

NATIONAL COLLECTION OF YEAST CULTURES

Catalogue of genetically defined *Saccharomyces cerevisiae* strains 2005.

Address

National Collection of Yeast Cultures
IFR Enterprises Ltd.
Norwich Research Park
Colney, Norwich
NR4 7UA UK

Telephone +44 (0)1603 255274
FAX +44 (0)1603 458414
Email ncyc@bbsrc.ac.uk
Web site <http://www.ncyc.co.uk>

NCYC Services

- Supply of freeze dried cultures
- NCYC catalogue
- Identification to species level
- Rapid DNA Fingerprinting
- Confidential safe deposit of cultures
- Deposit of cultures for patent purposes under the Budapest Treaty
- Strain database
- Contract research & consultancy
- Supply of Yeast Identification Program for PCs

Saccharomyces cerevisiae Genetic Collection

Wild Types

956.	X2180-1A, ATCC 26786	a	SUC2 mal gal2 CUP1	R.K.Mortimer
957.	X2180-1B, ATCC 26787	α	SUC2 mal gal2 CUP1	R.K.Mortimer
857.	158 a		Can.J.Microbiol., 1977, 23 , 441	G.Stewart
858.	159 α		Can.J.Microbiol., 1977, 23 , 441	G.Stewart

Killer Strains

713.	KIL-k2 (from draught beer)		Antonie van Leeuwenhoek, 1978, 44 , 59	M.Richards
738.	KIL-k2 (brewery contaminant)		Antonie van Leeuwenhoek, 1978, 44 , 59	A.P.Maule
761.	KIL-k3, CBS 7903 (from palm wine)		J.Ferm.Technol., 1985, 63 , 421-429	N.Okafor
1001.	KIL-k2 (brewing yeast)		Antonie van Leeuwenhoek, 1978, 44 , 59	
1561.	A8209B his4-864 KIL-k1			G.Fink via T.Young

Mapping Strains

958.	X2928-3D-1A	a	ade1 gal1 leu1 his2 ura3 trp1 met14	R.K.Mortimer
959.	X2928-3D-1C	α	ade1 gal1 leu1 his2 ura3 trp1 met14	R.K.Mortimer
1786.	STX 147-4C	α	ade1 his7 tyr1 gal1 cly8 ade5 aro2 met13 lys5 trp5 cyh2 arg4 lys1 ura4 gal2 ade2 rad56	L.Johnston
1620.	STX77-6C	α	gal1 his4 trp1 hom3 ura3 CUP1 ilv3 ade3 rad52 rna1	L.Johnston
1618.	X4119-19C	a	his7 tyr1 cdc9 trp4 aro1B hom2 rad2 thr1 lys11 gal2 ade2	L.Johnston
1661.	X4120-19D	α	lys2 leu2 pet14 rad(?) rna3 ade8 aro1D met10 ade5 leu1 CUP1	L.Johnston
1619.	STX66-4A	a	rad18 lys4 trp1 prt3 CUP1 gal2 ade2 met2 pha2	L.Johnston
1617.	K396-22B	α	spo11 ura3 ade1 his1 leu2 lys7 met3 trp5	L.Johnston
1614.	K381-9D	α	spo11 ura3 ade6 arg4 aro7 asp5 met14 lys2 pet17 trp1	L.Johnston
1613.	K398-4D	a	spo11 ura3 ade6 arg4 aro7 asp5 met14 lys2 pet17 trp1	L.Johnston
1611.	K382-23A	a	spo11 ura3 can1 cyh2 ade2 his7 hom3	L.Johnston
1612.	K382-19D	α	spo11 ura3 can1 cyh2 ade2 his7 hom3 tyr1	L.Johnston
1616.	K393-35C	α	spo11 ura3 his2 leu1 lys1 met4 pet8	L.Johnston
1615.	K399-7D	a	spo11 ura3 his2 leu1 lys1 met4 pet8	L.Johnston

Transformable Strains

1383.	DBY 747, ATCC 44774	a	leu2-3 leu2-112 his3-Δ1 trp4(?) -289 ura3-52	Gene, 1979, 8 , 17-24.	J.F.Makins
1392.	MC16	α	leu2-3 his4-712(FS) SUF2 ade2-1 lys2-1	Nature, 1981, 275 , 104.	J.F.Makins
1445.	LL20	α	his3-11 his3-15 leu2-3 leu2-112	J.Bacteriol., 1979, 140 , 73-82	A.Coddington
1527.	MD40/4C	α	leu2-3 leu2-112 his3-11 his3-15 ura2 trp1 CAN s		B.Bowen
1528.	AH22	a	leu2-3 leu2-112 his4 canR		B.Bowen
1627.	D13-1A (YNN6)	a	trp1 his3-532 gal2		L.Johnston
1771.	cdc9-1 (L89-6C)	a	cdc9-1 leu2 ade1 ade2 ura1 lys2		L.Johnston

General Strains

804.	D160	a	ura3 his1 arg6 trp2 ade1		J.F.T.Spencer
805.	A364A	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1	J.Mol.Biol., 1976, 105 , 427-443	J.F.T.Spencer
806.	x112	α	ade8-2 trp5-2 lys2-1 ura1-1		J.F.T.Spencer
808.	GRH1	a	trp1 ade1 his7 ura1 gal1		G.Stewart
1395.	S1896D	a	met7 trp1 leu1 ade1 gal1 gal2 pet		R.K.Mortimer
1396.	F33	α	met7 gal2 pet		R.K.Mortimer
1623.	X2181-1B	a	gal1 his2 trp1 ade1		
1626.	CG379 ade+	α	his7-2 leu2-3 leu2-112 trp1-289 ura3-52 (ade5 rev)		
1631.	g440-7C	α	ade4 trp1		L.Johnston
1632.	D273-11A	α	ade1 his1 trp2		L.Johnston
1662.		α	arg met		L.Johnston
1663.		a	arg met		L.Johnston
1664.		α/α	arg 2μ +		L.Johnston
1719.	A364A ρ-	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 ρ-		L.Johnston
1720.	B635	a	cyc1-115 his1-1 lys2-1 trp2		L.Johnston
1772.	L126-R9	a	leu2 hom3-10 his1		L.Johnston
1790.		a/a	arg his 2μ +		L.Johnston
1812.	L126-2B	a	leu2 hom3-10 his1		L.Johnston
1821.	S13	a	his4 ura1 trp5 gal2		L.Johnston
1822.	S49	a	his4 ura1 trp5 gal2 ade6		L.Johnston
1961.	GRF18	α	leu2-3 leu2-212 his3-11 his3-15 canR		G.Fink via D.MacKenzie

Acid and Alkaline Phosphatase Regulatory Mutant

1356.	A 137	α pho80-2	J.Bacteriol., 1973, 113 , 727-738	A.Coddington
1357.	A 138	a pho80-2	J.Bacteriol., 1973, 113 , 727-738	A.Coddington

Adenine Requiring Mutants

828.	a	ade1	J.F.T.Spencer
829.	α	ade1	J.F.T.Spencer
1577.	a	ade1 leu1	B.Pearson
1652.	a	ade1 leu2	B.Pearson
830.	a	ade2	J.F.T.Spencer
802.	α	ade2 (lys)	J.F.T.Spencer
832.	a	ade3	J.F.T.Spencer
833.	α	ade3 (ura)	J.F.T.Spencer
834.	a	ade4	J.F.T.Spencer
835.	α	ade4 (ura)	J.F.T.Spencer
836.	a	ade5	J.F.T.Spencer
837.	α	ade5 (ura)	J.F.T.Spencer
838.	a	ade6	J.F.T.Spencer
839.	α	ade6 (trp)	J.F.T.Spencer
840.	a	ade7	J.F.T.Spencer
841.	α	ade7	J.F.T.Spencer
842.	a	ade8	J.F.T.Spencer
843.	α	ade8 (lys trp)	J.F.T.Spencer

Cell Division Cycle Mutants

1654.	cdc3-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc3-1	L.Johnston
1642.	cdc4-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc4-1	L.Johnston
1643.	cdc5-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc5-1	L.Johnston
1723.	cdc6-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc6-1	L.Johnston
1729.	cdc7-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc7-1	L.Johnston
1730.	cdc8-141	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc8-141	L.Johnston
1667.	cdc8-198	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc8-198	L.Johnston
1771.	cdc9-1 (L89-6C)	a	cdc9-1 leu2 ade1 ade2 ura1 lys2	L.Johnston

1788.	cdc9-1 rev1		cdc9-1 rev1	L.Johnston
1672.	cdc9-12	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc9-12	L.Johnston
1673.	cdc9-13	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc9-13	L.Johnston
1791.	cdc9-3	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc9-3 2 μ +	L.Johnston
1731.	cdc9-4	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc9-4	L.Johnston
1732.	cdc9-6	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc9-6	L.Johnston
1807.	cdc9-7 (L82-2B)	a	cdc9-7 trp1 lys2 his7	L.Johnston
1808.	cdc9-7 (L94-4D)	a	cdc9-7 trp1 ura3	L.Johnston
1670.	cdc9-7	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc9-7	L.Johnston
1633.	cdc9-7 ρ -		cdc9-7 ρ -	L.Johnston
1671.	cdc9-8	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc9-8	L.Johnston
1674.	cdc10-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc10-1	L.Johnston
1655.	cdc11-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc11-1	L.Johnston
1733.	cdc12-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc12-1	L.Johnston
1734.	cdc13-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc13-1	L.Johnston
1735.	cdc14-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc14-1	L.Johnston
1736.	cdc18-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc18-1	L.Johnston
1737.	cdc19-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc19-1	L.Johnston
1738.	cdc26-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc26-1	L.Johnston
1665.	cdc28-4 L31-7a	a	cdc28-4 tyr1	L.Johnston
1675.	cdc30-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc30-1	L.Johnston
1676.	cdc31-1	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc31-1	L.Johnston
1722.	cdc36-16 SR661-2	a	cdc36-16 trp1-1 ura1	L.Johnston
1666.	cdc37-1 SR672-1	a	cdc37-1 ura1 cyh2	L.Johnston
1641.	cdc39-1 SR665-1	α	cdc39-1 met2 tyr1 cyh2	L.Johnston
1677.	cdc41	a	ade1 ade2 ura1 his7 lys2 tyr1 gal1 cdc41	L.Johnston

CDC-Diploids

1753.	cdc6 (MH18)		cdc6/cdc6 gal1/gal1 ade1/ade1 +/ade2 his1/his7 trp2/+ +/ura1 +/lys2 +/tyr1 2 μ +	L.Johnston
1754.	cdc13 (MH20)		cdc13/cdc13 gal1/gal1 ade1/ade1 +/ade2 his1/his7 trp2/+ +/ura1 +/lys2 +/tyr1 2 μ +	L.Johnston
1752.	cdc15-1 (MH15)		cdc15-1/cdc15-1 gal1/gal1 ade1/ade1 +/ade2 his1/his7 trp2/+ +/ura1 +/lys2 +/tyr1 2 μ +	L.Johnston
1755.	cdc17 (MH21)		cdc17/cdc17 gal1/gal1 ade1/ade1 +/ade2 his1/his7 trp2/+ +/ura1 +/lys2 +/tyr1 2 μ +	L.Johnston
1756.	cdc21 (MH21)		cdc21/cdc21 gal1/gal1 ade1/ade1 +/ade2 his1/his7 trp2/+ +/ura1 +/lys2 +/tyr1 2 μ +	L.Johnston
1718.	JC2 (L31-9a [a]/L31-2c [α])		cdc9/cdc9 cdc28/cdc28 ade/+ tyr1/tyr1 canR/+ +/his1	L.Johnston

1797. cdc36(MH30) α/a gal1/gal1 ade1/+ his1/+ trp2/+ +/trp1 +/ura1

Disomic Strains

961.	2C-4	α	arg4-2/+ arg4-17/+ CUP1/+ thr1/+; rec5 leu1 trp5 trp1 his5 ade2	Radiation Res., 1972, 49 , 133 & 148	R.K.Mortimer
960.	2C-8	α	arg4-2/+ arg4-17/+ CUP1/+ thr1/+; rec4 leu1 trp5 trp1 his5 ade2	Radiation Res., 1972, 49 , 133 & 148	R.K.Mortimer

Dumbbell-formers

1823.	dbf1 (L123-8A)	α	trp1 ura3 dbf1		L.Johnston
1824.	dbf2 (L119-7D)	α	trp? ura3 ade1 dbf2		L.Johnston
1750.	dbf2-3 (D128)	α	ade1 his1 trp2 dbf2-3		L.Johnston
1825.	dbf3 (L124-11D)	a	ura3 dbf3		L.Johnston
1751.	dbf3-1 (D128)	α	ade1 his1 trp2 dbf3-1		L.Johnston
1747.	dbf8-1 (D128)	α	ade1 his1 trp2 dbf8-1		L.Johnston
1748.	dbf9-1 (D128)	α	ade1 his1 trp2 dbf9-1		L.Johnston
1813.	dbf10-1 (D141)	α	ade1 his1 trp2 dbf10-1		L.Johnston
1814.	dbf11-1 (D132)	α	ade1 his1 trp2 dbf11-1		L.Johnston
1815.	dbf13-1 (D101)	α	ade1 his1 trp2 dbf13-1		L.Johnston
1816.	dbf14-1 (D22)	α	ade1 his1 trp2 dbf14-1		L.Johnston
1817.	dbf14-2 (D25)	α	ade1 his1 trp2 dbf14-2		L.Johnston
1818.	dbf14-3 (D44)	α	ade1 his1 trp2 dbf14-3		L.Johnston
1819.	dbf15-1 (D22)	α	ade1 his1 trp2 dbf15-1		L.Johnston
1820.	dbf20-1 (D175)	α	ade1 his1 trp2 dbf20-1		L.Johnston
1794.	MH25	α	dbf2 gal1-D5 ade1 his1 trp2 + + + +		L.Johnston
		a	dbf2 gal1-A + his1 trp2 ura1 tyr1 ade2 his		
1795.	MH26	α	dbf3 gal1-D5 ade1 his1 trp2 + + + +		L.Johnston
		a	dbf3 gal1-a ade1 + + lys2 ura1 tyr1 ade2		
1796.	MH27	α	dbf4 gal1-D5 ade1 his1 trp2 + + + +		L.Johnston
		a	dbf4 gal1-A ade1 his1 + lys2 tyr1 ade2 his7		

Drug Resistant Mutants

1621.	g716-5a ho	a	can1 hom3-10 his1-7		L.Johnston
1622.	309	α	ade2-R8 metX can1-11		L.Johnston
1717.	L39-8C	α	trp1 or trp2 lys2 canR.		L.Johnston
1628.	320	a	rme ade2 ura3 leu1 can1-11 cyh2-21		L.Johnston

1716.	α 131-20	α	ade2-R8 cyh2 can1 leu1 ura3		L.Johnston
Fermentation Markers					
807.	x 464-20C	α	trp1 ade1 his2 leu1 gal1		J.F.T.Spencer
859.	168	a	ade1 gal1 lys2 tyr1 his7 ura1 ade2	Can.J.Microbiol., 1977, 23 , 441	G.Stewart
1789.	L58.3b		gal1 ade1 or ade2		L.Johnston
1638.	L57-15b		gal1 his7 lys2 tyr1		L.Johnston
1625.	Z65	a/ α	gal1-1/gal1-4 lys2-1/lys2-2 tyr1-1/tyr1-2 his7-2/his7-1 ade1/+ +/ade2 +/ura		L.Johnston
1757.	M1-2B (YNN 27)	α	trp1 ura3-52 gal2		L.Johnston
865.	205	α	gal7 lys2 tyr1 his4 leu2 thr4 MAL2 trp1 ade6 arg4 ura4 suc-	Can.J.Microbiol., 1977, 23 , 441	G.Stewart
866.	206	a	gal7 lys2 tyr1 his4 MAL2 trp1 ade6 arg4 suc-	Can.J.Microbiol., 1977, 23 , 441	G.Stewart
1624.	108-3A	a	gal80 ade6 thr4 trp1 his3 \mp		L.Johnston
1636.	L53-14C	a	gal80 gal1-A tyr1 lys2 his7 ade1(or ade2) ura1		L.Johnston
1635.	L52-36	α	gal80 gal1-D5 ade1 his1 (or his8) trp1(or trp8)		L.Johnston
1787.	106-3D	α	gal80 ura1 his1		L.Johnston
1634.	MH10	α /a	gal80/gal80 gal1-D5/gal1-A trp2/+ +/ura1 +/tyr1 +/lys2 +/his2 +/ade1 or 2		L.Johnston
867.	207	a	ade1 gal1 ura3 his2 trp5 leu1 lys7 met2 MAL3 SUC2	Can.J.Microbiol., 1977, 23 , 441	G.Stewart
864.	194	a	ade1 trp5 MAL6 suc-	Can.J.Microbiol., 1977, 23 , 441	G.Stewart
862.	191	a	ade2 MAL3 SUC3 MEL1 MGL2 MGL3	Can.J.Microbiol., 1977, 23 , 441	G.Stewart
861.	190	a	his4 leu2 MAL2 suc-	Can.J.Microbiol., 1977, 23 , 441	G.Stewart
863.	192	a	trp1 ura3 MAL4 MEL1 MGL3 suc- gal3 gal4	Can.J.Microbiol., 1977, 23 , 441	G.Stewart
2252.		a/ α	trp1/+ his2/+ ade1/+ STA2/STA2	Biochem.J., 1988, 249 , 163	I.Evans
Flocculation Markers Ref.: Can.J.Microbiol., 1977, 23 , 441					
860.	169	α	ilv2 his FLO1(FLO4)		G.Stewart
868.	209	a	ilv2 FLO1(FLO4)		G.Stewart
869.	209	α	FLO1(FLO4)		G.Stewart
870.	210	a	ade1 gal1 trp1 ura3 his2 leu1 met14 FLO1(FLO4)		G.Stewart
General Amino Acid Permease Mutant					
1391.	Σ 1278b wild type (parent)			J.Bacteriol., 1970, 103 , 770	R.Robbins
1390.	2512C	a	gap1	J.Bacteriol., 1970, 103 , 770	R.Robbins
Mutagenicity Testing Strain Ref.: Mol.Gen.Genet., 1979, 168 , 125					
1454.	MP1, ATCC 42131	a/ α	ade2/+ his8/+ trp5-12/trp5-21		R.Fahrig

Nuclear Fusion Defective

916.	JCK5-5A	α	his4-A15 ade2-1 can(R) kar1-1	J.Conde
917.	ABq 21	α	his4-A15 ade2-1 can(R) kar1-2 nys(R)	J.Conde

Phosphoglycerate Kinase Mutant

2266.	BC3	leu2-3.112 trp1.1 ura3-52 pgk::TRP1	Nucl.Acids Res, 1988, 16 , 1333-1348	P.Piper
-------	-----	-------------------------------------	---	---------

Note: Should be grown in: 2% peptone, 1% yeast extract, 2% ethanol and 3% glycerol. Growth is strongly inhibited by glucose and other fermentable sugars.

Radiation Sensitive Strains

1639.		a	rad1 rad18 (+ other unlisted requirements)	L.Johnston
1799.	CM31/1d	α	rad1 leu his ade lys	L.Johnston
1800.	CM26/4c		rad4-3 his leu	L.Johnston
1763.	CM4/1d	α	rad5 ura	L.Johnston
1764.	CM5/1b	α	rad7 leu	L.Johnston
1805.	CM21/9a	a	rad9 ade arg leu lys	L.Johnston
1806.	CM30/2C	α	rad11 ade arg his leu	L.Johnston
1801.	CM1/8a	α	rad18 ade2 leu2 his4	L.Johnston
1640.	g739-2a	a	rad50-1 can1 his1 ade2(or adeX)	L.Johnston
1721.	g739-2d	α	rad50-1 hom3-10 his1 trp2	L.Johnston
1802.	CM1/1C	α	rad51 lys2 leu2 his4	L.Johnston
1803.	CM8/1a	a	rad54 ura his leu	L.Johnston
1804.	CM9/1a	a	rad55 leu his	L.Johnston
1749.	g725-12a	α	rad57-1 gal1-D5 hom3-10 his1-7	L.Johnston

RAD Diploid strains

1630.	SK1 (L57.15b/L58.3b)	gal1 het3 his7/+ lys2/+ tyr1/+ gal1-A/gal1-D5 +/ade1(or ade2) homothallic	L.Johnston
1637.	g761-10A [α] g763-5c [a]	rad51-3 gal1-A his1-1 + + tyr? lys? trp? + + + hom3-10 spo13-1 lys? tyr1 ura1 ade2	
1792.	g650-4a [α] g650-12a[a]	rad52-1 CAN(s) + + + ade4 ho rad52-1 can(R) hom3-10 his1-7 trp + ho	

RNA mutants

1745.	rna3-3 (D43)	α	ade1 his1 trp2 rna3-3	L.Johnston
1746.	rna3-4 (D167)	α	ade1 his1 trp2 rna3-4	L.Johnston
1758.	ts96	α	ade1 his1 trp2 rna11-2 dds1-1	L.Johnston

Sporulation Deficient Mutants

1614.	K381-9D	α	spo11 ura3 ade6 arg4 aro7 asp5 met14 lys2 pet17 trp1	L.Johnston
1612.	K382-19D	α	spo11 ura3 can1 cyh2 ade2 his7 hom3 tyr1	L.Johnston
1611.	K382-23A	a	spo11 ura3 can1 cyh2 ade2 his7 hom3	L.Johnston
1616.	K393-35C	α	spo11 ura3 his2 leu1 lys1 met4 pet8	L.Johnston
1617.	K396-22B	α	spo11 ura3 ade1 his1 leu2 lys7 met3 trp5	L.Johnston
1613.	K398-4D	a	spo11 ura3 ade6 arg4 aro7 asp5 met14 lys2 pet17 trp1	L.Johnston
1615.	K399-7D	a	spo11 ura3 his2 leu1 lys1 met4 pet8	L.Johnston

Historic Strains - *Genetic strains deposited before 1965.*

(i) Hybrid Brewing Strains

Strains with known flocculation characteristics obtained by crossing strains NCYC 227-232 with themselves and with their progeny.

Deposited by R.S.W.Thorne (1951). Ref.: R.S.W.Thorne, C.r.Trav.Lab.Carlsberg, 1951, **25**, 101.

- 227. Strain K, Manchester brewery strain, 1:5:4:2:1.
- 228. Strain R, Sheffield brewery strain, 5:1:1:3:5.
- 229. Strain T, London brewery strain, 5:1:1:4:5.
- 230. Strain U, Birmingham brewery strain, 5:1:1:4:5.
- 231. Strain V, Burton-on-Trent brewery strain, 1:5:5:3:1.
- 232. Strain S, American Yeast Foam, ATCC 60782, 1:1:3:5:1.
- 205. Hybrid 1 (NCYC 227 x NCYC 228)
- 206. Hybrid 2 (NCYC 227 x NCYC 229)
- 207. Hybrid 3 (NCYC 227 x NCYC 230)
- 208. Hybrid 4 (NCYC 227 x NCYC 230)
- 209. Hybrid 5 (NCYC 227 x NCYC 231)
- 210. Hybrid 6 (NCYC 227 x NCYC 231)
- 211. Hybrid 7 (NCYC 230 x NCYC 231)
- 212. Hybrid 15 (NCYC 227 x NCYC 232)
- 213. Hybrid 18 (NCYC 220 x NCYC 232)
- 214. Hybrid 24 (NCYC 222 x NCYC 221)
- 215. Hybrid 30 (NCYC 223 x NCYC 221)
- 216. Hybrid 38 (NCYC 224 x NCYC 226)
- 217. Hybrid 39 (NCYC 225 x NCYC 226)

- 218. Hybrid 48 (NCYC 226 x A162/1 ex NCYC 216)
- 219. Hybrid 64 (NCYC 227 x A162/3 ex NCYC 216)
- 220. Single spore isolate A2/3 strain from NCYC 212
- 221. Single spore isolate A38/3 strain from NCYC 213
- 222. Single spore isolate A48/1 strain from NCYC 213
- 223. Single spore isolate A85/1 strain from NCYC 214
- 224. Single spore isolate A101/1 strain from NCYC 214
- 225. Single spore isolate A101/2 strain from NCYC 214
- 226. Single spore isolate A104/1 strain from NCYC 214

(ii) **Genetically Marked Strains** – Deposited by R.K.Mortimer and J.R.Johnston, 1962.

- 646. x901-35C strain; α hom2 aro1A trp5 leu1 ade6 lys1 his6 ura1 arg4-1 thr1
- 647. x901-26A strain; α hom2 aro1A trp5 leu1 ade6 his6 ura1 arg4-2 thr1
- 648. x1069-1A strain; a ade1 his4 leu2 thr4 met2 trp5 ura1
- 650. DV 147 strain; α ade2, readily reverts to wild type
- 651. 4B strain; α his4 leu3 lys10(?) ade6 ade2 met(?),leaky mutant disomic for chromosome III, mates and sporulates well
- 652. S400D strain; a ilv1; has other unlisted requirements
- 653. S288C-27 strain; α ilv1, has other unlisted requirements
- 654. S2583D strain; α ilv2, has other unlisted requirements
- 655. S2582B strain; α ilv2, has other unlisted requirements
- 656. JB19 strain; α leu1 ade2
- 657. JB143 strain; α leu2 ade2
- 658. JA36 strain; a leu3 ade2 lys10
- 659. x 764 diploid hybrid strain; segregates for markers trp5 leu1 ade6 ura3 hom3 his6 lys1 arg4 mal1
- 660. x 373 tetraploid hybrid strain
- 661. x 362 hexaploid hybrid strain
- 663. xJ151 hybrid diploid strain; ATCC 60732; segregates for markers thr1 lys1 ura3 aro1A hom2 trp4 ade8; homozygous for ade2
- 664. xJ107 hybrid diploid strain; segregates for markers leu1 ura3 lys7 gal7 his8 ser1 ade2

(iii) **Miscellaneous**

- 264. S.Jackson (Farmer's diploid strain 18, C53-8d x C24-13b) 1959
- 402. A.A.Eddy (F28c strain, single spore isolate from NCYC 264) 1953
- 593. W.F.F.Oppenoorth (R7, O.Winge's C.L.303-9 hybrid strain) 1959
- 594. W.F.F.Oppenoorth (K83 S 58 hybrid strain) 1959

666. J.W.Millbank (respiratory deficient mutant derived from ale yeast NCYC 239) 1963
673. H.Laser (petite colony mutant by x-irradiation of baker's yeast) 1963