

Name: ***Streptomyces cinnamoneus***
Authors: (Thirumlacher 1968) Witt and Stackebrandt 1991
Satus: New Combination
Reference(s): Int. J. Syst. Bacteriol. 41:456 (Literature)
Risk group: 1 (German classification)
Type strain: ATCC 11874, ATCC 23897, CBS 293.64, DSM 40005, DSM 41431, JCM 4152, LMG 5971, NBRC 12852, NCIB 8851
Synonym(s): *Streptomyces griseoverticillatus* (heterotypic synonym)
Streptomyces hachijoensis (heterotypic synonym)
Streptomyces sapporonensis (heterotypic synonym)

Name: *Streptomyces cinnamoneus* subsp. *albosporus*
Authors: (Thirumalachar 1968) Witt and Stackebrandt 1991
Status: New Combination
Reference(s): Int. J. Syst. Bacteriol. 41:456 (validation list)
Risk group: 1 (German classification)
Comment: subspecies not mentioned in reclassification; IJSB 41:456
Type strain: ATCC 25186, DSM 40897
Other names: *Streptoverticillium cinnamoneum* subsp. *albosporum* (basonym)

Name: *Streptomyces cinnamoneus* subsp. *cinnamoneus*
Authors: (Benedict et al. 1952) Witt and Stackebrandt 1991
Status: New Combination
Reference(s): Int. J. Syst. Bacteriol. 41:456 (validation list)
Risk group: 1 (German classification)
Type strain: NRRL B-1285, DSM 40005
Other names: *Streptoverticillium cinnamoneum* subsp. *cinnamoneum* (basonym)

Name: *Streptomyces cinnamoneus* subsp. *lanosus*
Authors: (Thirumalachar 1968) Witt and Stackebrandt 1991
Status: New Combination
Reference(s): Int. J. Syst. Bacteriol. 41:456 (validation list)
Risk group: 1 (German classification)
Comment: subspecies not mentioned in reclassification; IJSB 41:456
Type strain: ATCC 25187, ATCC 25287, DSM 40898
Other names: *Streptoverticillium cinnamoneum* subsp. *lanosum* (basonym)

Name: *Streptomyces cinnamoneus* subsp. *sparsus*
Authors: (Thirumalachar 1968) Witt and Stackebrandt 1991
Status: New Combination
Reference(s): Int. J. Syst. Bacteriol. 41:456 (validation list)
Risk group: 1 (German classification)
Comment: subspecies not mentioned in reclassification;
IJSB 41:456
Type strain: ATCC 25185, DSM 40899
Other names: *Streptoverticillium cinnamoneum* subsp. *sparsum*
(basonym)

Author(s) Benedict, R. G., Dvonch, W., Shotwell, O. L., Pridham, T. G.,
Lindenfelser, L. A.
Title Cinnomycin, an antibiotic from *Streptomyces cinnamoneus*
nov. sp.
Journal Antibiot. Chemother.
Volume 2
Page(s) 591-594
Year 1952

Author(s) Witt, D., Stackebrandt, E.
Title Unification of the genera *Streptoverticillium* and
Streptomyces, and amendment of *Streptomyces* Waksman
and Henrici 1943, 339^{AL}.
Journal Syst. Appl. Microbiol.
Volume 13
Page(s) 361-371
Year 1990

Genus: *Streptomyces*

FH 2573

Species: *cinnamoneus*

Numbers in other collections: ATCC 11874

Former *Streptoverticillium cinnamoneum*

Morphology:

	G	R
<u>ISP 2</u>	good	sand yellow
	A	SP
	white	none
	G	R
<u>ISP 3</u>	good	beige
	A	SP
	bright ivory	none
	G	R
<u>ISP 4</u>	good	yellow
	A	SP
	bright ivory	none
	G	R
<u>ISP 5</u>	good	beige
	A	SP
	bright ivory	none
	G	R
<u>ISP 6</u>	good	beige
	A	SP
	none	none
	G	R
<u>ISP 7</u>	good	beige
	A	SP
	right ivory	none

Spore chains: Ve

Spore surface: smooth

Sporangia:

Fragmentation:

Melanoid pigment: - - - -

NaCl resistance: 2,5 %

Lysozyme resistance:

pH: Value- Optimum-

Temperature : Value- Optimum- 28 °C

Carbon utilization:

Glu	Ara	Suc	Xyl	Ino	Man	Fru	Rha	Raf	Cel
+	+	+	+	+	+	+	+	+	+

Enzymes:

Gel	Cit	Ure	Arg	Onp	Trp	Lys	Odc	VP	Ind	H2S
-	-	-	-	-	-	-	-	-	-	-

2+ 3+ 4+ 5+ 6+ 7+ 8+ 9+ 10+ 11+ 12+ 13- 14- 15- 16+ 17- 18+ 19- 20-



Streptomyces cinnamoneus

A and B – Agar plates medium 5265, 5315, 5317 and 5323



Streptomyces cinnamoneus

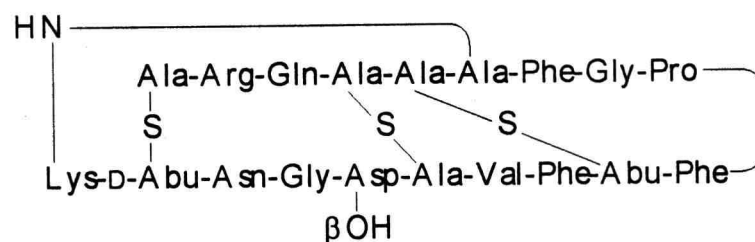
C and D – Agar plates medium 5318, 5322, 5337 with and without tyrosine

Name: *Streptomyces griseoverticillatus*
 Authors: (Shinobu and Shimada 1962) Witt and Stackebrandt 1991
 Status: Heterotypic synonym
 Reference(s): Int. J. Syst. Bacteriol. 41:456 (validation list)
 Risk group: 1 (German classification)
 Type strain: ATCC 27436, CBS 721.72, IFO 13420, ISP 5507, RIA 1381, DSM 40507
 Synonym(s): *Streptomyces cinnamoneus*
Streptomyces hachijoensis
Streptomyces sapporonensis

Author(s)	Hatano, K., Nishii, T., Kasai, H.
Title	Taxonomic re-evaluation of whorl-forming <i>Streptomyces</i> (formerly <i>Streptoverticillium</i>) species by using phenotypes, DNA-DNA hybridization and sequences of gyrB, and proposal of <i>Streptomyces luteireticuli</i> (ex Katoh and Arai 1957) corrig.
Journal	Int. J. Syst. Evol. Microbiol.
Volume	53
Page(s)	1519-1529
Year	2003

Secondary metabolites from *Streptomyces griseoverticillatus*

Lanthiopeptin, lantibiotic, antiviral agent, immunopotentiator



Genus: *Streptomyces*

FH 2101

Species: *griseoverticillatus*

Numbers in other collections: DSM 40507

Morphology:

<u>ISP 2</u>	G	R
	good	colorless
	A	SP
<u>ISP 3</u>	beige	none
	G	R
	good	colorless
<u>ISP 4</u>	A	SP
	rose	none
	G	R
<u>ISP 5</u>	good	colorless
	A	SP
	beige	brown
<u>ISP 6</u>	G	R
	good	colorless
	A	SP
<u>ISP 7</u>	rose	none
	G	R
	good	colorless
	A	SP
	white	none

Spore chains: Ve

Spore surface: smooth

Sporangia:

Fragmentation:

Melanoid pigment: - - - -

NaCl resistance: 2,5 %

Lysozyme resistance: 1 %

pH: Value- Optimum-

Temperature : Value- Optimum- 28 °C

Carbon utilization:

Glu	Ara	Suc	Xyl	Ino	Man	Fru	Rha	Raf	Cel
+	-	-	-	-	-	-	-	-	-

Enzymes:

Gel	Cit	Ure	Arg	Onp	Trp	Lys	Odc	VP	Ind	H2S
(+)	-	-	-	-	-	-	-	-	-	-

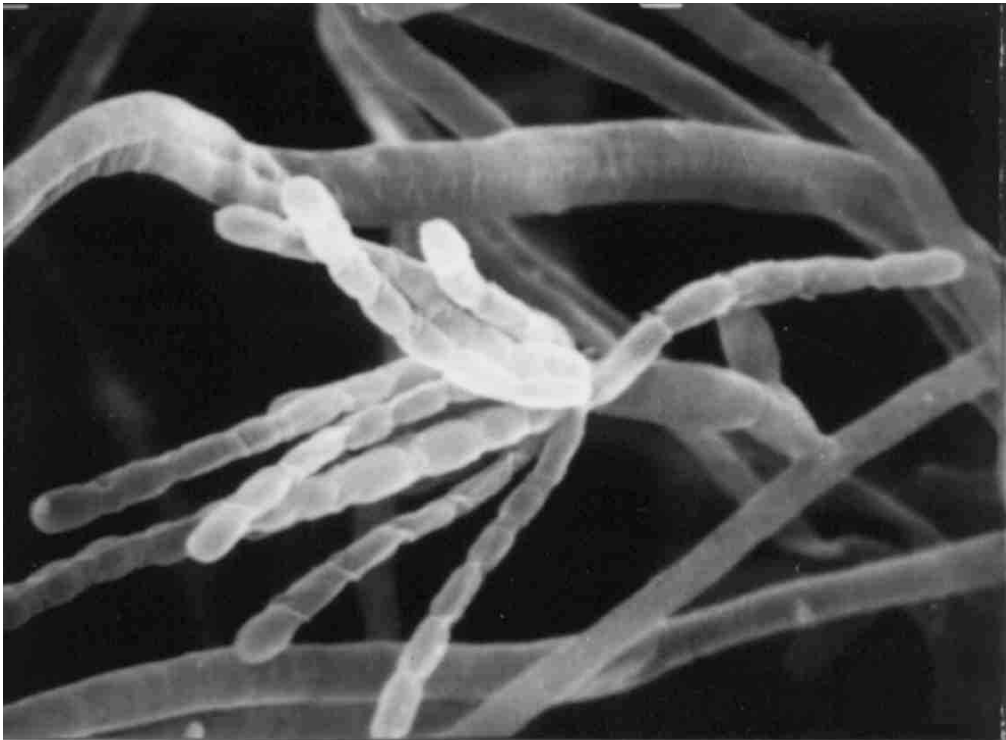
Comments



Streptomyces griseovorticillatus

A – Agar plates medium 5265, 5315, 5317, 5323 and 5006

B – Agar plates medium 5318, 5322, 5337 with and without tyrosine and 5001



Streptomyces griseoverticillatus

C – Colony surface on 5006 agar

D – Verticillated spore chains in SEM (x 7.500)

Name: *Streptomyces hachijoensis*
Authors: (Hosoya et al. 1952) Witt and Stackebrandt 1991
Status: New Combination
Reference(s): Int. J. Syst. Bacteriol. 41:456 (validation list)
Risk group: 1 (German classification)
Comment: synonyms: "*S. cinnamoneus* subsp. *azacoluta*";
"*S. taitoensis*" IJSB 46:702
Type strain: ATCC 19769, CBS 507.68, IFO 12782, ISP 5114,
RIA 1049, DSM 40114
Synonym(s): *Streptomyces cinnamoneus*
Streptomyces griseoverticillatus
Streptomyces sapporonensis

Author(s)	Hatano, K., Nishii, T., Kasai, H.
Title	Taxonomic re-evaluation of whorl-forming <i>Streptomyces</i> (formerly <i>Streptoverticillium</i>) species by using phenotypes, DNA-DNA hybridization and sequences of <i>gyrB</i> , and proposal of <i>Streptomyces luteireticuli</i> (ex Katoh and Arai 1957) corrig.
Journal	Int. J. Syst. Evol. Microbiol.
Volume	53
Page(s)	1519-1529
Year	2003

Genus: *Streptomyces*

FH 2503

Species: *hachijoensis*

Numbers in other collections: ATCC 19769

Morphology:

	G	R
<u>ISP 2</u>	good	yellow
	A	SP
	beige	none
	G	R
<u>ISP 3</u>	good	colorless
	A	SP
	white	none
	G	R
<u>ISP 4</u>	good	colorless
	A	SP
	beige	none
	G	R
<u>ISP 5</u>	good	colorless
	A	SP
	white	none
	G	R
<u>ISP 6</u>	good	yellow
	A	SP
	none	none
	G	R
<u>ISP 7</u>	good	yellow
	A	SP
	white	none

Spore chains: Ve

Spore surface: smooth

Sporangia:

Fragmentation:

Melanoid pigment: - - - -

NaCl resistance: 2,5 %

Lysozyme resistance: 0,5 %

pH: Value-

Optimum-

Temperature : Value-

Optimum- 28 °C

Carbon utilization:

Glu	Ara	Suc	Xyl	Ino	Man	Fru	Rha	Raf	Cel
+	(+)	(+)	(+)	+	(+)	(+)	-	-	-

Enzymes:

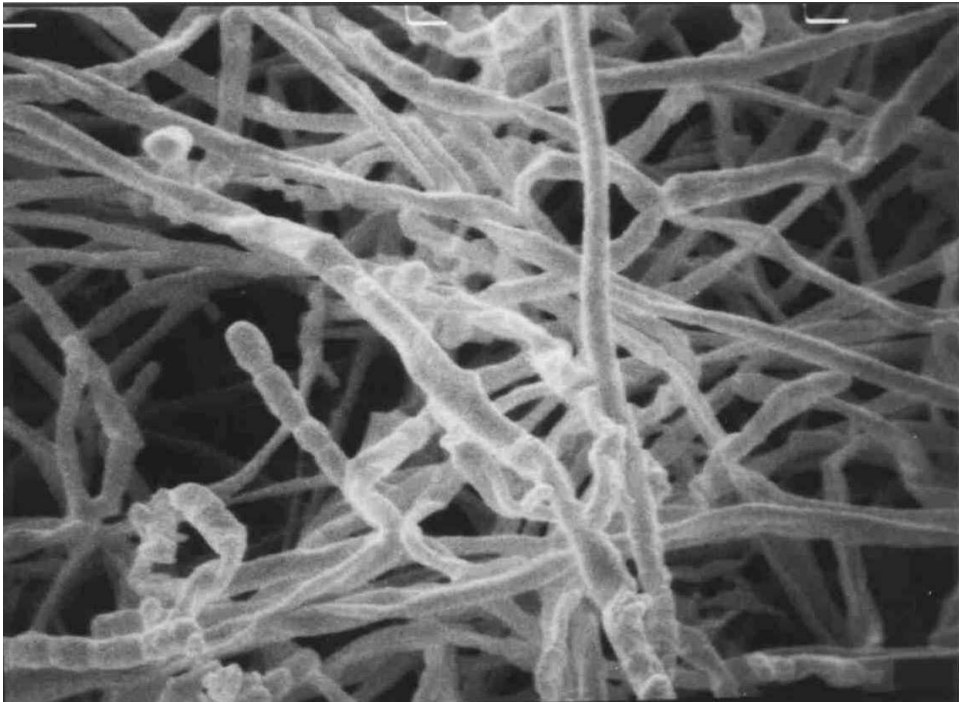
Gel	Cit	Ure	Arg	Onp	Trp	Lys	Odc	VP	Ind	H2S
+	+	+	+	-	-	+	+	-	-	-

Comments



Streptomyces hachijoensis

A and B – Agar plates medium 5265, 5315, 5317, 5323



Streptomyces hachijoensis

C – Agar plates medium 5006, 5318, 5322, 5337 with and without tyrosine

D – Smooth spores in SEM (x 5.000)

Name: *Streptomyces sapporonensis*
Authors: (Locci and Schofield 1989) Witt and Stackebrandt 1991
Status: New Combination
Reference(s): Int. J. Syst. Bacteriol. 46:836 (validation list)
Risk group: 1 (German classification)
Type strain: ATCC 21532, DSM 41675
Synonym(s): *Streptomyces cinnamoneus*
Streptomyces griseoverticillatus
Streptomyces hachijoensis

Author(s)	Hatano, K., Nishii, T., Kasai, H.
Title	Taxonomic re-evaluation of whorl-forming <i>Streptomyces</i> (formerly <i>Streptoverticillium</i>) species by using phenotypes, DNA-DNA hybridization and sequences of gyrB, and proposal of <i>Streptomyces luteireticuli</i> (ex Kato and Arai 1957) corrig.
Journal	Int. J. Syst. Evol. Microbiol.
Volume	53
Page(s)	1519-1529
Year	2003

Genus: *Streptomyces*

FH 2411

Species: *sapporonensis*

Numbers in other collections: ATCC 21532

Morphology:

	G	R
<u>ISP 2</u>	good	colorless
	A	SP
	pebble gray	none
	G	R
<u>ISP 3</u>	good	colorless
	A	SP
	pebble gray	none
	G	R
<u>ISP 4</u>	good	colorless
	A	SP
	pebble gray	none
	G	R
<u>ISP 5</u>	good	colorless
	A	SP
	pebble gray	none
	G	R
<u>ISP 6</u>	good	colorless
	A	SP
	none	brown
	G	R
<u>ISP 7</u>	good	beige
	A	SP
	pebble gray	none

Spore chains: Ve

Spore surface: smooth

Sporangia:

Fragmentation:

Melanoid pigment: - - (+) -

NaCl resistance: 2,5 %

Lysozyme resistance: 1 %

pH: Value-

Optimum-

Temperature : Value-

Optimum- 28 °C

Carbon utilization:

Glu	Ara	Suc	Xyl	Ino	Man	Fru	Rha	Raf	Cel
+	-	+	-	+	-	+	-	-	-

Enzymes:

Gel	Cit	Ure	Arg	Onp	Trp	Lys	Odc	VP	Ind	H2S
+	+	+	-	-	-	-	+	+	-	-



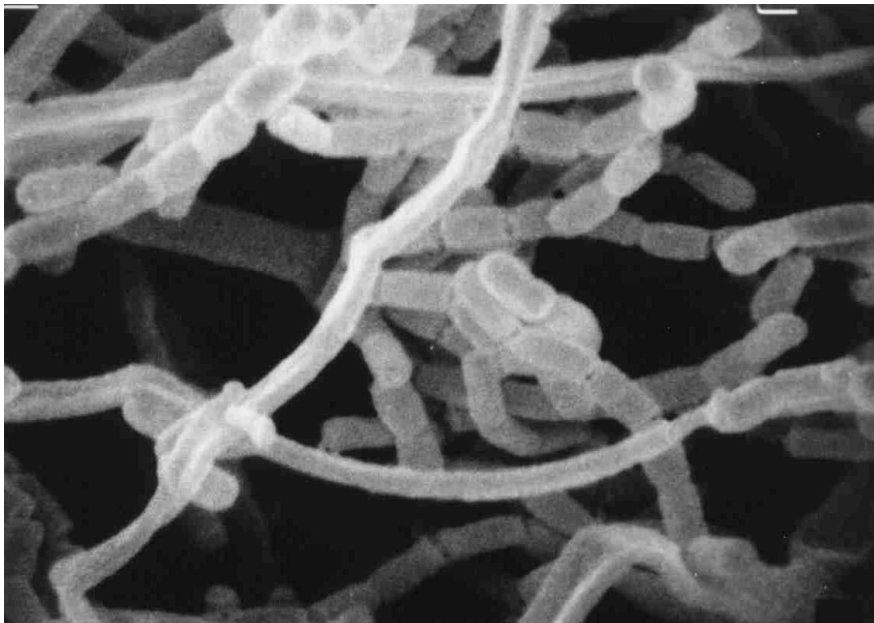
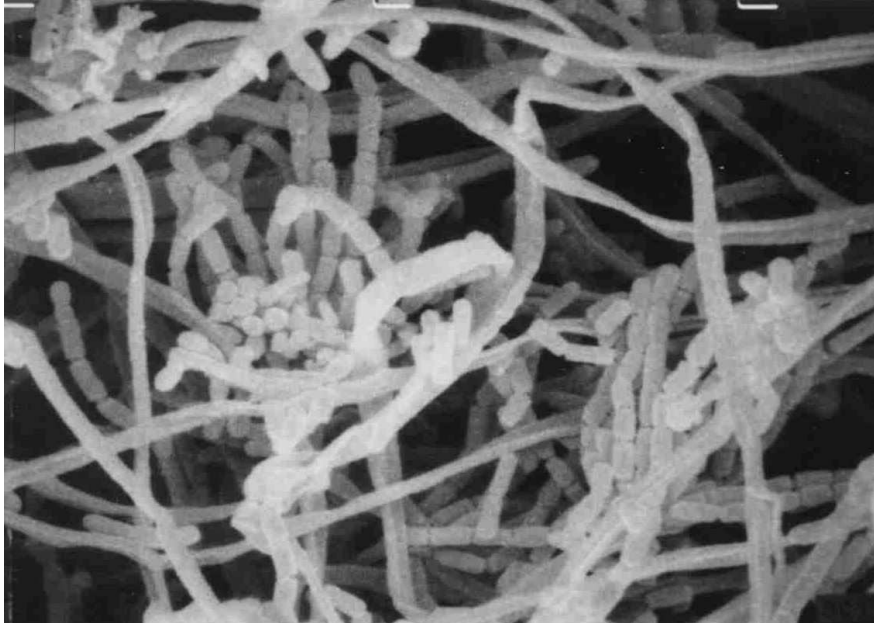
Streptomyces sapporonensis

A and B – Agar plates medium 5265, 5315 and 5317



Streptomyces sapporonensis

C and D – Agar plates medium 5318, 5322, 5337 with and without tyrosine



Streptomyces sapporonensis

Spore chains and smooth spores in SEM

E x 5.000 F x 10.000