

Strain identifier

BacDive ID: 3931 **DOI:** 10.13145/bacdive3931.20191129.4.1
Type strain: yes
Culture col. no.: DSM 19828, CCTCC AB 207007, KCTC 19231, YIM 45900

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Name and taxonomic classification

Ref.: 8337	Domain	Bacteria
Ref.: 8337	Phylum	Actinobacteria
Ref.: 8337	Class	Actinobacteria
Ref.: 8337	Order	Actinomycetales
Ref.: 8337	Family	Dermacoccaceae
Ref.: 8337	Genus	Yimella
Ref.: 8337	Species	Yimella lutea
Ref.: 8337	Full Scientific Name	Yimella lutea Tang et al. 2010
Ref.: 8337	Designation:	None
Ref.: 8337	Type strain:	yes

Prokaryotic Nomenclature Up-to-date (PNU)

Ref.: 20215	Domain	Bacteria
Ref.: 20215	Phylum	Actinobacteria
Ref.: 20215	Class	Actinobacteria
Ref.: 20215	Literature reference	Int. J. Syst. Bacteriol. 47:479*
Ref.: 20215	Family	Dermacoccaceae
Ref.: 20215	Literature reference	Int. J. Syst. Evol. Microbiol. 50:1279*
Ref.: 20215	Genus	Yimella

Ref.: 20215	Taxonomical status	gen. nov. (VP)
Ref.: 20215	Literature reference	Int. J. Syst. Evol. Microbiol. 60:659*
Ref.: 20215	Species	<i>Yimella lutea</i>
Ref.: 20215	Taxonomical status	sp. nov. (VP)
Ref.: 20215	Literature reference	Int. J. Syst. Evol. Microbiol. 60:659*
Ref.: 20215	Full Scientific Name	<i>Yimella lutea</i> Tang et al. 2010

Morphology and physiology

Ref.: 29477	Gram stain	positive
Ref.: 29477	Cell length	1.55 µm
Ref.: 29477	Cell width	0.8 µm
Ref.: 29477	Cell shape	coccus-shaped
Ref.: 29477	Motility	no
Ref.: 19787	Cultivation medium used	ISP 2
Ref.: 19787	Colony color	Corn yellow (1006)
Ref.: 19787	Incubation period	10-14 days
Ref.: 19787	Cultivation medium used	ISP 3
Ref.: 19787	Colony color	Beige (1001)
Ref.: 19787	Incubation period	10-14 days
Ref.: 19787	Cultivation medium used	ISP 4
Ref.: 19787	Colony color	Light ivory (1015)
Ref.: 19787	Incubation period	10-14 days
Ref.: 19787	Cultivation medium used	ISP 5
Ref.: 19787	Colony color	Golden yellow (1004)
Ref.: 19787	Incubation period	10-14 days
Ref.: 19787	Cultivation medium used	ISP 6
Ref.: 19787	Colony color	Golden yellow (1004)
Ref.: 19787	Incubation period	10-14 days

Ref.: 19787 **Cultivation medium used** ISP 7

Ref.: 19787 **Colony color** Dahlia yellow (1033)

Ref.: 19787 **Incubation period** 10-14 days

Ref.: 29477 Ref.: 29477 Ref.: 29477	Enzymes	Enzyme	Enzyme activity	EC number
		alkaline phosphatase	+	3.1.3.1
		catalase	+	1.11.1.6
		gelatinase	+	

Ref.: 29477 Ref.: 29477	Halophily	Salt	Tested relation	Salt conc.
		NaCl	growth	0-8 %
		NaCl	optimum	0.5 %

Ref.: 19787

API zym

API ID	611
Control	n.d.
Alkaline phosphatase	+
Esterase (C 4)	+
Esterase Lipase (C 8)	+
Lipase (C 14)	-
Leucine arylamidase	+
Valine arylamidase	+
Cystine arylamidase	-
Trypsin	-
Alpha-chymotrypsin	-
Acid phosphatase	+
Naphthol-AS-BI-phosphohydrolase	+
Alpha-galactosidase	-
Beta-galactosidase	-
Beta-glucoronidase	-
Alpha-glucosidase	+
Beta-glucosidase	-
N-acetyl-beta-glucosaminidase	-
Alpha-mannosidase	-
Alpha-fucosidase	-

	Metabolite utilization	Chebi ID	Metabolite	Utilization activity	Kind of utilization tested
Ref.: 29477		15366	Acetic acid	+	carbon source
Ref.: 19787		22599	Arabinose	-	
Ref.: 29477		29016	Arginine	+	carbon source
Ref.: 19787		62968	Cellulose	-	
Ref.: 19787		28757	Fructose	+	
Ref.: 29477		28757	Fructose	+	carbon source
Ref.: 19787		17234	Glucose	+	
Ref.: 29477		17234	Glucose	+	carbon source
Ref.: 29477		17754	Glycerol	+	carbon source
Ref.: 29477		15428	Glycine	+	carbon source
Ref.: 29477		27570	Histidine	+	carbon source
Ref.: 19787		17268	Inositol	-	
Ref.: 29477		17306	Maltose	+	carbon source
Ref.: 19787		29864	Mannitol	+	
Ref.: 29477		37684	Mannose	+	carbon source
Ref.: 29477		17632	Nitrate	+	reduction
Ref.: 29477		30768	Propionic acid	+	carbon source
Ref.: 29477		32816	Pyruvic acid	+	carbon source
Ref.: 19787		16634	Raffinose	-	
Ref.: 19787		26546	Rhamnose	-	
Ref.: 29477		33942	Ribose	+	carbon source
Ref.: 19787		17992	Sucrose	+	
Ref.: 29477		17992	Sucrose	+	carbon source
Ref.: 29477		27082	Trehalose	+	carbon source
Ref.: 29477		53423	Tween 40	+	carbon source
Ref.: 29477		53426	Tween 80	+	carbon source
Ref.: 29477		16704	Uridine	+	carbon source
Ref.: 19787		18222	Xylose	-	
Ref.: 29477		18222	Xylose	+	carbon source

Ref.: 19787 **Medium Name (multicellularity)** ISP 2

Ref.: 19787 **Multicellular complex forming ability** no

Ref.: 19787 **Medium Name (multicellularity)** ISP 3

Ref.: 19787	Multicellular complex forming ability	no
Ref.: 19787	Medium Name (multicellularity)	ISP 4
Ref.: 19787	Multicellular complex forming ability	no
Ref.: 19787	Medium Name (multicellularity)	ISP 5
Ref.: 19787	Multicellular complex forming ability	no
Ref.: 19787	Medium Name (multicellularity)	ISP 6
Ref.: 19787	Multicellular complex forming ability	no
Ref.: 19787	Medium Name (multicellularity)	ISP 7
Ref.: 19787	Multicellular complex forming ability	no
Ref.: 8337	Murein short key	A11.36
Ref.: 8337	Murein types	A4alpha L-Lys-L-Ser-D-Asp
Ref.: 29477	Decomposition/lysis	aggregates in clumps
Ref.: 29477	Oxygen tolerance	aerobe
Ref.: 29477	Ability of spore formation	no

Culture and growth conditions

Ref.: 8337	Culture medium	COLUMBIA BLOOD MEDIUM (DSMZ Medium 693), 28°C
Ref.: 8337	Culture medium growth	yes
Ref.: 8337	Culture medium link	https://www.dsmz.de/microorganisms/medium/pdf/DSMZ_Medium693.pdf
Ref.: 8337	Culture medium	GYM STREPTOMYCES MEDIUM (DSMZ Medium 65), 28°C
Ref.: 8337	Culture medium growth	yes

Ref.: 8337	Culture medium link	https://www.dsmz.de/microorganisms/medium/pdf/DSMZ_Medium65.pdf
Ref.: 19787	Culture medium	ISP 2
Ref.: 19787	Culture medium growth	yes
Ref.: 19787	Culture medium composition	Name: ISP 2 / Yeast Malt Agar (5265); 5265 Composition Malt extract 10.0 g/l Yeast extract 4.0 g/l Glucose 4.0 g/l Agar 15.0 g/l Preparation: Sterilisation: 20 minutes at 121°C pH before sterilisation: 7.0 Usage: Maintenance and Taxonomy Organisms: All Actinomycetes
Ref.: 19787	Culture medium	ISP 3
Ref.: 19787	Culture medium growth	yes
Ref.: 19787	Culture medium composition	Name: ISP 3; 5315 Composition Dog oat flakes 20.0 g/l Trace element solution (5314) 2.5 ml/l Agar 18.0 g/l Preparation: Oat flakes are cooked for 20 minutes, trace element solution and agar are added (in the case of non rolled oat flakes the suspension has to be filtered). Sterilisation: 20 minutes at 121°C pH before sterilisation: 7.8 Usage: Maintenance and taxonomy (e.g. SEM As liquid medium for metabolite production) Organisms: All Actinomycetes Trace element solution 5314 Name: Trace element solution 5314; 5314 Composition CaCl ₂ x H ₂ O 3.0 g/l Fe-III-citrate 1.0 g/l MnSO ₄ 0.2 g/l ZnCl ₂ 0.1 g/l CuSO ₄ x 5 H ₂ O 0.025 g/l Sodium tetra borate 0.2 g/l CoCl ₂ x 6 H ₂ O 0.004 g/l Sodium molybdate 0.01 g/l Preparation: Use double distilled water. Sterilisation: 20 minutes at 121°C pH before sterilisation: Usage: Trace element solution for different media Organisms:
Ref.: 19787	Culture medium	ISP 4
Ref.: 19787	Culture medium growth	yes
Ref.: 19787	Culture medium composition	Name: ISP 4; DSM 547 Solution I: Difco soluble starch, 10.0 g. Make a paste of the starch with a small amount of cold distilled water and bring to a volume of 500 ml. Solution II: CaCO ₃ 2.0 g K ₂ HPO ₄ (anhydrous) 1.0 g MgSO ₄ x 7 H ₂ O 1.0 g NaCl 1.0 g (NH ₄) ₂ SO ₄ 2.0 g Distilled water 500.0 ml Trace salt solution (see below) 1.0 ml The pH should be between 7.0 and 7.4. Do not adjust if it is within this range. Mix solutions I and II together. Add 20.0 g agar. Liquify agar by steaming at 100°C for 10 to 20 min. Trace element solution: FeSO ₄ x 7 H ₂ O 0.1 g MnCl ₂ x 4 H ₂ O 0.1 g ZnSO ₄ x 7 H ₂ O 0.1 g Distilled water 100.0 ml
Ref.: 19787	Culture medium	ISP 5
Ref.: 19787	Culture medium growth	yes
Ref.: 19787	Culture medium composition	Name: ISP 5 (5323) Composition L-Asparagine 1.0 g/l Glycerol 10.0 g/l K ₂ HPO ₄ 1.0 g/l Salt solution (see preparation) 1.0 ml/l Agar 20.0 g/l Preparation: Salt solution 1.0 g FeSO ₄ x 7 H ₂ O 1.0 g MnCl ₂ x 4 H ₂ O 1.0 g ZNSO ₄ x 7 H ₂ O in 100 ml water Sterilisation: 20 minutes at 121°C pH before sterilisation: 7.2 Usage: Maintenance and taxonomy Organisms: All Actinomycetes

Ref.: 19787 **Culture medium** ISP 6
 Ref.: 19787 **Culture medium growth** yes
 Ref.: 19787 **Culture medium composition** Name: ISP 6 (5318) Composition Peptone 15.0 g/l Proteose peptose 5.0 g/l Ferric ammonium citrate 0.5 g/l Sodium glycerophosphate 1.0 g/l Sodium thiosulfate 0.08 g/l Yeast extract 1.0 g/l Agar 15.0 g/l Sterilisation: 20 minutes at 121°C pH before sterilisation: Usage: Production of melanoid pigments Organisms: All Actinomycetes

Ref.: 19787 **Culture medium** ISP 7
 Ref.: 19787 **Culture medium growth** yes
 Ref.: 19787 **Culture medium composition** Name: ISP 7 (5322) Composition Glycerol 15.0 g/l L-Tyrosine 0.5 g/l L-Asparagine 1.0 g/l K₂HPO₄ 0.5 g/l NaCl 0.5 g/l FeSO₄ x 7 H₂O 0.01 g/l Trace element solution 5343 1.0 ml/l Agar 20.0 Sterilisation: 20 minutes at 121°C pH before sterilisation: 7.3 Usage: Production of melanoid pigments Organisms: All Actinomycetes

Ref.: 8337	Ref.: 19787	Ref.: 29477	Ref.: 29477	Temperatures	
				Kind of temperature	Temperature
				growth	28 °C
				optimum	28 °C
				growth	22-42 °C
				optimum	28 °C

Ref.: 8337 **Temperature range** mesophilic
 Ref.: 19787 **Temperature range** mesophilic
 Ref.: 29477 **Temperature range** mesophilic

Ref.: 29477	Ref.: 29477	pH	
		Kind of pH	pH
		growth	05-09
		optimum	6.5

Isolation, sampling and environmental information

Ref.: 8337 **Sample type/isolated from** contaminated agar plate
 Ref.: 8337 **Geographic location (country and/or sea, region)** Yannan Province
 Ref.: 8337 **Country** China
 Ref.: 8337 **Continent** Asia

Isolation sources categories

Cat1	Cat2	Cat3
#Engineered	#Contamination	-
#Engineered	#Laboratory	#Lab enrichment

Application and interaction

Ref.: 8337 **Biosafety level** 1 Risk group (German classification)

Molecular biology

Ref.: 8337 **GC-content** 65.8 mol%

Ref.: 29477 **GC-content** 65.8 mol%

	Sequence database	Sequence accession description	Sequence accession number	Sequence length(bp)	Associated NCBI tax ID
Ref.: 8337	gene for 16S rRNA, Marker Gene (GenBank Direct submission)	Yimella lutea strain YIM 45900 16S ribosomal RNA gene, partial sequence	FJ528304	1444	587872

Strain availability

Ref.: 8337 **Culture collection no.** DSM 19828, CCTCC AB 207007, KCTC 19231, YIM 45900

Ref.: 8337 **Strain history** <- S.-K. Tang, YIM; YIM 45900

Associated Passport(s) in StrainInfo

Ref.: 20218 853245 - <http://www.straininfo.net/strains/853245>

Ref.: 20218 853244 - <http://www.straininfo.net/strains/853244>

Ref.: 20218 853246 - <http://www.straininfo.net/strains/853246>

Ref.: 20218 853243 - <http://www.straininfo.net/strains/853243>

References

Ref.: 8337 Leibniz Institut DSMZ-Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH; Curators of the DSMZ; DSM 19828

Ref.: 19787 Wink, J.: Compendium of Actinobacteria. HZI-Helmholtz-Centre for Infection Research, Braunschweig.

- Ref.: 20215 D.Gleim, M.Kracht, N.Weiss et. al.: Prokaryotic Nomenclature Up-to-date - compilation of all names of Bacteria and Archaea, validly published according to the Bacteriological Code since 1. Jan. 1980, and validly published nomenclatural changes since.
- Ref.: 20218 Verslyppe, B., De Smet, W., De Baets, B., De Vos, P., Dawyndt P. StrainInfo introduces electronic passports for microorganisms.. Syst Appl Microbiol. 37: 42-50 2014 (10.1016/j.syapm.2013.11.002, 24321274)
- Ref.: 29477 Barberan A, Caceres Velazquez H, Jones S, Fierer N. Hiding in Plain Sight: Mining Bacterial Species Records for Phenotypic Trait Information. mSphere 2: None-None 2017 (10.1128/mSphere.00237-17, None) - **originally annotated from #25879**
- Ref.: 25879 IJSEM 659 2010 (10.1099/ijs.0.013920-0)

* **These References are textmined**

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