

Appendix Table B1 Places where sample were collected.

Strains	Source	Place	Date of Collected
ST-1	Mushroom	Sakaerat (Chachoengsao)	17-Oct-00
ST-2	Mushroom	Sakaerat (Chachoengsao)	17-Oct-00
ST-3, ST-4	Mushroom	Sakaerat (Chachoengsao)	17-Oct-00
ST-5	Mushroom	Sakaerat (Chachoengsao)	17-Oct-00
ST-7	Mushroom	Sakaerat (Chachoengsao)	17-Oct-00
ST-8	Mushroom	Sakaerat (Chachoengsao)	17-Oct-00
ST-9	Moss	Sakaerat (Chachoengsao)	17-Oct-00
ST-11	Flower (<i>Ixora robbii</i> Loud)	Chatuchak (Bangkok)	30-Oct-00
ST-12	Flower (<i>Cassia suratensis</i>)	Chatuchak (Bangkok)	30-Oct-00
ST-13	Flower of Coconut (<i>Cocos nucifera</i>)	Chatuchak (Bangkok)	30-Oct-00
ST-14	Moss	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-15	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-17	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-18, ST-19	Mushroom	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-20, ST-21	Flower	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-22	Flower	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-23, ST-24	Insect frass	Khao Yai (Nakhon Ratchasima)	04-Nov-00
ST-26	Flower	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-27, ST-28, ST-29	Flower	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-30, ST-31	Moss	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-32	Flower	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-33	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-34	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-35, ST-36	Moss	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-37	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-38	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-39	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-40	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-41	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-43	Insect frass	Khao Yai (Nakhon Ratchasima)	03-Nov-00
ST-46	Flower of Coconut (<i>Cocos nucifera</i>)	Chatuchak (Bangkok)	12-Nov-00
ST-48	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-49	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-50	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-53	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-54	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-55	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-52	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-57	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-59, ST-60	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-61	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-62, ST-63	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-64	Insect frass	Putthamontol (Nakhon Pathom)	07-Dec-00
ST-68	Mushroom	Chatuchak (Bangkok)	16-Jan-01

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-69	Insect frass	Khuan U-Bolratana (Khon Kaen)	01-Feb-01
ST-70, ST-71, ST-72	Insect frass	Khuan U-Bolratana (Khon Kaen)	01-Feb-01
ST-73, ST-74	Insect frass	Khuan U-Bolratana (Khon Kaen)	01-Feb-01
ST-75	Insect frass	Khuan U-Bolratana (Khon Kaen)	01-Feb-01
ST-77, ST-78	Insect frass	Khuan Haui Laung (Udon Thani)	02-Feb-01
ST-79, ST-80	Insect frass	Khuan Haui Laung (Udon Thani)	02-Feb-01
ST-81, ST-82	Insect frass	Khuan Haui Laung (Udon Thani)	02-Feb-01
ST-83, ST-84, ST-85	Insect frass	Khuan Haui Laung (Udon Thani)	02-Feb-01
ST-87, ST-88, ST-90, ST-91	Leave (<i>Eugenia</i> sp.)	Than Tong Waterfall (Nong Khai)	02-Feb-01
ST-92, ST-93, ST-94	Leave (<i>Triumfetta</i> sp.)	Than Tong Waterfall (Nong Khai)	02-Feb-01
ST-95, ST-96	Insect frass	Than Tong Waterfall (Nong Khai)	02-Feb-01
ST-98	Leave (<i>Bambusa</i> sp.)	Than Tong Waterfall (Nong Khai)	02-Feb-01
ST-100, ST-101, ST-102, ST-105	Leave (<i>Pharagmites</i> sp.)	Hin Mak Peang Temple (Nong Khai)	02-Feb-01
ST-106, ST-107	Leave	Hin Mak Peang Temple (Nong Khai)	02-Feb-01
ST-108	Insect frass	Hin Mak Peang Temple (Nong Khai)	02-Feb-01
ST-111, ST-115	Leave (<i>Merremia</i> sp.)	Than Tong Waterfall (Nong Khai)	02-Feb-01
ST-116	Insect frass	Than Tong Waterfall (Nong Khai)	02-Feb-01
ST-117	Insect frass	Nong Bo Kok (Nong Khai)	03-Feb-01
ST-119	Leave (<i>Eucaliptus</i> sp.)	Nong Bo Kok (Nong Khai)	03-Feb-01
ST-120, ST-121, ST-122	Insect frass	Pu Wao (Nong Khai)	03-Feb-01
ST-123	Leave	Pu Wao (Nong Khai)	03-Feb-01
ST-124, ST-125	Insect frass	Pu Wao (Nong Khai)	03-Feb-01

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-126, ST-127	Insect frass	Pu Wao (Nong Khai)	03-Feb-01
ST-128	Leave (<i>Stepblus</i> sp.).	Pu Wao (Nong Khai)	03-Feb-01
ST-132	Leave (<i>Memycylon</i> sp.)	Pu Wao (Nong Khai)	03-Feb-01
ST-136	Insect frass	Pu Wao (Nong Khai)	03-Feb-01
ST-140	Leave (<i>Hymenoperamis</i> sp.)	Pu Wao (Nong Khai)	03-Feb-01
ST-144, ST-145	Leave (<i>Thelypteris parasitica</i>)	Pu Wao (Nong Khai)	03-Feb-01
ST-146, ST-147	Insect frass	Ban Paeng (Nakhon Phanom)	03-Feb-01
ST-148	Insect frass	Ban Paeng (Nakhon Phanom)	03-Feb-01
ST-149	Insect frass	Ban Paeng (Nakhon Phanom)	03-Feb-01
ST-150, ST-151, ST-153	Leave	Ban Paeng (Nakhon Phanom)	03-Feb-01
ST-156, ST-159	Leave (<i>Thelypteris interrupta</i>)	Ban Paeng (Nakhon Phanom)	03-Feb-01
ST-160	Insect frass	Nong Han (Nakhon Phanom)	03-Feb-01
ST-161	Insect frass	Nong Han (Nakhon Phanom)	03-Feb-01
ST-162	Insect frass	Nong Han (Nakhon Phanom)	03-Feb-01
ST-164	Insect frass	Huai Deag (Sakon Nakhon)	04-Feb-01
ST-165	Insect frass	Huai Deag (Sakon Nakhon)	04-Feb-01
ST-166	Leave (<i>Artocarpus</i> sp.)	Phuphan (Sakon Nakhon)	04-Feb-01
ST-170, ST-172, ST-173	Leave (<i>Imperata cylindrica</i>)	Num Pung Dam (Sakon Nakhon)	04-Feb-01
ST-174, ST-175, ST-176	Leave (<i>Eragrostis</i> sp.)	Num Pung Dam (Sakon Nakhon)	04-Feb-01
ST-178, ST-181	Leave (<i>Pennisetum</i> sp.)	Num Pung Dam (Sakon Nakhon)	04-Feb-01
ST-182, ST-183, ST-184, ST-185, ST-186, ST-187	Leave (<i>Ageratum</i> sp.)	Num Pung Dam (Sakon Nakhon)	04-Feb-01

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-192	Leave (<i>Commelina</i> sp.)	Song Dao (Sakon Nakhon)	04-Feb-01
ST-194	Insect frass	Kut Bak (Sakon Nakhon)	04-Feb-01
ST-195, ST-197, ST-198, ST-201, ST-202	Leave (<i>Manihot esculenta</i>)	Ban Tai (Sakon Nakhon)	04-Feb-01
ST-204	Leave (<i>Pederia</i> sp.)	Ban Tai (Sakon Nakhon)	04-Feb-01
ST-206, ST-208	Leave (<i>Erechtites</i> sp.)	Ban Tai (Sakon Nakhon)	04-Feb-01
ST-209	Insect frass	Waritchaphum (Sakhon Nakhon)	04-Feb-01
ST-211	Insect frass	Ban Chiong (Udon Thani)	04-Feb-01
ST-213	Leave (<i>Musa sapientum</i>)	Nong Meg (Udon Thani)	04-Feb-01
ST-214	Insect frass	Lum Pao Dam (Kalasin)	05-Feb-01
ST-217	Leave (<i>Bauhinia</i> sp.)	Huai Prong (Kalasin)	05-Feb-01
ST-223	Insect frass	Nong Laung (Amnat Charoen)	05-Feb-01
ST-224, ST-225	Insect frass	Nong Laung (Amnat Charoen)	05-Feb-01
ST-226	Leave	Nong Bo Mhu (Yasothon)	05-Feb-01
ST-228	Insect frass	Nong Bo Mhu (Yasothon)	05-Feb-01
ST-229	Insect frass	Nong Bo Mhu (Yasothon)	05-Feb-01
ST-231	Insect frass	Nong Kratone (Nakhon Ratchasima)	06-Feb-01
ST-232, ST-233	Insect frass	Nong Kratone (Nakhon Ratchasima)	06-Feb-01
ST-234	Insect frass	Nong Kratone (Nakhon Ratchasima)	06-Feb-01
ST-235, ST-236, ST-237	Insect frass	Nong Kratone (Nakhon Ratchasima)	06-Feb-01
ST-238, ST-239, ST-240, ST-241	Insect frass	Nong Kratone (Nakhon Ratchasima)	06-Feb-01
ST-246	Mushroom	Hala Bala (Narathiwat)	10-Mar-01

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-247	Moss	Hala Bala (Narathiwat)	10-Mar-01
ST-248	Insect frass	Hala Bala (Narathiwat)	10-Mar-01
ST-249	Insect frass	Hala Bala (Narathiwat)	10-Mar-01
ST-250	Insect frass	Hala Bala (Narathiwat)	10-Mar-01
ST-251	Insect frass	Hala Bala (Narathiwat)	10-Mar-01
ST-252	Insect frass	Hala Bala (Narathiwat)	10-Mar-01
ST-253	Mushroom	Hala Bala (Narathiwat)	10-Mar-01
ST-258	Flower (<i>Plumeria acuminata</i>)	Tak Bi (Narathiwat)	10-Mar-01
ST-265	Flower (<i>Ixora</i> sp.)	Hala Bala (Narathiwat)	10-Mar-01
ST-266	Moss	Hala Bala (Narathiwat)	10-Mar-01
ST-267	Moss	Hala Bala (Narathiwat)	11-Mar-01
ST-269	Moss	Hala Bala (Narathiwat)	11-Mar-01
ST-296, ST-297	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-298	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-299	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-300	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-303	Mushroom	Ko Yao (Pattani)	12-Mar-01
ST-305, ST-306, ST-307	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-308	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-309	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-312, ST-313, ST-314	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-315, ST-316	Insect frass	Ko Yao (Pattani)	12-Mar-01

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-317, ST-318, ST-319	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-310, ST-311	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-320	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-321	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-322	Insect frass	Ko Yao (Pattani)	12-Mar-01
ST-323	Mushroom	Hala Bala (Narathiwat)	13-Mar-01
ST-326, ST-327	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-328, ST-329	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-330	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-331	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-332, ST-333	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-334	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-335	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-336	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-337, ST-338, ST-339	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-340	Insect frass	Tone Nga Chang Waterfall (Songkhla)	13-Mar-01
ST-343	Mushroom	Prom Lok Waterfall (Surat Thani)	14-Mar-01
ST-344	Insect frass	Prom Lok Waterfall (Surat Thani)	14-Mar-01
ST-356	Insect frass	Bangkhen (Bangkok)	30-May-01
ST-358	Mushroom	Tone Nga Chang Waterfall (Songkhla)	29-Sep-01
ST-361	Mushroom	Tone Nga Chang Waterfall (Songkhla)	30-Sep-01
ST-362, ST-363	Mushroom	Tone Nga Chang Waterfall (Songkhla)	30-Sep-01

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-364	Mushroom	Krung Ching Waterfall (Nakhon Si Thammarat)	30-Sep-01
ST-365, ST-366	Mushroom (<i>Maraumius</i> sp.)	Krung Ching Waterfall (Nakhon Si Thammarat)	30-Sep-01
ST-368	Mushroom	Krung Ching Waterfall (Nakhon Si Thammarat)	30-Sep-01
ST-370	Mushroom	Krung Ching Waterfall (Nakhon Si Thammarat)	30-Sep-01
ST-375	Mushroom	Krung Ching Waterfall (Nakhon Si Thammarat)	30-Sep-01
ST-377	Mushroom	Nam Nao National Park (Petchabun)	05-Oct-01
ST-380	Mushroom	Sai Yok Waterfall (Kanchanaburi)	16-Oct-01
ST-385	Moss	Mae Hong Son	07-Jan-02
ST-387	Flower (<i>Bruguiera gymnorhiza</i>)	Waeru Mangrove Forest (Trad)	13-Jan-02
ST-388	Flower (<i>Bruguiera gymnorhiza</i>)	Waeru Mangrove Forest (Trad)	13-Jan-02
ST-389	Flower (<i>Rhizophora apiculata</i>)	Waeru Mangrove Forest (Trad)	13-Jan-02
ST-390	Flower (<i>Rhizophora apiculata</i>)	Waeru Mangrove Forest (Trad)	13-Jan-02
ST-391	Flower (<i>Sonneratia caseolaris</i>)	Waeru Mangrove Forest (Trad)	13-Jan-02
ST-394	Insect frass	Pan Pu (Trad)	13-Jan-02
ST-398	Flower (<i>Durio zibethinus</i>)	Ban pred Nai (Trad)	14-Jan-02
ST-403	Insect frass	Houy Num Kaow Mangrove Forest (Trad)	14-Jan-02
ST-404	Insect frass	Houy Num Kaow Mangrove Forest (Trad)	14-Jan-02
ST-407	Moss	Houy Num Kaow Mangrove Forest (Trad)	14-Jan-02
ST-410	Flower (<i>Lumnitzera recemosa</i>)	Houy Num Kaow Mangrove Forest (Trad)	14-Jan-02
ST-419	Insect frass	Prai Prong Prang (Samut Songkhram)	07-Feb-02
ST-422	Coconut juice (<i>Cocos nucifera</i>)	Prai Prong Prang (Samut Songkhram)	07-Feb-02
ST-431	Insect frass	Sakaerat (Chachoengsao)	10-Apr-02

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-433	Insect frass	Sakaerat (Chachoengsao)	10-Apr-02
ST-441	Moss	Ranong Mangrove Biosphere (Ranong)	20-May-02
ST-445	Moss	Ngaow Waterfall (Ranong)	20-May-02
ST-446	Moss	Ngaow Waterfall (Ranong)	20-May-02
ST-448	Moss	Boonyaban Waterfall (Ranong)	20-May-02
ST-449	Moss	Ngaow Waterfall (Ranong)	20-May-02
ST-451	Moss	Ngaow Waterfall (Ranong)	20-May-02
ST-453	Moss	Tone Nga Chang Waterfall (Songkhla)	05-Feb-03
ST-457	Moss	Tone Nga Chang Waterfall (Songkhla)	05-Feb-03
ST-464	Lichen	Tone Nga Chang Waterfall (Songkhla)	05-Feb-03
ST-476	Rotted wood	Tone Nga Chang Waterfall (Songkhla)	05-Feb-03
ST-481	Mushroom	Tone Nga Chang Waterfall (Songkhla)	05-Feb-03
ST-484	Exudate of <i>Ficus</i> sp.	Tone Nga Chang Waterfall (Songkhla)	05-Feb-03
ST-490	Flower	Bangkhen (Bangkok)	05-Feb-03
ST-493	Insect frass	Tong Pha Phum (Kanchanaburi)	19-Feb-03
ST-495	Moss	Tong Pha Phum (Kanchanaburi)	19-Feb-03
ST-515	Moss	Tong Pha Phum (Kanchanaburi)	19-Feb-03
ST-516	Insect frass	Tong Pha Phum (Kanchanaburi)	19-Feb-03
ST-529	Insect frass	Tong Pha Phum (Kanchanaburi)	19-Feb-03
ST-533	Flower	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-536	Flower	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-541	Insect frass	Tong Pha Phum (Kanchanaburi)	20-Feb-03

Appendix Table B1 (Continued)

Strains	Source	Place	Date of Collected
ST-543	Moss	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-551	Insect frass	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-552	Insect frass	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-554	Insect frass	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-555	Insect frass	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-568	Moss	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-570	Moss	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-578	Rotted wood	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-583	Moss	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-586	Moss	Tong Pha Phum (Kanchanaburi)	20-Feb-03
ST-613	Rotted fruit (<i>Psidium guajava</i>)	Tong Pha Phum (Kanchanaburi)	04-Nov-03

Appendix Table B2 Assimilation of carbon and nitrogen compounds of yeast strains assigned to new species.

Strains	Carbon Assimilation																														Nitrogen Assimilation															
	Glucose	Galactose	L-Sorbose	Sucrose	Maltose	Cellobiose	Trehalose	Lactose	Melibiose	Raffinose	Melezitose	Inulin	Sol.starch	D-Xylose	L-Arabinose	D-Arabinose	D-Ribose	L-Rhamnose	Ethanol	Glycerol	Erythritol	Ribitol	Galactitol	D-Mannitol	D-Glucitol	a-Methyl-D-glucoside	Salicin	Glucono-δ-lactone	2-Ketogluconic acid	5-Ketogluconic acid	DL-lactic acid	Succinic acid	Citric acid	Inositol	Glucuronic acid	Galacturonic acid	Nitrate	Nitrite	Ethylamine	L-Lysine	Cadaverine					
ST-2	+	-	-	+	+	+	+	-	-	-	+	-	+	w	-	-	+	-	-	+	-	+	-	+	+	+	+	+	+	-	-	-	+	+	-	-	-	-	-	-	+	+	+	+	+	
ST-3	+	-	+	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	+	-	+	+	-	-	-	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+
ST-4	+	-	+	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	+	-	+	+	-	-	-	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+
ST-17	+	+	+	+	+	+	+	+	-	-	+	-	w	+	-	+	-	-	-	-	-	+	+	+	+	+	+	+	+	+	+	-	w	+	+	-	-	-	-	-	-	+	+	+	+	+
ST-18	+	+	+	+	+	+	+	-	-	-	+	-	w	+	+	-	+	-	-	+	-	+	-	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+
ST-19	+	+	+	+	+	-	+	-	-	-	+	-	w	+	+	+	-	-	-	+	-	+	+	+	+	+	+	-	+	+	+	-	+	-	-	-	-	-	-	-	-	+	+	+	+	+
ST-22	+	-	+	+	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	+	-	-	-	+	+	-	-	-	+	+	+	+	+	-	-	-	-	-	-	+	+	+	w	+		
ST-26	+	w	-	+	-	+	-	-	-	+	-	+	-	-	-	-	+	-	-	+	+	-	-	-	-	-	-	-	+	-	-	+	w	-	-	-	-	-	-	+	+	-	-	+	+	
ST-29	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	w	-	-	+	-	-	-	+	+	-	-	+	+	+	+	+	+	-	-	-	-	-	+	+	+	-	+	+		
ST-30	+	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	+	-	+	+	-	-	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+
ST-32	+	-	+	+	+	-	+	-	-	-	+	-	-	+	-	-	-	-	-	+	-	+	+	+	+	+	+	-	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+	+	+	
ST-33	+	+	+	+	+	+	+	-	-	-	+	-	-	+	+	+	+	w	-	+	+	+	-	+	+	+	+	+	+	-	-	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+
ST-36	+	+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-	-	+	+	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+	+	+	+	
ST-37	+	-	-	+	+	+	+	-	-	+	+	w	w	+	-	-	-	+	-	+	-	-	-	+	+	+	+	+	+	+	-	-	+	+	+	-	-	-	-	+	+	+	+	+	+	
ST-43	+	+	+	+	+	+	+	-	-	-	+	-	w	+	+	+	+	+	-	+	-	+	-	+	+	+	+	-	+	-	w	+	+	-	-	-	-	-	-	-	+	+	w	+	+	
ST-49	+	+	+	+	+	-	+	-	-	+	+	+	+	+	-	-	+	-	+	+	-	+	+	+	+	+	+	+	+	+	+	-	-	+	+	-	-	-	-	-	-	+	+	+	+	+

Appendix Table B2 (Continued)

Strains	Carbon Assimilation																														Nitrogen Assimilation														
	Glucose	Galactose	L-Sorbose	Sucrose	Maltose	Cellobiose	Trehalose	Lactose	Melibiose	Raffinose	Melezitose	Inulin	Sol.starch	D-Xylose	L-Arabinose	D-Arabinose	D-Ribose	L-Rhamnose	Ethanol	Glycerol	Erythritol	Ribitol	Galactitol	D-Mannitol	D-Glucitol	a-Methyl-D-glucoside	Salicin	Glucono-δ-lactone	2-Ketogluconic acid	5-Ketogluconic acid	DL-lactic acid	Succinic acid	Citric acid	Inositol	Glucuronic acid	Galacturonic acid	Nitrate	Nitrite	Ethylamine	L-Lysine	Cadaverine				
ST-50	+	+	+	+	+	-	+	-	-	-	+	+	w	+	+	+	+	-	+	+	-	+	-	+	+	+	+	-	+	+	-	+	+	-	-	+	-	-	+	+	+	+	+		
ST-57	+	+	+	-	-	-	-	-	-	-	-	+	w	+	-	-	-	-	+	+	-	+	-	+	+	-	+	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+	+	+	
ST-59	+	+	+	+	+	+	+	+	-	-	+	+	+	+	+	w	+	-	+	+	+	+	+	+	w	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+	+
ST-61	+	+	+	+	+	+	+	-	-	-	-	w	+	+	-	w	w	-	+	+	-	+	-	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	+	+	+	+	+
ST-71	+	+	l	+	+	+	+	+	-	+	+	-	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	s	s	+	+	-	+	+	+	+	+	+	+	-	+	+	+	+	
ST-73	+	+	-	+	+	+	+	+	+	+	+	-	+	+	+	-	l/-	l/-	-	l	-	l	+	+	+	+	+	+	+	+	+	l	+	+	+	+	+	+	+	-	-	+	+	+	
ST-78	+	+	l	+	+	+	+	-	-	-	+	-	w	+	+	+	w	+	+	+	+	+	-	+	+	+	+	+	+	-	-	-	+	+	-	-	-	-	-	-	+	+	+	+	+
ST-79	+	+	+	+	+	+	+	-	-	-	-	-	+	+	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	l	+	-	-	+	+	+	+	+		
ST-84	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	+	+	+	+	+	
ST-87	+	+	+	+	+	+	+	-	-	+	+	s	+	+	w/-	s	s	-	+	+	-	+	-	+	+	+	+	+	+	-	-	s	+	+	-	-	-	-	+	+	l	s	w		
ST-88	s	-	-	-	-	-	+	-	-	-	-	-	-	s	-	-	-	-	-	-	-	-	-	-	-	-	-	w/-	-	-	-	w	-	-	-	-	-	-	-	+	+	+	+	+	
ST-90	+	+	+	w/-	-	-	+	-	-	-	-	-	-	+	w/-	w/-	w/-	-	+	+	-	+	+	+	+	-	-	w	-	-	-	w	w	-	-	-	-	-	-	+	+	+	+	+	
ST-91	+	-	+	+	-	-	+	-	-	+	+	-	-	-	-	-	-	-	+	+	-	+	-	+	+	-	-	-	-	-	-	+	-	-	-	-	-	-	+	+	+	-	-		
ST-92	+	+	+	+	+	+	+	-	-	+	+	w	+	s	-	+	+	-	+	+	-	+	-	+	+	+	+	+	+	-	-	w	+	+	-	-	-	-	+	+	+	-	-		
ST-95	+	+	+	+	+	-	+	-	-	-	+	-	-	+	-	-	-	-	+	+	-	+	-	+	+	+	+	-	+	+	-	+	+	+	-	-	-	-	-	+	+	+	+	+	
ST-98	+	+	+	+	+	+	+	-	-	-	+	-	-	+	-	-	w	+	+	+	+	+	-	+	+	+	s	+	-	-	-	-	+	+	-	-	-	-	-	-	+	+	+	+	+

Appendix Table B2 (Continued)

Strains	Carbon Assimilation																												Nitrogen Assimilation															
	Glucose	Galactose	L-Sorbose	Sucrose	Maltose	Cellobiose	Trehalose	Lactose	Melibiose	Raffinose	Melezitose	Inulin	Sol.starch	D-Xylose	L-Arabinose	D-Arabinose	D-Ribose	L-Rhamnose	Ethanol	Glycerol	Erythritol	Ribitol	Galactitol	D-Mannitol	D-Glucitol	a-Methyl-D-glucoside	Salicin	Glucono-δ-lactone	2-Ketogluconic acid	5-Ketogluconic acid	DL-lactic acid	Succinic acid	Citric acid	Inositol	Glucuronic acid	Galacturonic acid	Nitrate	Nitrite	Ethylamine	L-Lysine	Cadaverine			
ST-102	+	+	+	+	+	+	+	-	-	+	+	w	+	+	-	+	+	-	+	+	-	+	-	+	+	+	+	+	+	-	-	+	+	+	-	-	-	+	+	+	+	+	-	
ST-105	+	-	-	+	+	+	+	-	-	+	+	-	+	+	+	+	-	-	-	+	-	l	-	+	+	+	+	-	l	-	-	-	+	+	-	w	-	-	+	+	-	-	-	
ST-111	+	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	-	+	+	s	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
ST-115	+	+	+	+	+	w	+	-	-	+	+	l	-	l	-	w	-	-	+	+	-	+	-	+	+	-	+	+	+	-	-	w	+	+	-	-	-	-	+	+	+	w	-	
ST-119	+	+	+	+	+	+	+	-	-	+	+	+	+	l	-	l	+	-	+	l	-	l	+	+	+	+	+	+	+	-	-	l	+	w	-	-	-	-	w	-	+	+	w	
ST-122	+	+	+	+	+	+	+	-	-	+	-	-	+	+	+	-	+	-	+	+	+	+	-	+	+	+	+	+	+	+	-	+	+	+	+	-	-	-	-	-	+	+	+	+
ST-128	+	+	+	+	+	+	+	-	-	+	+	+	+	+	-	l	+	-	+	+	-	+	-	+	+	+	+	+	+	+	-	-	w	+	+	-	-	-	-	+	+	+	-	-
ST-144	+	+	+	+	+	+	+	-	+	+	+	-	+	+	+	+	l	+	-	-	-	-	+	+	-	+	w	l	+	+	l	+	-	+	+	+	+	+	+	w	w	w	w	w
ST-145	+	+	+	+	+	+	+	-	-	-	+	-	+	+	+	+	+	+	-	-	-	+	l	+	+	+	+	+	+	l	+	-	+	l	+	+	+	+	+	+	+	+	w	+
ST-151	+	l	l	+	+	+	-	-	-	+	+	l	+	l	-	+	-	-	+	+	-	l	-	+	+	l	+	+	-	-	-	+	+	-	-	-	-	+	w	-	+	+		
ST-153	+	-	-	+	l	+	+	-	+	+	+	l	-	w	w	-	-	-	-	-	-	+	-	+	+	-	-	w	-	-	-	l	-	-	-	-	-	+	-	-	-	-	-	
ST-156	+	l	+	+	+	+	+	-	-	+	+	w	+	-	-	+	w	-	+	+	-	+	-	+	+	+	+	+	+	-	-	-	+	+	-	-	-	-	+	-	w	+	w	
ST-164	+	+	-	+	+	+	+	-	-	-	+	-	+	+	+	-	+	+	+	+	+	+	-	+	+	+	+	+	l	-	-	l	+	+	-	-	-	-	-	-	+	+	+	+
ST-184	+	-	+	+	-	-	-	-	-	l	-	-	-	l	-	-	-	-	l	+	-	+	-	+	+	-	-	l	-	-	-	w	-	-	-	-	-	+	+	-	w	-		
ST-195	+	l	+	+	+	w	+	-	-	+	+	-	+	+	-	w	w	-	+	+	-	+	-	+	+	-	w	+	-	-	w	+	+	-	-	-	-	+	+	+	+	+	+	
ST-198	+	-	+	+	-	-	l	-	-	w	-	-	-	+	-	-	-	-	+	+	-	+	-	-	+	-	w	-	-	-	-	w	-	-	-	-	-	+	+	-	w	-		

Appendix Table B2 (Continued)

Strains	Carbon Assimilation																												Nitrogen Assimilation															
	Glucose	Galactose	L-Sorbose	Sucrose	Maltose	Cellobiose	Trehalose	Lactose	Melibiose	Raffinose	Melezitose	Inulin	Sol.starch	D-Xylose	L-Arabinose	D-Arabinose	D-Ribose	L-Rhamnose	Ethanol	Glycerol	Erythritol	Ribitol	Galactitol	D-Mannitol	D-Glucitol	α-Methyl-D-glucoside	Salicin	Glucono-δ-lactone	2-Ketogluconic acid	5-Ketogluconic acid	DL-lactic acid	Succinic acid	Citric acid	Inositol	Glucuronic acid	Galacturonic acid	Nitrate	Nitrite	Ethylamine	L-Lysine	Cadaverine			
ST-201	+	+	+	+	+	+	+	-	+	+	+	-	w	+	+	+	w	+	+	+	+	w	+	+	l	+	+	+	+	+	-	+	l	+	+	+	+	-	+	+	+	+	+	
ST-202	+	+	+	+	+	+	+	-	-	+	+	w	+	-	-	l	l	-	+	+	-	l	-	+	+	+	+	+	+	-	-	-	+	w	-	-	-	-	+	+	+	+	w	
ST-206	+	w	+	+	+	l	+	-	-	+	+	w	+	l	-	w	+	-	+	+	-	l	-	+	+	l	+	+	-	-	-	w	+	+	-	-	-	+	+	w	-			
ST-211	+	+	l	+	+	+	+	-	-	+	+	l	-	+	-	-	-	-	+	+	-	+	-	+	+	+	+	+	+	+	-	-	+	+	-	-	-	-	-	+	+	+	+	
ST-224	+	+	l	+	+	+	+	-	+	+	+	-	+	+	+	-	+	+	+	+	+	+	-	+	+	+	+	+	+	-	-	-	l	+	-	-	-	-	-	+	+	+	+	
ST-225	+	-	-	+	+	+	+	-	-	-	+	-	+	+	+	+	-	+	+	+	-	-	-	+	+	+	+	+	+	-	-	+	+	+	+	-	-	-	-	-	+	+	+	+
ST-226	+	-	+	+	-	-	+	-	-	+	-	-	-	+	-	w	-	-	+	+	-	+	-	+	+	-	-	w	-	-	-	w	-	-	-	-	-	+	+	-	w	-		
ST-228	+	-	-	+	+	+	+	-	-	-	+	-	+	+	l	w	-	+	+	+	-	-	-	+	+	+	+	+	+	-	-	+	+	+	+	-	-	-	-	-	+	+	+	+
ST-229	+	-	-	+	+	+	+	-	-	-	+	-	+	+	l	l	-	+	+	+	-	-	-	+	+	+	+	+	+	-	-	+	+	+	+	-	-	-	-	-	+	+	+	+
ST-236	+	+	-	+	+	+	+	-	+	+	+	-	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	-	-	+	+	+	+	-	-	-	+	+	+	+	+	
ST-237	+	+	+	+	+	+	+	+	-	-	-	-	+	+	-	-	+	-	+	+	+	+	+	+	+	+	+	+	+	-	-	-	+	+	-	-	-	-	-	+	+	+	+	+
ST-238	+	+	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	-	+	+	-	+	+	-	-	+	+	s	-	-	-	-	-	-	+	+	+	+	
ST-239	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	s	-	+	+	-	-	+	+	+	+	-	-	-	+	+	+	+	+	+	
ST-240	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	-	-	-	+	+	-	-	-	+	+	-	-	-	+	+	+	+	-			
ST-246	+	-	+	-	-	-	+	-	-	-	-	-	-	+	-	-	+	-	-	+	+	+	-	+	+	-	-	+	-	-	w/-	+	+	-	-	-	+	+	+	+	+	+	+	
ST-249	+	-	+	+	+	+	+	-	-	-	+	-	+	+	-	-	-	-	+	-	-	+	-	+	+	+	+	+	+	+	-	-	+	+	-	-	-	-	-	+	+	+	+	+

Appendix Table B2 (Continued)

Strains	Carbon Assimilation																												Nitrogen Assimilation																			
	Glucose	Galactose	L-Sorbose	Sucrose	Maltose	Cellobiose	Trehalose	Lactose	Melibiose	Raffinose	Melezitose	Inulin	Sol.starch	D-Xylose	L-Arabinose	D-Arabinose	D-Ribose	L-Rhamnose	Ethanol	Glycerol	Erythritol	Ribitol	Galactitol	D-Mannitol	D-Glucitol	α-Methyl-D-glucoside	Salicin	Glucono-δ-lactone	2-Ketogluconic acid	5-Ketogluconic acid	DL-lactic acid	Succinic acid	Citric acid	Inositol	Glucuronic acid	Galacturonic acid	Nitrate	Nitrite	Ethylamine	L-Lysine	Cadaverine							
ST-250	+	-	-	-	-	+	w	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+			
ST-253	+	+	+	+	+	+	+	-	+	+	+	+	w	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	+	+	-	+	+	+	+	-	-	-	-	-	-	+	+	+	+	+		
ST-269	+	+	+	+	+	+	+	-	-	-	+	-	w/-	+	+	+	-	+	+	+	-	+	-	+	+	+	+	+	+	+	-	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+	
ST-297	+	+	+	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	+	+	-	-	-	+	-	-	+	+	+	-	-	-	-	-	-	-	-	+	-	-	+	-	
ST-300	+	+	+	+	+	+	+	-	-	-	+	-	w	+	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	-	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+	
ST-306	+	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	+	+	+	+	-	-	-	-	-	-	-	-	+	-	+	+	
ST-311	+	-	-	+	+	+	+	-	-	w/-	+	-	+	+	l	-	-	+	+	+	+	-	-	-	+	+	+	+	+	+	-	-	+	+	+	+	-	-	-	-	-	-	-	-	+	+	+	+
ST-314	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+	
ST-315	+	+	+	-	-	+	-	-	-	-	-	-	-	+	+	+	-	-	-	+	-	+	s	+	+	-	-	+	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	+	+	+	+	
ST-318	+	+	+	+	+	+	+	+	-	-	+	-	+	+	-	-	+	+	+	+	-	l	-	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	-	-	+	+	+	+	+	
ST-320	+	-	-	+	+	+	+	-	-	-	+	-	+	+	s/-	-	-	+	+	+	+	-	-	-	+	+	+	+	+	+	-	-	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+	+
ST-328	+	+	-	+	+	+	+	-	-	-	+	-	w	+	+	+	+	-	+	+	+	+	-	+	+	+	+	+	+	+	+	-	-	s	+	+	-	-	-	-	-	-	-	-	+	+	+	+
ST-329	+	+	-	+	+	+	+	-	-	-	+	-	-	+	+	+	+	-	+	+	+	+	-	+	+	+	+	+	+	+	+	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+	+	+
ST-330	+	+	+	-	-	+	+	-	-	-	-	-	s	-	-	+	-	-	+	+	-	+	-	+	+	-	+	+	+	+	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+	+	+	
ST-331	+	+	+	+	+	+	+	+	-	-	+	-	w	+	+	+	+	+	+	+	+	+	-	+	+	+	+	+	+	+	-	-	+	+	+	-	-	-	-	-	-	-	-	+	+	+	+	
ST-333	+	+	l	+	+	+	+	-	-	-	+	-	-	+	+	+	+	-	+	+	+	+	+	-	+	+	+	+	+	+	+	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+	+	+

Appendix Table B2 (Continued)

Strains	Carbon Assimilation																												Nitrogen Assimilation																
	Glucose	Galactose	L-Sorbose	Sucrose	Maltose	Cellobiose	Trehalose	Lactose	Melibiose	Raffinose	Melezitose	Inulin	Sol.starch	D-Xylose	L-Arabinose	D-Arabinose	D-Ribose	L-Rhamnose	Ethanol	Glycerol	Erythritol	Ribitol	Galactitol	D-Mannitol	D-Glucitol	α-Methyl-D-glucoside	Salicin	Glucono-δ-lactone	2-Ketogluconic acid	5-Ketogluconic acid	DL-lactic acid	Succinic acid	Citric acid	Inositol	Glucuronic acid	Galacturonic acid	Nitrate	Nitrite	Ethylamine	L-Lysine	Cadaverine				
ST-334	+	-	+	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	+	+	-	-	-	+	+	-	+	+	-	-	+	+	+	-	-	-	-	-	-	-	+	+	+		
ST-335	+	+	+	+	+	+	+	-	-	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	-	-	-	-	-	-	-	+	+	+	
ST-337	+	-	+	+	+	+	+	-	-	-	+	-	+	+	-	-	-	+	+	-	-	s	-	+	+	+	+	+	+	+	+	-	+	+	-	-	-	-	-	-	-	+	+	+	
ST-338	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	-	-	-	-	-	-	+	+	+	
ST-339	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	+	+	+	
ST-343	+	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ST-358	+	+	s	+	+	+	+	-	-	-	+	-	-	+	+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	-	-	-	-	-	-	-	-	+	+	+
ST-365	+	+	+	+	+	+	+	-	-	-	+	-	w/-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	w/-	+	+	+	-	-	-	-	-	-	-	+	+	
ST-366	+	+	+	+	+	+	+	-	-	-	+	-	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	+	+	+	-	-	-	-	-	-	-	+	+	
ST-370	+	+	-	-	-	+	+	-	-	-	-	-	-	+	-	-	s	-	+	+	-	+	-	+	+	-	+	+	+	w/-	-	+	+	+	-	-	-	-	-	-	-	+	+	+	
ST-377	+	+	-	-	-	+	+	-	-	-	-	-	-	+	s	-	+	-	+	+	-	+	-	+	+	-	+	+	+	+	+	-	+	+	+	-	-	-	-	-	-	-	+	+	+
ST-380	+	+	+	+	+	+	+	-	-	-	+	-	-	+	-	-	-	-	+	+	-	+	-	+	+	-	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	+	+	+
ST-388	+	+	+	+	+	-	-	-	-	+	-	-	w/-	w/-	-	-	w	-	-	+	-	-	-	+	+	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	+	+
ST-390	+	+	+	+	+	-	-	-	-	+	-	-	w	w/-	w/-	w/-	w	-	-	+	-	-	-	+	+	-	-	+	-	-	-	+	w/-	-	-	-	-	-	-	-	-	-	+	+	+
ST-391	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	w	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	
ST-394	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix Table B2 (Continued)

Strains	Carbon Assimilation																												Nitrogen Assimilation																	
	Glucose	Galactose	L-Sorbose	Sucrose	Maltose	Cellobiose	Trehalose	Lactose	Melibiose	Raffinose	Melezitose	Inulin	Sol.starch	D-Xylose	L-Arabinose	D-Arabinose	D-Ribose	L-Rhamnose	Ethanol	Glycerol	Erythritol	Ribitol	Galactitol	D-Mannitol	D-Glucitol	α-Methyl-D-glucoside	Salicin	Glucono-δ-lactone	2-Ketogluconic acid	5-Ketogluconic acid	DL-lactic acid	Succinic acid	Citric acid	Inositol	Glucuronic acid	Galacturonic acid	Nitrate	Nitrite	Ethylamine	L-Lysine	Cadaverine					
ST-422	+	+	-	+	-	-	+	-	-	+	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-		
ST-431	+	+	-	-	-	+	+	-	-	-	-	-	-	+	-	w	+	-	+	+	+	+	-	+	+	-	+	+	+	+	-	+	+	-	-	-	-	-	-	-	-	+	+	+	+	+
ST-433	+	-	-	+	+	+	+	-	-	-	+	-	+	+	+	+	-	-	+	+	-	1	-	+	+	+	+	+	1	-	-	+	+	+	+	-	-	-	+	+	+	+	+	+		
ST-445	+	-	+	-	-	+	-	-	-	-	-	-	-	+	-	-	-	-	+	+	-	-	-	+	+	-	+	+	+	-	-	+	+	+	+	-	-	-	-	-	-	+	+	+	+	
ST-449	+	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	-	-	-	-	-	+	-	-		
ST-451	+	+	+	+	+	+	+	-	-	-	+	-	w	+	-	w	+	-	-	+	-	+	+	+	+	+	+	+	+	+	-	+	+	+	+	-	-	-	-	-	-	-	+	+	+	+
ST-464	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	
ST-476	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	+	+	+		
ST-490	+	+	+	+	-	+	-	-	-	+	-	-	-	s/-	-	-	+	-	-	+	-	+	+	+	+	-	+	+	+	+	-	+	+	+	+	-	-	-	-	+	+	+	+	+		
ST-493	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-	+	+	+	+		
ST-533	+	+	+	+	-	+	-	-	-	+	-	-	-	-	-	-	+	-	-	+	-	+	+	+	+	-	+	+	+	+	-	+	+	+	+	-	-	-	-	+	+	+	+	+		
ST-536	+	+	+	+	-	+	-	-	-	+	-	-	-	-	-	-	+	-	-	+	-	+	+	+	+	-	+	+	+	+	-	+	+	+	+	-	-	-	-	+	+	+	+	+		
ST-613	+	-	-	-	-	+	w/-	-	-	-	-	-	-	-	-	-	-	-	w/-	-	-	-	-	-	-	-	+	+	+	-	-	-	-	-	-	-	-	-	-	-	+	+	-	+	+	

Appendix Table B3 Fermentation and other characteristics of yeast strains assigned to new species.

Strain	Fermentation							Other Tests									Vitamin Requirement
	Glucose	Galactose	Sucrose	Maltose	Lactose	Rafinose	Melibiose	Vitamin free medium	50% Glucose	Starch formation	Gelatin liquefaction	0.1% Cycloheximide	Acid formation	Lipase	Urease	Maximum growth temperature (°C)	
ST-2	-	-	-	-	-	-	-	w	-	-	-	-	-	-	-	35-36	nd
ST-3	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	35-36	nd
ST-4	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	35-36	nd
ST-17	s	w	-	-	-	-	-	-	-	-	-	-	-	-	-	35-36	nd
ST-18	+	+	-	+	-	-	-	-	+	-	-	-	+	-	-	33-34	nd
ST-19	-	-	-	-	-	-	-	-	+	-	+	+	-	-	-	33-34	nd
ST-22	vw	-	-	-	-	-	-	+	-	-	-	+	+	-	-	32-33	nd
ST-26	-	-	-	-	-	-	-	+	+	-	+	-	+	-	-	nd	nd
ST-29	l	-	-	-	-	-	-	-	-	-	-	+	+	-	-	30-31	nd
ST-30	+	-	+	-	-	+	-	-	-	-	-	-	+	-	-	35-36	nd
ST-32	+	-	+	+	-	-	-	-	-	-	-	-	-	-	-	35-36	nd
ST-33	+	+	-	-	-	-	-	+	-	-	-	+	+	-	-	36-37	nd
ST-36	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	35-36	nd
ST-37	+	-	+	-	-	+	-	w	-	-	-	-	+	-	-	33-34	Pyridoxine and thiamine
ST-43	w	-	-	-	-	-	-	-	-	-	lw	-	-	-	-	35-36	nd
ST-49	+	-	+	-	-	+	-	+	-	-	-	+	-	-	-	34-35	nd

Appendix Table B3 (Continued)

Strain	Fermentation							Other Tests									Vitamin Requirement
	Glucose	Galactose	Sucrose	Maltose	Lactose	Rafinose	Melibiose	Vitamin free medium	50% Glucose	Starch formation	Gelatin liquefaction	0.1% Cycloheximide	Acid formation	Lipase	Urease	Maximum growth temperature (°C)	
ST-50	+	l	w	-	-	-	-	+	-	-	-	-	w	-	-	35-36	nd
ST-57	+	-	-	-	-	-	-	-	+	-	-	-	w	-	-	nd	nd
ST-59	-	-	-	-	-	-	-	-	-	-	+	+	-	-	w	nd	nd
ST-61	+	w	+	s	-	-	-	+	+	-	-	nd	-	-	-	nd	nd
ST-71	-	-	-	-	-	-	-	+	+	-	+	-	+	-	+	35-36	Thiamin
ST-73	-	-	-	-	-	-	-	-	-	-	-	-	w	-	+	32-33	Thiamine
ST-78	+	vw	-	-	-	-	-	+	+	-	-	nd	+	+	-	36-37	nd
ST-79	w	-	-	-	-	-	-	+	-	-	-	nd	-	-	-	40-41	-
ST-84	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	35-36	Pyridoxin and thiamine
ST-87	-	-	-	-	-	-	-	-	nd	-	-	-	lw	-	+	nd	Folic acid
ST-88	-	-	-	-	-	-	-	nd	nd	-	-	-	nd	-	+	nd	nd
ST-90	-	-	-	-	-	-	-	nd	nd	-	-	-	nd	-	+	nd	nd
ST-91	-	-	-	-	-	-	-	+	nd	-	-	-	nd	-	+	nd	-
ST-92	-	-	-	-	-	-	-	+	nd	-	-	-	nd	-	+	nd	-
ST-95	+	vw	+	s	-	-	-	-	nd	-	-	-	nd	-	-	36-37	Thiamine
ST-98	-	-	-	-	-	-	-	-	nd	-	-	-	nd	-	+	nd	Biotin and thiamine

Appendix Table B3 (Continued)

Strain	Fermentation							Other Tests									
	Glucose	Galactose	Sucrose	Maltose	Lactose	Rafinose	Melibiose	Vitamin free medium	50% Glucose	Starch formation	Gelatin liquefaction	0.1% Cycloheximide	Acid formation	Lipase	Urease	Maximum growth temperature (°C)	Vitamin Requirement
ST-102	-	-	-	-	-	-	-	+	nd	-	-	-	nd	-	+	nd	-
ST-105	-	-	-	-	-	-	-	-	nd	nd	-	-	nd	-	+	nd	Thiamine
ST-111	-	-	-	-	-	-	-	-	nd	+	-	-	nd	-	+	nd	Thiamine
ST-115	-	-	-	-	-	-	-	nd	nd	nd	-	-	nd	-	+	nd	nd
ST-119	-	-	-	-	-	-	-	nd	nd	nd	-	-	nd	-	+	nd	nd
ST-122	+	+	+	+	-	-	-	nd	nd	nd	+	-	nd	-	-	39-40	nd
ST-128	-	-	-	-	-	-	-	nd	nd	nd	-	-	nd	-	+	nd	nd
ST-144	-	-	-	-	-	-	-	nd	-	nd	-	-	-	-	+	28-29	nd
ST-145	-	-	-	-	-	-	-	nd	-	nd	-	-	-	-	+	32-33	nd
ST-151	-	-	-	-	-	-	-	nd	-	nd	-	-	-	-	+	nd	nd
ST-153	-	-	-	-	-	-	-	nd	-	nd	-	-	-	-	+	nd	nd
ST-156	-	-	-	-	-	-	-	nd	-	nd	-	-	-	-	+	nd	nd
ST-164	+	+	-	-	-	-	-	-	-	nd	-	-	-	-	-	39-40	Biotin
ST-184	-	-	-	-	-	-	-	nd	lw	nd	-	-	-	-	+	29-30	nd
ST-195	-	-	-	-	-	-	-	nd	-	nd	-	-	-	-	+	nd	nd
ST-198	-	-	-	-	-	-	-	nd	w	nd	-	-	-	-	+	28-29	nd

Appendix Table B3 (Continued)

Strain	Fermentation							Other Tests									
	Glucose	Galactose	Sucrose	Maltose	Lactose	Rafinose	Melibiose	Vitamin free medium	50% Glucose	Starch formation	Gelatin liquefaction	0.1% Cycloheximide	Acid formation	Lipase	Urease	Maximum growth temperature (°C)	Vitamin Requirement
ST-201	-	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	+	nd	nd
ST-202	-	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	+	nd	nd
ST-206	-	-	-	-	-	-	-	nd	nd	nd	-	-	-	-	+	nd	nd
ST-211	+	+	+	-	-	+	-	nd	nd	-	-	-	-	-	-	37-38	-
ST-224	s	-	-	-	-	-	-	nd	nd	-	-	-	-	-	-	39-40	-
ST-225	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	41-42	Pyridoxine and thiamine
ST-226	-	-	-	-	-	-	-	nd	-	nd	-	-	-	-	+	nd	nd
ST-228	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	41-42	Pyridoxine and thiamine
ST-229	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	41-42	Pyridoxine and thiamine
ST-236	+	-	-	-	-	-	-	+	+	-	-	-	-	-	-	38-39	-
ST-237	+	s	+	+	-	-	-	+	nd	-	lw	-	w	-	-	43-44	-
ST-238	-	-	-	-	-	-	-	+	nd	-	-	-	-	-	-	39-40	-
ST-239	s	-	-	-	-	-	-	+	nd	-	-	+	w	-	-	39-40	-
ST-240	s	-	-	-	-	-	-	+	+	-	-	+	w	-	-	40-41	-
ST-246	+	-	-	-	-	-	-	-	nd	-	-	+	-	-	-	35-36	Thiamine
ST-249	vw	-	-	-	-	-	-	+	nd	-	-	-	-	-	-	33-34	-

Appendix Table B3 (Continued)

Strain	Fermentation							Other Tests								Vitamin Requirement	
	Glucose	Galactose	Sucrose	Maltose	Lactose	Rafinose	Melibiose	Vitamin free medium	50% Glucose	Starch formation	Gelatin liquefaction	0.1% Cycloheximide	Acid formation	Lipase	Urease		Maximum growth temperature (°C)
ST-250	+	-	-	-	-	-	-	-	nd	nd	-	-	-	-	-	nd	Inositol, niacin, pantothenate and pyridoxine
ST-253	+	+	+	-	-	-	-	+	+	-	-	-	-	-	-	nd	nd
ST-269	-	-	-	-	-	-	-	+	+	-	-	nd	-	-	-	37-38	-
ST-297	-	-	-	-	-	-	-	-	nd	-	lw	+	w	-	-	34-35	Biotin, pyridoxine and thiamine
ST-300	+	+	-	-	-	-	-	-	nd	-	-	-	w	-	-	37-38	Thiamine
ST-306	+	-	-	-	-	-	-	-	nd	-	-	-	-	-	-	36-37	Inositol, niacin, pantothenate and pyridoxine
ST-311	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	34-35	Biotin, pyridoxine and thiamine
ST-314	l/-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	32-33	Biotin, pyridoxine
ST-315	l/-	l/-	-	-	-	-	-	-	+	-	lw	-	lw	-	-	35-36	Biotin, pyridoxine
ST-318	-	-	-	-	-	-	-	-	-	-	-	-	-	-	s	35-36	Thiamine
ST-320	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	34-35	Biotin, pyridoxine and thiamine
ST-328	+	+	-	-	-	-	-	-	nd	nd	-	-	w	-	-	38-39	Biotin and thiamine
ST-329	+	+	-	-	-	-	-	-	nd	nd	-	-	w	-	-	38-39	Biotin and thiamine
ST-330	+	-	-	-	-	-	-	+	+	-	-	-	w	-	-	31-32	-
ST-331	+	+	-	-	-	-	-	+	nd	-	-	-	w	-	-	38-39	-
ST-333	+	+	-	-	-	-	-	-	nd	-	-	-	-	-	-	38-39	Thiamine

Appendix Table B3 (Continued)

Strain	Fermentation							Other Tests									
	Glucose	Galactose	Sucrose	Maltose	Lactose	Rafinose	Melibiose	Vitamin free medium	50% Glucose	Starch formation	Gelatin liquefaction	0.1% Cycloheximide	Acid formation	Lipase	Urease	Maximum growth temperature (°C)	Vitamin Requirement
ST-334	+	-	-	-	-	-	-	nd	-	-	-	-	w	-	-	36-37	nd
ST-335	+	s	-	-	-	-	-	-	nd	-	-	-	-	-	-	37-38	Biotin
ST-337	-	-	-	-	-	-	-	-	nd	-	-	-	-	-	-	32-33	Biotin and thiamine
ST-338	-	-	-	-	-	-	-	+	nd	-	-	-	-	-	-	31-32	-
ST-339	w	-	-	-	-	-	-	+	-	-	-	-	-	-	-	31-32	-
ST-343	+	+	-	-	-	-	-	-	nd	-	-	-	lw	-	-	35-36	Pantothenate, pyridoxine and thiamine
ST-358	+	vw	-	-	-	-	-	-	nd	nd	-	-	l	-	-	35-36	Biotin
ST-365	+	+	-	-	-	-	-	+	+	-	-	-	w	-	-	37-38	Thiamine
ST-366	+	+	-	-	-	-	-	+	+	-	-	-	w	-	-	37-38	Thiamine
ST-370	+	s	-	-	-	-	-	+	+	-	-	-	lw	-	-	35-36	Biotin
ST-377	+	-	-	-	-	-	-	+	nd	nd	lw	-	-	-	-	38-39	Biotin
ST-380	+	-	-	-	-	-	-	+	+	-	-	-	-	-	-	nd	nd
ST-388	+	-	+	+	-	+	-	+	+	-	-	-	-	-	-	37-38	Biotin and thiamine
ST-390	+	-	-	-	-	-	-	+	+	-	-	-	-	-	-	nd	Biotin and thiamine
ST-391	+	-	-	-	-	-	-	-	+	-	-	-	-	-	-	34-35	nd
ST-394	+	+	-	-	-	-	-	-	nd	nd	-	-	-	-	-	40-41	Pantothenate, niacin, pyridoxine and thiamine

Appendix Table B3 (Continued)

Strain	Fermentation							Other Tests								Vitamin Requirement	
	Glucose	Galactose	Sucrose	Maltose	Lactose	Rafinose	Melibiose	Vitamin free medium	50% Glucose	Starch formation	Gelatin liquefaction	0.1% Cycloheximide	Acid formation	Lipase	Urease		Maximum growth temperature (°C)
ST-422	w	-	-	-	-	-	-	+	+	-	-	-	-	-	-	nd	nd
ST-431	+	+	-	-	-	-	-	+	+	-	-	-	-	-	-	35-36	Biotin
ST-433	+	-	-	-	-	-	-	-	w	nd	-	-	-	nd	-	37-38	Piridoxine and thiamine
ST-445	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34-35	nd
ST-449	+	-	-	-	-	-	-	-	nd	-	-	-	-	nd	-	41-42	Niacin, pyridoxin and thiamine
ST-451	+	-	+	-	-	-	-	-	nd	nd	-	-	-	nd	-	36-37	Pyridoxine and thiamine
ST-464	+	-	-	-	-	-	-	-	nd	nd	-	-	-	nd	-	36-37	Inositol, niacin, pantothenate, pyridoxine
ST-476	+	-	-	-	-	-	-	-	nd	nd	-	-	-	nd	-	33-34	Inositol, niacin, pantothenate, pyridoxine and thiamine
ST-490	+	-	+	s	-	-	-	-	nd	-	lw	-	-	nd	-	39-40	Thiamine
ST-493	+	-	-	-	-	-	-	-	nd	nd	-	-	-	nd	-	36-37	Inositol, niacin, pantothenate, pyridoxine and thiamine
ST-533	+	-	+	lw	-	-	-	-	nd	-	w	-	lw	nd	-	38-39	Thiamine
ST-536	+	-	+	lw	-	-	-	-	nd	-	w	-	lw	nd	-	38-39	Thiamine
ST-613	+	-	-	-	-	-	-	-	nd	-	-	-	-	nd	-	37-38	Inositol, niacin, pantothenate, pyridoxine and thiamine