

Compendium of Actinobacteria from Dr. Joachim M. Wink  
University of Braunschweig

Strain		DSM 45823
Genus		<i>Thermomonospora</i>
Species		<i>cellulosilytica</i>
Status		
Synonyms		<i>Actinomadura cellulosilytica</i> Jiao et al. 2015
Risk group		1 (provisional classification by DSMZ)
Type strain		CCTCC AA 2012023; JCM 30326; YIM 77510
Genbank accession numbers		16S rRNA gene: <a href="#">AB859254</a>
Reference		
Author		Jiao, J. Y., Liu, L., Zhou, E. M., Wei, D. Q., Ming, H., Xian, W. D., Yuan, C. G., Zhong, J. M., Li, W. J.
Title		<i>Actinomadura amylolytica</i> sp. nov. and <i>Actinomadura cellulosilytica</i> sp. nov., isolated from geothermally heated soil
Journal		<i>Antonie Van Leeuwenhoek</i>
Volume		<b>108</b> (1)
Page		75-83
Year		2015
Morphology		
Agar	ISP 2 - growth/G	good
Agar	ISP 2 - colony color/R	sand yellow (1002)
Agar	ISP 2 - aerial mycelium/A	pure white (9010)
Agar	ISP 2 - soluble pigment/S	none
Agar	ISP 3 - G	sparse- good
Agar	ISP 3 - R	sand yellow (1002), ivory (1014)
Agar	ISP 3 - A	cream (9001), sparse
Agar	ISP 3 - S	sand yellow (1002)
Agar	ISP 4 - G	good
Agar	ISP 4 - R	light ivory (1015)
Agar	ISP 4 - A	oyster white (103), sparse
Agar	ISP 4 - S	sand yellow (1002)
Agar	ISP 5 - G	good
Agar	ISP 5 - R	beige (1001)
Agar	ISP 5 - A	none
Agar	ISP 5 - S	none
Agar	ISP 6 - G	good
Agar	ISP 6 - R	colourless
Agar	ISP 6 - A	none
Agar	ISP 6 - S	none
Agar	ISP 7 - G	good

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Agar	ISP 7 - R	grey beige (1019)
Agar	ISP 7 - A	none
Agar	ISP 7 - S	brown beige (1011)
Agar	suter with tyrosine - G	good
Agar	suter with tyrosine - R	grey beige (1019)
Agar	suter with tyrosine - A	traffic white (9016)
Agar	suter with tyrosine - S	maize yellow (1006)
Agar	suter without tyrosine - G	good
Agar	suter without tyrosine - R	beige (1001)
Agar	suter without tyrosine - A	pure white (9010), sparse
Agar	suter without tyrosine - S	sand yellow (1002)
	Sporechains/Sporangia	
Physiology		
Melanin		-
pH	range	
pH	optimum	
temperature	range	
temperature	optimum	
sodium chloride tolerance		2,5%
lysozyme tolerance		
use of carbohydrates	glucose	+
use of carbohydrates	arabinose	(+)
use of carbohydrates	sucrose	(+)
use of carbohydrates	xylose	+
use of carbohydrates	inositol	-
use of carbohydrates	mannose	(+)
use of carbohydrates	fructose	(+)
use of carbohydrates	rhamnose	+
use of carbohydrates	raffinose	-
use of carbohydrates	cellulose	+
Api zym	Phosphatase alcaline	5
Api zym	Esterase (C4)	3
Api zym	Esterase Lipase (C8)	3
Api zym	Lipase (C14)	2
Api zym	Leucin arylamidase	5
Api zym	Valine arylamidase	5
Api zym	Cystine arylamidase	3
Api zym	Trypsin	4
Api zym	Chymotrypsin	5
Api zym	Phosphatase acid	2
Api zym	Naphtol-AS-BI-phosphohydrolase	3
Api zym	alpha galactosidase	0
Api zym	beta galactosidase	0
Api zym	beta glucuronidase	1

Api zym	alpha glucosidase	5
Api zym	beta glucosidase	3
Api zym	N-acetyl-beta-glucoseamidase	0
Api zym	alpha mannosidase	0
Api zym	alpha fucosidase	0
Api coryne	nitrate reduction	+
Api coryne	Pyraziamidase	+
Api coryne	Pyrrolidonyl arylamidase	-
Api coryne	Alkaline phosphatase	+
Api coryne	beta glucuronidase	-
Api coryne	beta galactosidase	-
Api coryne	alpha glucosidase	+
Api coryne	N-acetyl -beta glucoseamidase	-
Api coryne	Esculin (beta glucosidase)	+
Api coryne	Urease	-
Api coryne	Gelatine(hydrolysis)	+
Api coryne	Glucose fermentation	-
Api coryne	Ribose fermentation	-
Api coryne	Xylose fermentation	-
Api coryne	Mannitol fermentation	-
Api coryne	Maltose fermentation	-
Api coryne	Lactose fermentation	-
Api coryne	Sucrose fermentation	-
Api coryne	Glycogen fermentation	-

### Apicoryne



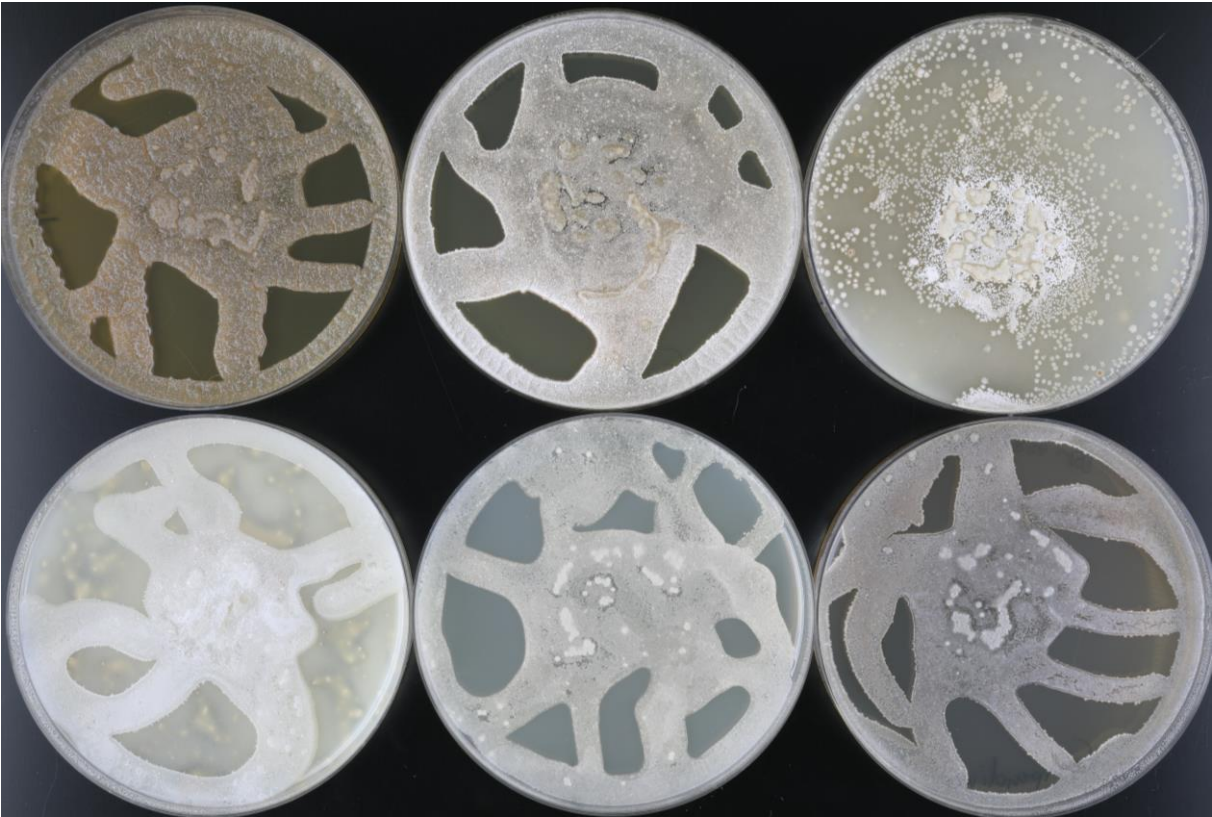
Abbildung 1: Apicoryne-Teststreifen mit Keim DSM 45823.

### Apizym



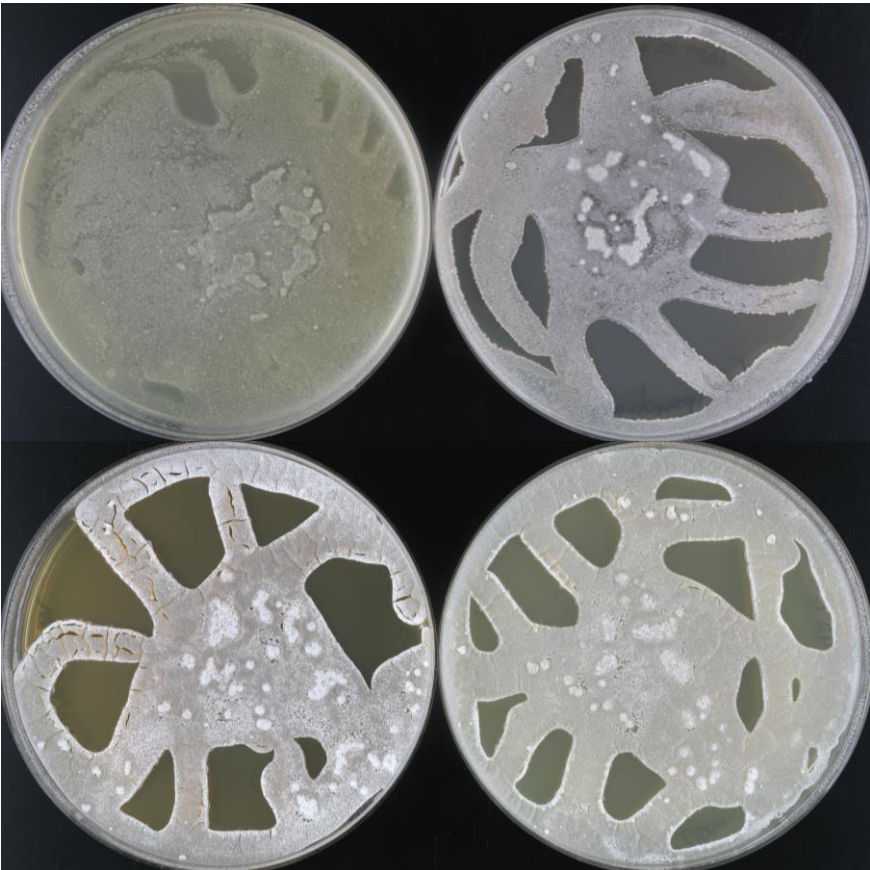
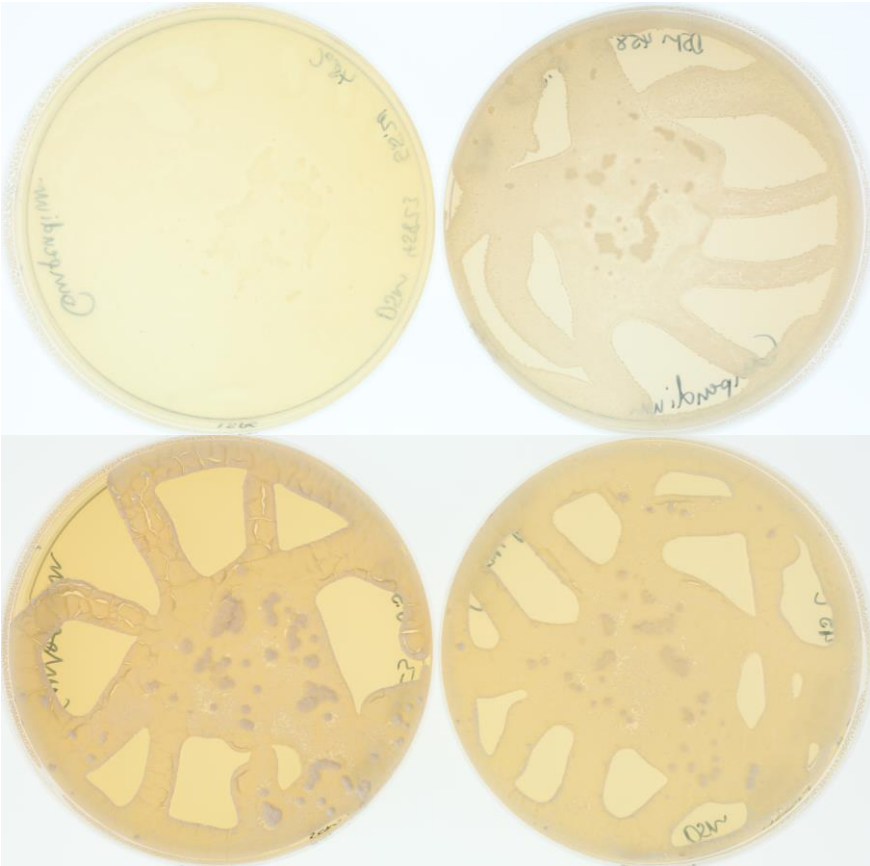
Abbildung 2: Apizym-Teststreifen mit Keim DSM 45823.

**Plates 45°C (553, ISP2, ISP3, ISP4, ISP5, ISP7)**

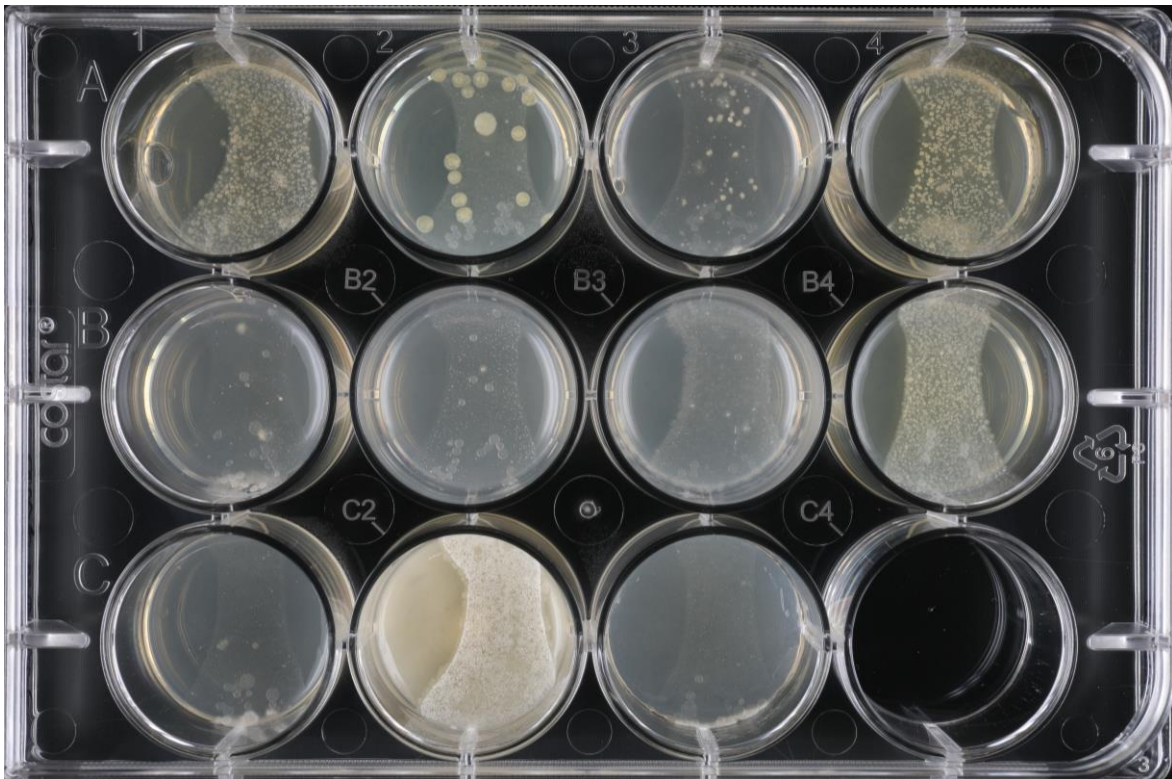
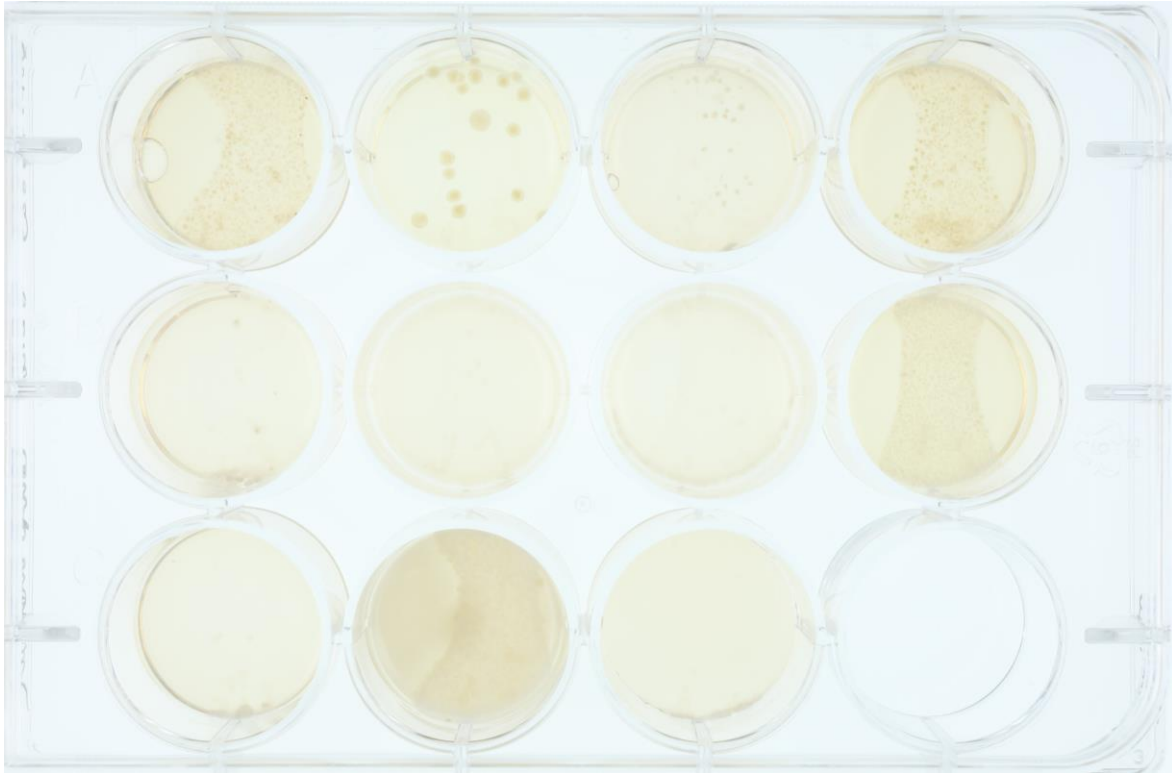




(ISP6, ISP7, SSM+T, SSM-T)



**Carbon utilization test (from top left to bottom right: glucose, arabinose, sucrose, xylose, inositol, mannose, fructose, rhamnose, raffinose, cellulose)**





**Sodium chloride tolerance test (from top left to bottom right: 0%, 2,5%, 5%,  
7,5%, 10%)**

