

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

Strain		DSM 22823
Genus		<i>Cryobacterium</i>
Species		<i>arcticum</i>
Status		
Risk group		L1
Type strain		SK1, NCCB 100316
Reference		
Author		Bajerski, F., Ganzert, L., Mangelsdorf, K., Lipski, A., Wagner, D.
Title		<i>Cryobacterium arcticum</i> sp. nov., a psychrotolerant bacterium from an Arctic soil.
Journal		<i>Int J Syst Evol Microbiol</i>
Volume		61 (Pt 8)
Page		1849-1853
Year		2011
Morphology		
Agar	ISP 2 - growth/G	good
Agar	ISP 2 - colony color/R	lemon yellow (1012) / ivory (1014)
Agar	ISP 2 - aerial mycelium/A	none
Agar	ISP 2 - soluble pigment/S	none
Agar	ISP 3 - G	decreased
Agar	ISP 3 - R	light ivory (1015)
Agar	ISP 3 - A	none
Agar	ISP 3 - S	none
Agar	ISP 4 - G	decreased
Agar	ISP 4 - R	zinc yellow (1018)
Agar	ISP 4 - A	none
Agar	ISP 4 - S	none
Agar	ISP 5 - G	good
Agar	ISP 5 - R	zinc yellow (1018)
Agar	ISP 5 - A	none
Agar	ISP 5 - S	none
Agar	ISP 6 - G	good
Agar	ISP 6 - R	zinc yellow (1018)
Agar	ISP 6 - A	none
Agar	ISP 6 - S	none
Agar	ISP 7 - G	good
Agar	ISP 7 - R	zinc yellow (1018)
Agar	ISP 7 - A	none
Agar	ISP 7 - S	none
Agar	suter with tyrosine - G	good
Agar	suter with tyrosine - R	ivory (1014)
Agar	suter with tyrosine - A	none
Agar	suter with tyrosine - S	none

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Agar	suter without tyrosine - G	good
Agar	suter without tyrosine - R	zinc yellow (1018)
Agar	suter without tyrosine - A	none
Agar	suter without tyrosine - S	none
	Sporechains/Sporangia	
Physiology		
Melanin		(+)
pH	range	
pH	optimum	
temperature	range	
temperature	optimum	
sodium chloride tolerance		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 alkaline	0
Api zym	Esterase (C4)	1
Api zym	Esterase Lipase (C8)	2
Api zym	Lipase (C14)	0
Api zym	Leucin arylamidase	5
Api zym	Valine arylamidase	2
Api zym	Cystine arylamidase	1
Api zym	Trypsin	2
Api zym	Chymotrypsin	0
Api zym	Phosphatase acid	0
Api zym	Naphtol-AS-BI-phosphohydrolase	1
Api zym	alpha galactosidase	5
Api zym	beta galactosidase	4
Api zym	beta glucuronidase	0
Api zym	alpha glucosidase	4
Api zym	beta GLUCOSIDASE	5
Api zym	N-acetyl-beta-glucoseamidase	0
Api zym	alpha mannosidase	3
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	-

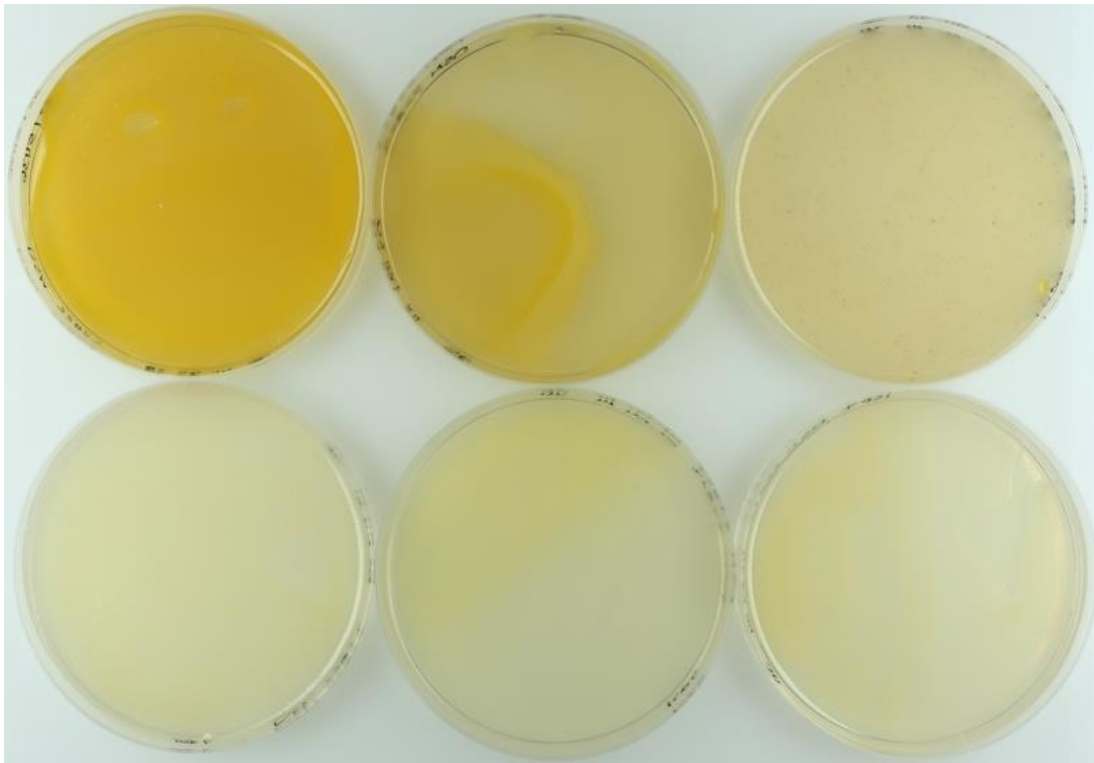
Apicoryne



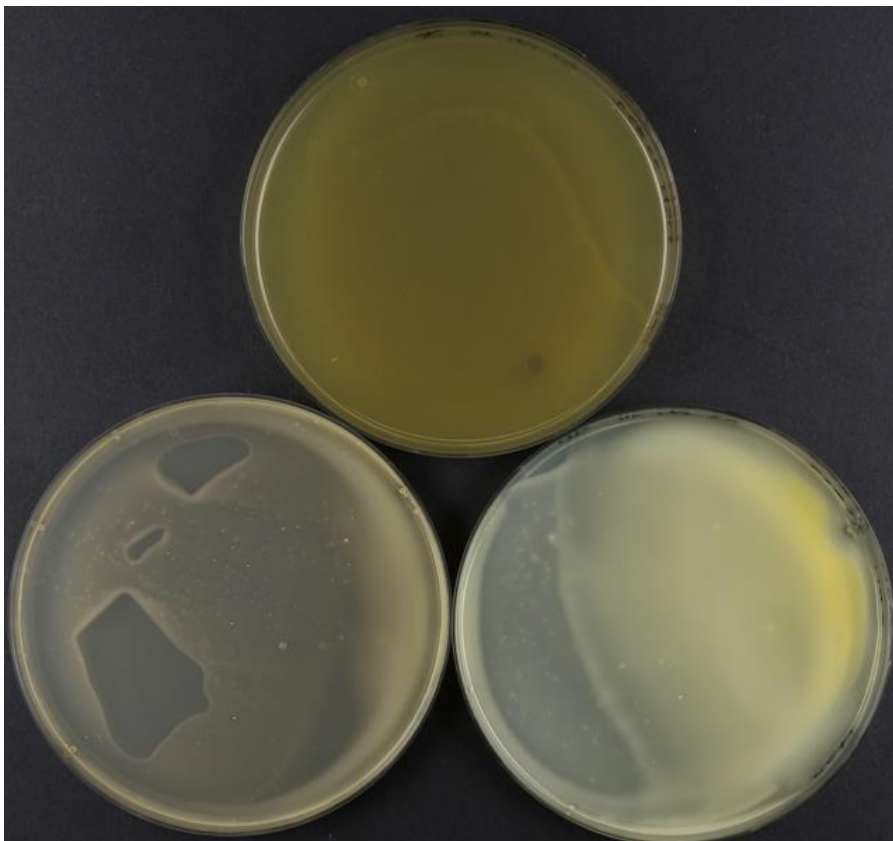
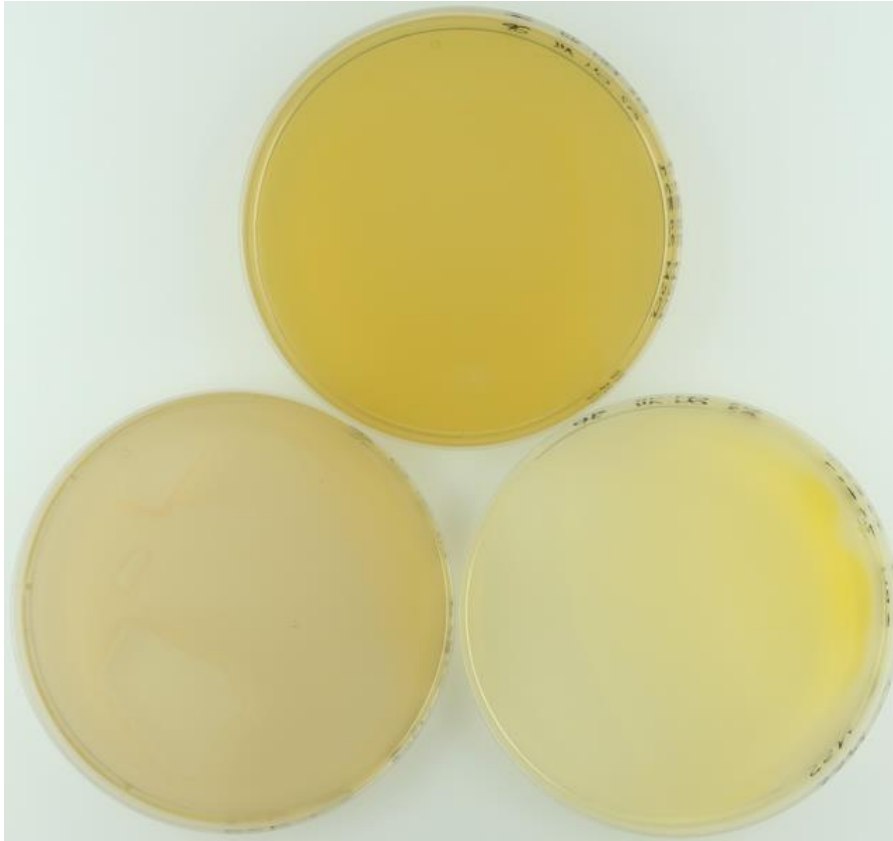
Apizym



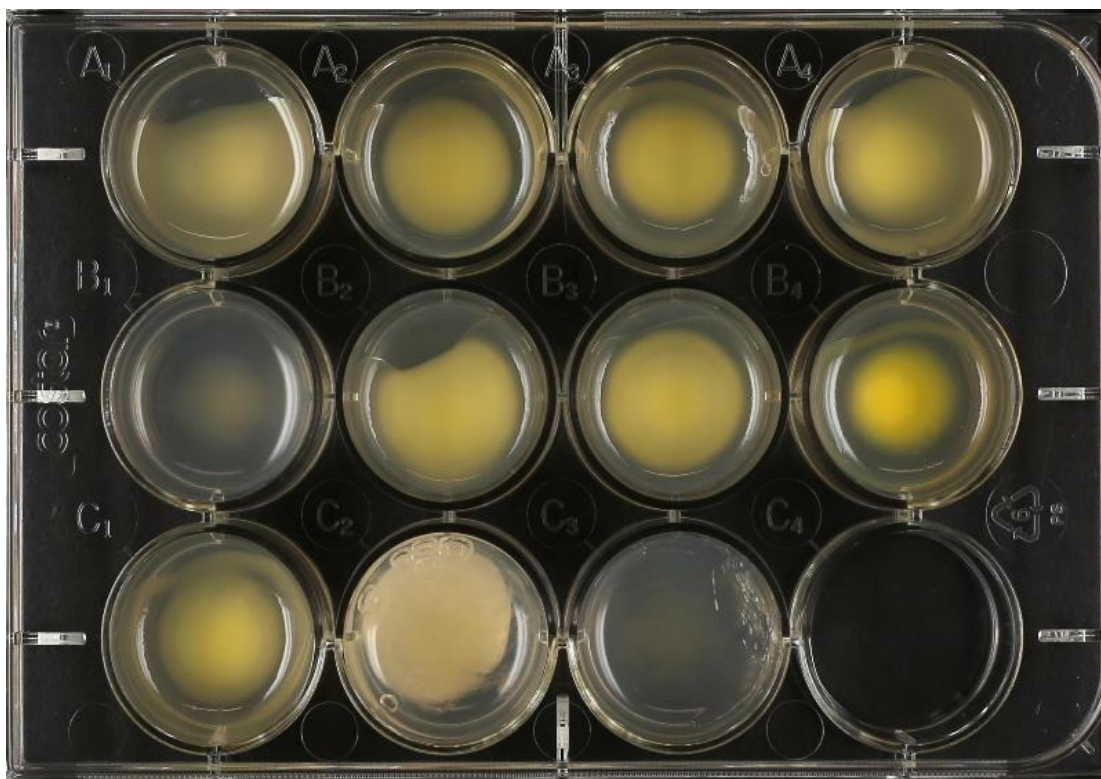
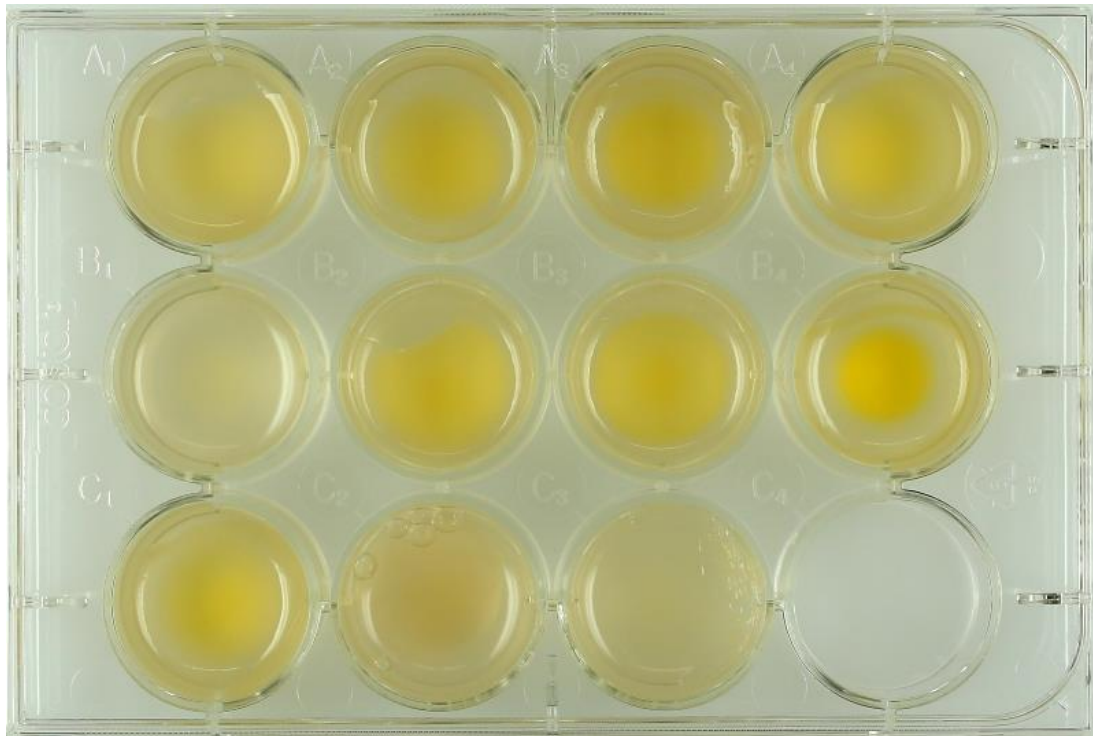
Plates (GYM, ISP2, ISP3, ISP4, ISP5, ISP7)



(ISP6, 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%)

