(Medium 29, 28°C)
 3301 CFTRI 370 (1966).Malaga wine.(Medium 29, 28°C)
 3302 CFTRI 371 (1966).Steinberg strain.(Medium 29, 28°C)
 3303 CFTRI 373 (1966).Pommard.(Medium 29, 28°C)
 3304 CFTRI 374 (1966).All purpose strain.(Medium 29, 28°C)
 3305 CFTRI 375 (1966).Tokay wine. (Medium 29, 28°C)
 3306 CFTRI 376 (1966).Maury wine.(Medium 29, 28°C)
 3307 CFTRI 377 (1966).British wine.(Medium 29, 28°C)
 3308 CFTRI 378 (1966).Champagne.(Medium 29, 28°C)
 3309 CFTRI 379 (1966).(Medium 29, 28°C)
 3310 CFTRI 380 (1966).Herrilberg wine.(Medium 29, 28°C)
 3311 CFTRI 381 (1966).Madira wine.(Medium 29, 28°C)
 3312 CFTRI 800 (1966). (*Saccharomyces carlbergensis*). (Medium 29, 28°C)
 3313 CFTRI 802 (1966). (Medium 29, 28°C)
 3314 CFTRI 803 (1966). (*Saccharomyces diastaticus*). (Medium 29, 28°C)
 3315 CFTRI 804 (1966). Wine strain.(Medium 29, 28°C)
 3316 CFTRI 805 (1966). Cider wine.(Medium 29, 28°C)
 3317 CFTRI 806 (1966). Brewery yeast.Manchester yeast.(Medium 29, 28°C)
 3318 CFTRI 807 (1966). Brewery strain. (Medium 29, 28°C)
 3319 CFTRI 808 (1966). Brewery strain. (Medium 29, 28°C)
 3321 CFTRI 810 (1966). (Medium 29, 28°C)
 3332 PRL 186 (*Saccharomyces uvarum*). (Medium 29, 28°C)
 3345 PRL SC-6 (1966) (Medium 29, 28°C)
 3361 PRL 111 (1969). (*Saccharomyces pastorianus*). (Medium 29, 28°C)
 3375 PRL RS-26 (1966). (Medium 29, 28°C)
 3389 NCYC 190. (*Saccharomyces logos*) (Medium 29, 28°C)
 3391 NCYC 520 (1971). (*Saccharomyces uvarum*).Bottom fermentation brewing strain.(Medium 29, 28°C)
 3392 NCYC 447 (1971). (*Saccharomyces diasticus*).From draughtbeer. (Medium 29, 28°C)
 3394 NCYC 625 (1971).(*Saccharomyces diasticus*), flocculant strain. (Medium 29, 28°C)
 3396 NCYC 186 (*Saccharomyces hybrid*).O.Winge Via British Fermentation Products Ltd. (hybrid K 471). (Medium 29, 28°C)
 3428 NCYC 368 (1971).(*Yorkshire type yeast CC2.5:1:4:4:3*). (Medium 29, 28°C)
 3429 NCYC 1001 (1971). British brewery strain (5:1:4:5:5). (Medium 29, 28°C)
 3430 NCYC 531 (1971). (*Saccharomyces uvarum* 1:5:5:5:3). Bottom fermenting brewing strain. (Medium 29, 28°C)
 3441 NCYC 584 (1971). Brewing yeast. (3:1:2:5:1). Dutch top fermentation. (Medium 29, 28°C)
 3451 Y-4 (*Saccharomyces fructum*). (Medium 29, 28°C)
 3452 E-15 (1979). Received from Medical Academic, Erfurt. (Medium 29, 28°C)

- 3453** E-47 (1979). Received from Medical Academic, Erfurt. (Medium 29, 28°C)
- 3454** E-77 (1979). Received from Medical Academic, Erfurt. (Medium 29, 28°C)
- 3455** ATCC 26602 (1982). D. Rose SA 23 (*Saccharomyces carlsbergensis*). Sugar refinery sample, England. High alcohol production from cane molasses, sugar tolerant (J. Appl. Bact. **35**, 499, 1972) Ethanol production at elevated temperatures (Biotechnol. Lett. **2**, 141, 1980). Kinetics of alcohol fermentation (Biotechnol. Bioeng. **21**, 1477, 1979). Highly flocculent yeast (Proc. Biochem. **11**, 10, 1976). Production of ethanol from molasses (J. Ferm. Technol. **62**, 297, 1984) and sweet sorghum juice (Biotechnol. Bioeng. **26**, 1126, 1984). CCY 48-88; NRRL Y-11857 and Y-11877; MTCC 36; NCYC 975. (Medium 29, 28°C)
- 3458** Uran (1982). Baker's yeast from commercial compressed yeast. "Tower Brand" of Indian Yeast Co. Ltd., Kegaon. (Medium 29, 28°C)
- 3473** ATCC 26109 (1984). E. cabib X 2180, R. K. Mortimer. Production of chitin synthetase zymogen (Biochem. Biophys. Res. Commun. **50**, 186, 1973). Produces protein inhibitors of tryptophan synthase (J. Biol. Chem. **249**, 4515, 1974). Genetic control of cell wall mannan (ibid **248**, 4660, 1973). NCYC 826. (Medium 29, 28°C)
- 3474** NCYC 861 (1984). a his4, leu 2MAL, 2Suc-. (Medium 29, 28°C)
- 3475** NCYC 862 (1984). a ade2, MAL-3, SUC-3, MEL-1, MGL-2, MGL-3. (Medium 29, 28°C)
- 3476** NCYC 863 (1984). a trp1, ura-3, MAL-4, MEL-1, MGL-3, Suc- gal-3 gal-4 (can self diploidise). (Medium 29, 28°C)
- 3477** NCYC 864 (1984). a ade1, trp5, MAL-6, Suc-. (Medium 29, 28°C)
- 3478** NCYC 865 (1984). α -gal-7, lys-2, tyr-1, his-4, leu-2, thr-4, MAL-2, trp-1, ade-6, arg-4, ura-4, Suc-. (Medium 29, 28°C)
- 3479** NCYC 866 (1984). α -gal-7, lys-2, try-1, his-4, MAL-2, trp-1, ade-6, arg-4, Suc-. (Medium 29, 28°C)
- 3480** NCYC 867 (1984). a ade-1, gal-1, ura 3, his-2, trp-5, leu-1, lys-7, met-2, MAL-3, Suc-2. (Medium 29, 28°C)
- 3486** NCYC (1984). 2C-8- α -Rec 4 (Medium 29, 28°C)
- 3492** ATCC 2345 (1984). Same as NCIM 3219.
- 3493** Y-1347 (1984). (Medium 29, 28°C)
- 3494** ATCC 24702 (1984). Production of 2-ketopantoyl lactone and 2-ketopantoic acid reductases (J. Biol. Chem. **247**, 4096, 1972). Farm scale production of fuel ethanol (Biotechnol. Bioeng. **24**, 1681, 1982). NRRL Y-2034. (Medium 29, 28°C)
- 3495** Same as NCIM 3219 and 3492.
- 3509** Same as NCIM 3455.
- 3510** NCYC 957 (1985). X 2180-1-B. Genetic hybrid strain, alpha SUC 2, mal gal 2, CUP 1 (Medium 29, 28°C)
- 3511** NCYC 956 (1985). X-2180-1A. Genetic hybrid strain, a SUC-2, mal gal-2, CUP-1. (Medium 29, 28°C)

- 3512 NCYC 959 (1985). X-2928-3D-1C. Genetic hybrid strain, α -ade,1-gal, 1-leu, 1-his, 2-ura, 3-trp 1-met 14. (Medium 29, 28°C)
- 3514 NCYC 961 (1985).2C-4.Genetic hybrid strain.alpha arg 4-2/+ arg 4-17/+ CUP 1/+ thr 1/+; rec 5 leu 1 trp 5 trp 1his 5 ade 2. (Medium 29, 28°C)
- 3521 YS-9 National Sugar Institute, Kanpur (1985). Thermotolerant yeast. (Medium 29, 28°C)
- 3523 Y-7 (1985). Ethanol tolerant yeast isolated by D.V. Gokhale. (Enzyme Microb. Technol. **8**, 623-627, 1986). (Medium 19 / 29, 28°C)
- 3524 Y-10 (1985). (*Saccharomyces capensis*). Ethanol tolerant yeast isolated by D.V. Gokhale. (Enzyme Microb. Technol. **8**, 623-627, 1986). (Medium 19 / 29, 28°C)
- 3525 SH-12 (1985). (*Saccharomyces italicus*). (Medium 19 / 29, 28 °C)
- 3526 SH-29 (1985). (*Saccharomyces capensis*). (Enzyme Microbiol.Tech. **8**, 481,1986; Biotechnol. Lett. **11**, 213-216, 1989). (Medium19 / 29, 28°C)
- 3528 Strain 17. Received from J. D. Bullock, Manchester University, UK (1987). (*Saccharomyces uvarum*). Flocculant and auto-immobilising yeast. (Medium 29, 28°C)
- 3529 Quick rise flocculating baker's yeast from red star Co., California, USA (1987). (Medium 29, 28°C)
- 3555 Deposited by Dr. H. Polasa, Hyderabad (1988). Patented culture. (Medium 29, 28°C)
- 3558 Deposited by Dr. H. Polasa, Hyderabad (1988). Mutant strain. Increase in thiamine content. (Medium 29, 28°C)
- 3559 ATCC 2366 (1988). Preceptrol culture. R. Chodat 52. (*Saccharomyces pastorianus* subsp *arbiqnesis*). Assay of actidione (J. Bact. **56**, 283, 1948). Assay for antifungal antibiotic-A 9145 (Antimicrob. Agents Chemother **3**, 49, 1973). Assay of cyclohexamide (Analytical Microbiology **2**, F. Kavanagh, ed. Academic Press, New York., 251, 1972). Bioautography of kalafungin (Chromatography of anti-biotics, G.H.Wagman and M.J.Winstein, Elsevier, Amsterdam, 96,1973) and streptovitacins (ibid.,177). Assay of trace toxic and carcinogenic chemicals (Dev. Ind. Microbiol. **22**, 739, 1981). CBS 1539,CCY 21-4-61,NRRL Y-139. (Medium 29, 28°C)
- 3561 MTCC 36 (1990). Ethanol production from molasses. Same as NCIM 3455.
- 3562 MTCC 427 (1990). Killer K1+K2. (Medium 29, 28°C)
- 3563 MTCC 463 (1990). (Medium 29, 28°C)
- 3564 MTCC 464 (1990). Deposited by H.Sivaraman. Continuous fermentation plant. Killer character containing ds-RNA (Antonie van Leeuwenhoek **44**, 59,1978; J. Inst. Brew. **79**, 137, 1973). Killer type K2 (J. Ferm.Technol. **63**, 421, 1985). ATCC 36900; NCYC 738. (Medium 29, 28°C)
- 3567 TR 690 (1990). Deposited by Dr. A. A. Khatri. Alcohol production from molasses (Medium 29, 35-37°C)

- 3569 ATCC 38659 (1990). N. Gunge, B 511-4c. Protoplast fusion (Japan.J. Genet. **53**, 41, 1978). Genotype: α / ade1/ade1 his4/his4 leu2/leu2 thr4/thr4 w-C^SE^SO^S rho+. (Medium 29, 28°C)
- 3570 ATCC 26603 (1991). D. Rose Sa 28. Jamaican cane juice sample. High alcohol production from molasses, sugar tolerant (J. Appl. Bact. **35**,499,1972). Production of ethanol from wood acid hydrolyzate, (Dev.Ind.Microbiol.**23**,351,1982) NRRL Y-11878. (Medium 29, 28°C)
- 3571 Same as NCIM 3569.
- 3576 Deposited by H.Sivaraman (1991). (*Saccharomyces uvarum*) 2518 20 uv mutant. (Medium 29, 28°C)
- 3577 Deposited by H.Sivaraman (1991).(*Saccaromyces uvarum*).2518 Ran mutant (Medium 29, 28°C)
- 3578 DBV 6459 (1992). Same as NCIM 3564.
- 3579 MTCC 475 (1992). Deposited by H.Sivaraman. Killer toxin producer, diploid. (J. Ind. Microbiol. **15**, 94, 1995). (Medium 29, 28°C)
- 3580 MTCC (1993). A patent culture, Not for distribution, deposited by Mr. Sanjay Nene in 1973.(Medium 29, 28°C)
- 3581 SH-16 (1993). From molasses pits, Malegaon. Alcohol production at 35°C. Salt tolerance. (Medium 29, 28°C)
- 3582 SH-46 (1993). From molasses pits, Warana Sugar Factory. Alcohol production at 35 °C.Salt tolerance. (Medium 29, 28°C)
- 3583 SH-48 (1993). From molasses pits, Someshwar. Alcohol production at 35°C. Salt tolerance .(Medium 29, 28°C)
- 3584 IMTECH 1-6 (1994). Patent culture.(Medium 29, 28°C)
- 3585 IMTECH 2-11(1994). Patent culture.(Medium 29, 28°C)
- 3586 IMTECH 1-19(1994). Patent culture. (Medium 29, 28°C)
- 3587 IMTECH "B"(1994). Patent culture. (Medium 29, 28°C)
- 3588 IMTECH 1-16(1994). Patent culture. (Medium 29, 28°C)
- 3594 ATCC 834 (1999).Preceptrol culture.F. W. Tanner (*Saccharomyces cerevisiae* var. *Ellipsoideus*). Champagne yeast. Production of ethanol from whey (Biotechnol. Bioeng. **19**, 1019-1035, 1977). (Medium 29, 28°C)
- 3604 Deposited by D.D. Karad. Resistant to sodium metabisulphite / potassium metabisulphite (0.125 g/L). Grape wine production. (Medium 29, 28°C)
- 3606 Strain 1/43 (2001). Isolated by Zita Lobo, TIFR, Mumbai.Genotype α -pfk1-1 his2 trp1 (Yeast **10**, 199-209, 1994). (Medium 29, 28°C)
- 3607 Strain pdc2T17B (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype α -pdc2-2 ura3 leu2 trp1 (Genetics **145**, 587-594, 1997). (Medium 29, 28°C)
- 3608 pdc2 Δ T14D (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype α -pdc2 Δ :: TRP1 trp1 leu2 ura3 (Genetics **145**, 587-594, 1997). (Medium 29, 28°C)
- 3609 Strain 5T15A (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype α -pfk1-1 pfk3-6 ura3 52 leu1 trp1 (Yeast **10**, 199-209, 1994). (Medium 29, 28°C)

- 3610** Strain 6/24 (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype α -p_{fk}1-1 p_{fk}3-4 ura3 52 leu2 trp1 (Yeast **10**, 199-209, 1994). (Medium 29, 28°C)
- 3611** Strain 6/25 (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype α -p_{fk}3-4 leu2 trp1 (Yeast **10**, 199-209, 1994). (Medium 29, 28°C)
- 3612** Strain 113/2 (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype α -p_{fk}1-1 p_{fk}3-4 ura3 52 leu2 trp1 (pP_{FK}3-2) (Yeast **10**, 199-209, 1994). (Medium 29, 28°C)
- 3613** Strain pdc2 Δ xsp37 (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype α -pdc2 Δ ::URA3xsp37 ura3 trp1 (Genetics **145**, 587-594, 1997). (Medium 29, 28°C)
- 3614** Strain pdc2-2T21B (2001). Isolated by Zita Lobo, TIFR, Mumbai. α pdc2-2ura3 leu2 trp1 (J. Genetics **73** (**1**),17-32, 1994). (Medium 29, 28°C)
- 3615** Strain pdc1-1T1D (2001). Isolated by Zita Lobo, TIFR, Mumbai. α pdc1-1ura3 leu2 trp1 (J. Genetics **73** (**1**),17-32, 1994). (Medium 29, 28 °C)
- 3616** Strain pdc1-1T2C (2001). Isolated by Zita Lobo, TIFR, Mumbai. α pdc1-1ura3 leu2 trp1 (J. Genetics **73** (**1**),17-32, 1994). (Medium 29, 28 °C)
- 3617** Strain D308 (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype α -ade1 his2 trp1 met14 h_{xk}1-2h_{xk}2-2 (Genetics **86**, 727-744, 1977). (Medium 29, 28°C)
- 3618** Strain D3010 (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype a ura3 met14 h_{xk}1 -2h_{xk}2-2 (Genetics **105**, 501-515, 1983). (Medium 29, 28°C)
- 3619** Strain 711 (2001). Isolated by Zita Lobo, TIFR, Mumbai. Genotype a h_{xk}1 -1h_{xk}2-1 (Genetics **105**, 501-515, 1983). (Medium 29, 28°C)
- 3622** ATCC 2601 (2001). (*Candida robusta*). Assay of amphotericin B (fungizone) (Laboratory handbook of medical mycology. New York: Academic Press; 1980, pp.412-419). Assay of nystatin (fungicidin) (US Food & Drug Administration. Microbiological Methods. Code of Federal regulatio Title 21: Part 436, subpart D; US Pharmacopeia, 1995, pp. 1690-1696). NRRL Y-53; DSM 3774; NCYC 853. (Medium 29, 28°C)
- 3630** Deposited by Microexpress, Goa (2008). Same as NCIM 3090. (Medium 29, 28°C)
- 3640** Deposited by Prof. Seshagiri Rao, Andhra University, visakhapatanam. Isolated from female toddy saps. Strain no. GS2. Ethanol production (Medium 29, 28°C)

***Saccharomyces cerevisiae* var *ellipsoideus* (Hansen) Dekker.**

(See *Saccharomyces cerevisiae*).

***Saccharomyces chevalieri* Guillermond.**

(See *Saccharomyces cerevisiae*).

***Saccharomyces diastiticus* Andrews & Gilliland. Ex. Van der Walt.**

(See *Saccharomyces cerevisiae*).

***Saccharomyces fragilis* Jorgensen.**

(See *Kluyveromyces marxianus*).

***Saccharomyces italicus* Castelli**

(See *Saccharomyces cerevisiae*).

***Saccharomyces lodderi* van der Walt and Tochn.**

(See *Klyveromyces lodderi*).

***Saccharomyces logos* van Laer and Denamur,cf.**

(See *Saccharomyces cerevisiae*).

***Saccharomyces marxianus* Hansen.**

(See *Kuyveromyces marxianus*).

***Saccharomyces mellis* (Fabian and Quinet) Lodder and van Rij.**

(See *Zygosaccharomyces bisporus*).

***Saccharomyces pastorianus* Hansen**

(See *Saccharomyces cerevisiae*).

***Saccharomyces rouxii* Boutrou.**

(See *Zygosaccharomyces rouxii*).

***Saccharomyces transvaalensis* a vander Walt.**

(See *Pachytichospora transvaalensis*).

***Saccharomyces turbidans* Hansen.**

(See *Saccharomyces cerevisiae*).

***Saccharomyces uvarum* Beijerinck.**

(See *Saccharomyces cerevisiae*).

SACCHAROMYCODES

SACCHAROMYCODES Hansen.

***Saccharomycodes ludwigii* Hansen.**

3261 IFO 0798 (1956).Type culture (The Yeasts-A Taxonomic Study, 3rd ed. 396, 1984). ATCC 11313; CBS 821; NRRL Y-12793 (Medium 29, 28°C)

3552 Same as NCIM 3261.

SACCHAROMYCOPSIS

SACCHAROMYCOPSIS Schionning.

***Saccharomycopsis capsularis* Schionning**

(Syn *Endomycopsis capsularis*).

3322 PRL-R₂ A (1970). (Medium 29, 28°C)

***Saccharomycopsis fibuligera*.(Lindner) Klocker.**

3154 IFO 0103 (1961). (*Endomycopsis fibuligera*). HUT 7206 . (Medium 29, 28°C)

3155 IFO 0104 (1961). (*Endomycopsis hordei*). HUT 7208. (K., Rep. Centr. Lab. S. Manchuria R.Co.1,1,1914). (Medium 29, 28°C)

3156 IFO 0105 (1961). (*Endomycopsis hordei*). Asporogenous. (Medium 29, 28°C)

3160 NRRL 77 (1961). (*Endomycopsis fibuligera*). (Medium 29, 28°C)

3161 NRRL Y-1062 (1961). (*Endomycopsis fibuligera*).(Labatt 240) Produces amylase (J. Appl. Bact. **44**, 373, 1978: Appl. Environ. Microbiol. **39**, 387, 1980). Produces glucoamylase,a-amylase and

- biomass (J. Inst. Brew. **88**, 313, 1982). Reduces chemical oxygen demand (COD) of potato effluent (J. Food Process. Preserv. **8**, 175, 1984). ATCC 9947. (Medium 29, 28°C)
- 3162** NRRL 78 (1961). (*Endomycopsis fibuligera*). (Medium 29, 28°C)
- 3241** NRRL Y-76 (1970). (*Endomycopsis hordei*). ATCC 2088. R. Chodat 116. (Medium 29, 28°C)
- 3242** NRRL Y-3 (1970). F. W. Tanner, (*Endomyces lindneri*). From Chinese yeast for preparation of hoang-chiu. ATCC 2080. (Medium 29, 28°C)

Saccharomycopsis lipolytica

(See *Yarrowia lipolytica*).

SCHIZOSACCHAROMYCES

SCHIZOSACCHAROMYCES Lindner.

***Schizosaccharomyces octosporus*. Beijerinck.**

- 3297** CFTRI 364 (1966). (Medium 29, 28°C)
- 3331** PRL F2(1966). (Medium 29, 28°C)
- 3384** MACS(1971). CBS 6208. (Medium 19 / 29, 28°C)

***Schizosaccharomyces pombe* Lindner**

- 3360** PRL 30(1966). (Medium 29, 28°C)
- 3457** CBS 357(1982). *S. mellacei*, ex cane-sugar molasses. Good alcohol producer. (Medium 29, 28°C)

Schizosaccharomyces sloottii

- 3388** CBS 207 (1971). (Medium 19 / 29, 28°C)

SCHWANNIOMYCES

SCHWANNIOMYCES Klocker.

***Schwanniomyces occidentalis* Klocker.**

- 3424** NCYC 133 (1965). From soil. (Medium 29, 28°C)
- 3459** NRRL Y-2469 (1993). Isolated from soil. Type culture of *Schwanniomyces alluvius* (Antonie van Leeuwenhoek **26**, 183, 1960). Produces thermosensitive amylase (Plant Cell Physiol. **25**, 757, 1984). Produces single-cell protein from potato starch (J. Ferment. Technol. **64**, 71, 1986). ATCC 26074; CBS 4516. (Medium 29, 28°C)

SPOROBOLOMYCES

SPOROBOLOMYCES Kluver and van Niel.

***Sporobolomyces holsaticus* Windisch, ex. Yarrow and Fell.**

- 3411** NCYC 420 (1971). CMI 56574. (Medium 29, 28°C)

***Sporobolomyces roseus* Kluver & van Niel.**

- 3383** NCIM isolate (1967). (Medium 29, 28°C)
- 3554** NCYC 1463 (1988). Leaves of *Solanum tuberosum*. Teaching strain. Ballistospores. (Medium 29, 28°C)

***Sporobolomyces salmonicolor* (Fischer and Brebeck) Kluver and van Niel.**

- 3434** NCYC 424 (1971). CMI 56578. (Medium 29, 28°C)

TORULASPORA

TORULASPORA Lindner.

***Torulaspora delbrueckii* (Lindner) Lindner.**

3295 CFTRI 362 (*Torulaspora rosei*) (Medium 29, 28°C)

TORULOPSIS

TORULOPSIS Berlese.

***Torulopsis anomala* Lodder & Kreger-van Rij.**

(See *Torulopsis versatilis*).

***Torulopsis apicola* Hajsig.**

(See *Candida apicola*).

***Torulopsis candida* (Saito) Lodder.**

(See *Candida famata*).

***Torulopsis capsuligenus* van der Walt and van Kerken.**

(See *Filobasidium capsuligenum*).

***Torulopsis colliculosa* (Hartmann) Saccardo.**

(See *Candida colliculosa*).

***Torulopsis etchellsii* Lodder and Kreger van Rij.**

(See *Candida etchellsii*).

***Torulopsis ethanolitolerans* Rybarova et.al.**

(Syn. *Candida ethanolitolerans*).

3539 CCY-26-58-3 (1987).J. Rybarova R7. Industrial Yeast. Type culture.

(Z. Allg. Mikrobiol. **21**,749, 1981). ATCC 46860. (Medium 29, 24°C)

***Torulopsis famata* (Harrison) Lodder and Kreger van Rij.**

(See *Torulopsis candida*).

***Torulopsis glabrata* (Anderson) Lodder and de Vries.**

(See *Candida glabrata*).

***Torulopsis gropengiesseri* (Harrison) Lodder.**

(See *Candida gropengiesseri*).

***Torulopsis lipofera* (den Dooren de Jong) Lodder.**

(See *Lipomyces lipofera*).

***Torulopsis magnoliae* Lodder and Kreger van Rij.**

(See *Candida magnoliae*).

Torulopsis rosea

(See *Metschnikowia pulcherrima*).

***Torulopsis* sp.**

(Syn. *Candida* sp).

3370 PRL-Y-1445 (1966). (Medium 29, 28°C)

***Torulopsis stellata* Kroemer and Krumbholz.**

(See *Candida stellata*).

***Torulopsis utilis*.**

(See *Candida utilis*).

***Torulopsis versatilis* (Etchells & Bell) Lodder and van Rij.**

(See *Candida versatilis*).

TRIGNOPSIS

TRIGNOPSIS

Trignopsis variabilis

- 3635** Deposited by Dr. Gadre, NCL, Pune (2008). MTCC 1354, ATCC 10679, CBS 1040 (Medium 29, 28°C)

TREMELLA

TREMELLA

Tremella mesenterica Fries.

- 3530** NRRL Y-6158 (1987). Slow growth at 20-30°C. Produces glucan. (Can. J. Chem. **49**, 1804, 1971). ATCC 42220. (Medium 29, 28°C)

TRICHOSPORON

TRICHOSPORON Behrendii.

Trichosporon beigeli (Kuchenmeister and Rabenhorst) Vuillemin.

(Syn. *Trichosporon cutaneum*).

- *3326** PRL RS-II (1966). Production of 4-(R)-hydroxycyclopent-2-en-1 (S)-acetate (Tetrahedron Asymmetry **11**, 2965, 2000). ATCC PTA-3079 (Medium 29, 28°C).

- 3404** PRL 19(1971). (Medium 29, 28°C)

Trichosporon capitatum Diddens and Lodder.

- 3412** NCYC 473 (1971). From tongues of cattle suffering from test and mouth disease. (Trans. Br. Mycol. Soc. **41**, 320, 1958). (Medium 29, 28°C)

Trichosporon cutaneum (de Beurmann et. al.) Ota.

(See *Trichosporon beigeli*).

Trichosporon lodderi Phaff, Mrak and Williams.

(See *Candida tropicalis*).

Trichosporon margaritiferum.

(See *Oosporidium margaritiferum*).

Trichosporon pullulans (Lindner) Diddens and Lodder.

(Syn. *Endomycopsis vernalis*).

- 3149** IFO 0110 (1961). HUT-OUT (K.Saito). (J. Ferment. Technol. **9**, 6, 1931). (Medium 29, 28°C)
- 3150** Ottawa 719 (1960). Bacteriology and Dairy Research Science Service Division, Ottawa, Japan (Medium 29, 28°C)
- 3151** Ottawa 808(1963). Fat production. (BIOS Final Report 69 1963). Division of Applied Biology, Ottawa, Japan. (Medium 29, 28°C)
- 3152** NRRL Y-1485 (1966). (Mycotaxon **6**, 391, 1977). ATCC 9331; CBS 2533; IFO 0114. (Medium 29, 28°C)
- 3153** NRRL Y-1522 (1966). Same as NCIM 3436.
- 3436** NCYC 477 (1971). From air. Type culture. (Lodder, J., "The Yeasts-A Taxonomic Study." 1342, 1970, North Holland Pub. Co. Amsterdam: Mycotaxon **6**, 391, 1977). Produces α -amylase and Gluco amylase (Can. J. Microbiol. **32**, 47, 1986). ATCC 10677; NRRL Y-1522; CBS 2532; IFO 1232. (Medium 29, 28°C)

***Trichosporon* sp.**

- 3369 PRL Y-226 (1966). (Medium 29, 28°C)
3382 PRL 2264 A (1966). (Medium 29, 28°C)

TRIGONOPSIS

TRIGONOPSIS Schachner.

***Trigonopsis variabilis* Schachner.**

- 3344 PRL 57 (1966). (Medium 29, 28°C)
3409 NCYC 378 (1971). (Medium 29, 28°C)

WILLIOPSIS

WILLIOPSIS (Zender).

***Williopsis californica* (Lodder) von Arx.**

(Syn. *Hansenula californica*).

- 3438 NCYC 496 (1971). Soil isolate (Tech.Bull.No.1029, U. S. Dept. Agric. 1951). NRRL Y-1680.(Medium 29, 28°C)

***Williopsis saturnus* (Klocker) Kurtzman. Zender var.saturnus.**

- 3163 NCYC 22 (1961).(*Hansenula saturnus* var.*saturnus*). Isolated from soil.Carlbergensis strain. (Medium 29, 28°C)
3164 NCYC 23 (1961). (*Wilia saturnus*).IFO 0117. (Medium 29, 28°C)
3277 NRRL Y-838 (1970). (Medium 29, 28°C)
3298 CFTRI 365 (1966). (Medium 29, 28°C)

XANTHOPHYLLOMYCES

XANTHOPHYLLOMYCES

Xanthophyllomyces dendrorhous

- 3644 Deposited by Dr. Nene, NCL, Pune (2010) (*Phaffia rhodozyma*). Production of asthaxanthin. NRRL-Y-10921, ATCC 24202. (Medium 29, 22°C)
3645 Deposited by Dr. Nene, NCL, Pune (2010) (*Phaffia rhodozyma*). Production of asthaxanthin. NRRL-Y-27348, (Medium 29, 22°C)

YARROWIA

YARROWIA

***Yarrowia lipolitica* (Wickerham et.al.) van der Walt and von Arx.**

- 3229 NCYC 153 (1951) (*Saccharomycopsis lipolitica*, *Candida lipolitica*, *Torula lipolitica*). (Proc. Trans. Roy. Soc. Can. 22,187,1928). Citric acid producer. (Medium 29, 28°C)
3450 Y-13(1982). (*Endomycopsis lipolitica*). (Medium 29, 28°C)
3472 ATCC 8661(1984).(*Candida lipolitica*). Lederle Labs; Purdue University13.Production of yeast protein (Eur.J. Appl.Microbiol. 2, 231, 1976). Degradation and fermentation of hydrocarbons (Biotech. Bioeng. 15, 649, 1973;ibid, 16, 1399, 1974; Nature 192, 892, 1961;

- Arch. Mikrobiol. 60, 246, 1968; Can. J. Microbiol. 15, 1255, 1969; Adv. Appl. Microbiol 14, 249, 1971). Production of citric and isocitric acid (U.S. Pat. 3,873,424). Phosphatase activity (Microbiologica 2, 107, 1979). NCYC 825; IFO 1631; NRRL Y-1095. (Medium 29, 28°C)
- 3589** NCL isolate, Deposited by A. Pant (1996). Isolated from Arabian sea water. (Medium 29 in sea water, 28°C)
- 3590** MTCC 35 (1995). (*Candida lipolytica*). Deposited by A. Pant. Asexual state (J. Appl. Bacteriol. 28, 224, 1965). (Medium 29 in sea water, 28°C)
- 3639** Deposited by Dr. Gokhale, NCL, Pune (2007). Production of cold active lipase (Bioresour. Technol. 102, 10663-10670, 2011). (Medium 29, 28°C).

ZYGOSACCHAROMYCES

ZYGOSACCAROMYCES

Zygosaccharomyces bisporus Naganishi.

(Syn. *Saccharomyces bisporus*).

- 3265** CFTRI (1968). (Medium 29, 28°C)
- 3296** CFTRI 363 (1966). (Medium 29, 28°C)
- 3386** MACS 10 (1971). (Medium (Medium 19 / 29, 28°C)
- 3447** CFTRI (1950). (Medium 29, 28°C)

Zygosaccharomyces rouxii (Boutroux) Yarrow.

(Syn. *Saccharomyces rouxii*).

- 3263** CFTRI 350 (1950). (Medium 29, 28°C)
- 3264** CFTRI 351 (1966). (Medium 29, 28°C)
- 3291** CFTRI 352 (1966). (Medium 29, 28°C)
- 3292** CFTRI 353 (1966). (Medium 29, 28°C)
- 3293** CFTRI 354 (1966). (Medium 29, 28°C)
- 3362** PRL P3 A (1970). (Medium 29, 28°C)
- 3376** PRL 411 (1970). (Medium 29, 28°C)
- 3385** MACS (1971).Ex honey.CBS 6205 (Medium 19 / 29, 28°C).
- 3460** ATCC 13356 (1983).Noda Inst. Sci. Res. Strain m3 (*Saccharomyces rouxii*)Production of glycerol (U.S.Pat.3,012, 945). Production of glycerine (Appl.Microbiol.11,274,1963). Inhibition by acetic acid (Appl.Environ. Microbiol.43,245,1982). Production of glutaminase for flavor-enhancing of foods (U.S.Pat.3,717,470). Produces extra-cellular Medium 19 / 29, 28°C)
- 3651** MTCC 2635, NCYC 381, CBS 7804 (2012) Used in Preservative testing : Antimicrobial Effectiveness Test Corry, J. Appl. Bacteriol. , 1976, 40, 269 & 277.(heat resistance), James et al., Int.J.Syst.Bacteriol. 46: 189-194, 1996 (ITS1 & 2) (Medium 29, 28°C)

ZYGOSPORIUM

ZYGOSPORIUM

Zygosporium aromyces

- 3405 (1971). (Medium 29, 28°C)
Zygosporium priorionus
3267 (1970). (Medium 29, 28°C)
3299 CFTRI 366 (1966). (Medium 29, 28°C)

UNIDENTIFIED

UNIDENTIFIED

Unidentified yeast

- 3572 AH 2215, deposited by P.M.B.group, N.C.L (1991). (Medium 29, 28°C).
3623 NCIM isolate (2004). Isolated from oil polluted soil. (Medium 29, 28°C)
3624 NCIM isolate (2004). Isolated from oil polluted soil. (Medium 29, 28°C)
3625 NCIM isolate (2004). Isolated from sea water. (Medium 29, 28°C)
3626 NCIM isolate (2004). Isolated from decayed oyster from oil-polluted area. (Medium 29, 28°C)