

Characteristics		Species		<i>Thermoactino myces vulgaris</i> <sup>a, d</sup>	<i>Thermoactinomyces intermedium</i> <sup>a, c, d</sup>	<i>Laceyella sacchari</i> <sup>a, d</sup>	<i>Laceyella putida</i> <sup>a, d</sup>	<i>Laceyella tengchongensis</i> <sup>a</sup>	<i>Laceyella sedimicinis</i> <sup>c</sup>
Abundant white aerial mycelium				+	+	–	+	+	+
Colour of substrate mycelium				white or cream	yellowish-brown	olive-buff	yellowish-brown	yellow-white	yellow-white
Soluble pigment				–	–	+/- (yellow-brown)	greyish yellow	–	–
Melanin production				–	+	+/-	+	–	–
Degradation	Starch			+	–	+	+	–	+
	Gelatin			+	+	+/-	+	+	+
	Hypoxanthine			–	–	–	–	+	+
	Xanthine			–	–	–	+	–	+
	L-Tyrosine			–	+	+/-	+	+	nd
	Adenine			–	nd	–	–	–	+
Growth conditions	Temperature	range	35–60	35–60	35–65	36–58	28–70	28–65	
		opt.	55	50–55	55–60	48	55	55	
	pH	range	nd	nd	nd	nd	6.0–8.0	5.0–9.0	
		opt.	7.2–7.4*	7.2–7.4*	7.2–7.4*	7.2–7.4*	nd	7.0	
	NaCl (%) w/v	5	+	nd	–	–	nd	–	
		1	+	nd	+/-	–	nd	+	
Utilization	Lactose			–	nd	+	–	+	+
	Maltose			+	nd	+	+	–	+
	Trehalose			+	nd	+	–	+	+
	Raffinose			nd	nd	+	–	–	–
	D-Mannitol			+	nd	+	–	+	–
	D-Fructose			+	nd	+	–	–	nd
	D-Mannose			+	nd	+/-	–	–	–
	L-Rhamnose			–	nd	–	–	+	–
	D-Ribose			+	nd	+	–	–	–
	D-Xylose			–	nd	–	nd	–	–
	Glycine			nd	nd	+	+	–	+
	L-Cysteine			nd	nd	+	–	+	–
	L-Lysine			nd	nd	–	–	+	–
	L-Proline			nd	nd	–	+	–	+
	L-Serine			nd	nd	+	+	–	–
L-Threonine			nd	nd	–	+	+	–	
L-Valine			nd	nd	–	+	–	+	
DNA G+C content (mol%)				48	48	48.0	49.0	48.6	47.9
Cellular fatty acids				iso-C <sub>15:0</sub> <sup>f</sup> iso-C <sub>17:0</sub> <sup>f</sup> anteiso-C <sub>15:0</sub>	iso-C <sub>15:0</sub> <sup>f</sup> iso-C <sub>17:0</sub> <sup>f</sup> anteiso-C <sub>15:0</sub>	iso-C <sub>15:0</sub> <sup>f</sup> anteiso-C <sub>15:0</sub> <sup>f</sup> C <sub>15:0</sub> <sup>f</sup> iso-C <sub>16:0</sub>	iso-C <sub>15:0</sub> <sup>f</sup> anteiso-C <sub>15:0</sub> <sup>f</sup> C <sub>15:0</sub> <sup>f</sup> iso-C <sub>14:0</sub> <sup>f</sup> iso-C <sub>16:0</sub>	iso-C <sub>15:0</sub> <sup>f</sup> anteiso-C <sub>15:0</sub> <sup>f</sup> iso-C <sub>16:0</sub> <sup>f</sup> iso-C <sub>14:0</sub>	iso-C <sub>15:0</sub> <sup>f</sup> anteiso-C <sub>15:0</sub> <sup>f</sup> C <sub>15:0</sub>
Whole-cell sugars				Glu, Man <sup>b</sup>	nd	Xyl, Ara, Glu	Xyl, Ara, Glu	Rib, Xyl, Glu	Rib, Glu
Phospholipids				nd	nd	DPG, PE, PME, PI, PIM, PL	DPG, PE, PG, PI, PIM, PL	DPG, PE, PG, PI, PIM, PL	DPG, PE, PG, PI, PIM, PL
Menaquinones				MK-7	MK-7	MK-9, MK-8, MK-10	MK-9, MK-8	MK-9, MK-8	MK-9, MK-8

\*pH of recommended media, nd no data, + positive reaction, – negative reaction, +/- variable reaction. Ara arabinose, Glu glucose, Man mannose, Rib ribose, Xyl xylose. DPG diphosphatidylglycerol, PE phosphatidylethanolamine, PI phosphatidylinositol, PIM phosphatidylinositolmannosides, PME phosphatidylmethylethanolamine, PG phosphatidylglycerol, PL unknown phospholipids  
Data from: <sup>a</sup>Lacey and Cross 1989  
<sup>b</sup>McCarthy and Cross 1984  
<sup>c</sup>Kurup et al. 1980  
<sup>d</sup>Yoon et al. 2005  
<sup>e</sup>Zhang et al. 2010  
<sup>f</sup>Chen et al. 2012