

Genus *Friedmanniella*
Species *lacustris*
Subspecies
Author Lawson et al. 2000

Reclassification
Status sp. nov.

Type species DSM 11465, ATCC BAA-165, NCFB 3066

Hazard group 1

Author(s) Lawson, P. A., Collins, M. D., Schumann, P., Tindall, B. J., Labrenz, M.

Title New LL-diaminopimelic acid-containing actinomycetes from hypersaline, heliothermal and meromictic antarctic Ekho Lake: *Nocardioides aquaticus* sp. nov. and *Friedmanniella lacustris* sp. nov.

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Genus: *Friedmanniella*

FH 6182

Species: *lacustris*

Numbers in other collections: DSM 11465

Reclassification:

Morphology:

	G	R
<u>ISP 2</u>	good	bright red orange
	A	SP
	none	none
	G	R
<u>ISP 3</u>	good	pastel yellow
	A	SP
	none	none
	G	R
<u>ISP 4</u>	sparse	
	A	SP
	G	R
<u>ISP 5</u>	sparse	
	A	SP
	G	R
<u>ISP 6</u>	good	bright red orange
	A	SP
	none	none
<u>ISP 7</u>	G	R
	sparse	
	A	SP

Melanoid pigment: - - - -

NaCl resistance: %

Lysozyme resistance:

pH: Value- Optimum-

Temperature : Value- Optimum- 20°C

Enzymes:

Api Zym										
2+	3-	4+	5-	6+	7+	8+	9+	10(+)	11+	
12+	13+	14+	15-	16+	17+	18+	19+	20+		
Api Coryne										
Nit	Pyz	Pyr	Pal	βGur	βGal	αGlu	βNag	Esc	Ure	Gel
+	-	+	+	+	+	+	+	+	-	-
Glu	Rib	Xyl	Man	Mal	Lac	Sac	Glyg			
-	+	+	-	-	-	-	-			

Comments: Strain grows on Lake Strains Medium (see next page).

Lake Strains Medium:

Peptone Yeast Glucose Vitamin Medium with artificial sea water (5416),
1 l medium contains 750 ml water and 250 ml artificial sea water.

Preparation PYGV medium:

Mineral salt solution	20,00 ml/l
Peptone	0,25 g/l
Yeast extract	0,25 g/l

Sterilize 20 min. at 121°C. After cooling to 60°C add to the medium:

Glucose sol. (2,5 % sterile-filtered)	10,00 ml/l
Vitamin solution	5,00 ml/l

Adjust pH to 7,5 (the medium is only weakly buffered, one needs approx.
10 drops/l medium 6 N KOH).

Mineral salt solution:

Nitrilotriacetic acid (NTA)	10.00	g
MgSO ₄ x 7 H ₂ O	29.70	g
CaCl ₂ x 2 H ₂ O	3.34	g
Na ₂ MoO ₄ x 2 H ₂ O	12.67	mg
FeSO ₄ x 7 H ₂ O	99.00	mg
Metall salt sol. (5314)	50.00	ml
Distilled water	900.00	ml

Dissolve NTA first by neutralizing with KOH, then add other salts. Adjust pH to 7.2 with KOH or H₂SO₄. Adjust volume to 1000.0 ml with distilled water.

Vitamin solution (double conc.):

Biotin	4.00	mg
Folic acid	4.00	mg
Pyridoxine-HCl	20.00	mg
Riboflavine	10.00	mg
Thiamine-HCl x 2 H ₂ O	10.00	mg
Nicotinamide	10.00	mg
D-Ca-pantothenate	10.00	mg
Vitamin B ₁₂	0.20	mg
p-Aminobenzoic acid	10.00	mg
Distilled water	1000.00	ml

Store in the dark and cold (5°C).



Friedmanniella lacustris

- A – Agar plate medium 5006 (detail)
- B – Agar plates media 5006, 5265 and 5315
- C – Api Zym (upper) and Api Coryne