Physico-chemical Characterization of Indigenous *Streptomyces* and Influence of pH on Antimicrobial Activity

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Supplementary information

Supplementary Table 1: Growth on different Media

Isolate	ISP-1	ISP-2	ISP-4	ISP-6	SCDA	Starch Casein Agar
A-9	Whitish	Cream	Grayish	White	Gray	Milky White
A-12	White	Cream	White	whitish	Gray	Milky White
B-5	whitish	Grayish	Greenish	whitish	Gray	Milky White
B-7	Milky White	Grayish	Grayish	Milky White	Gray	Yellowish
C-1	White	Cream	Greenish	White	White	Milky White
D-5	White	Cream	White	White	White	N/G
E-6	Cream	Cream	Greenish	N/G	Waxy	Milky White
E-8	Milky White	Grayish	Grayish	Milky White	Off white	whitish

N/G: No Growth

Supplementary Table 2: Analysis of Variance for test pathogen *S. typhimurium.*

Source of Variation	Degrees of freedom	Sum of Squares	Mean Square	F value	Pr(>F)
Isolates	7	234.0	33.43	1.493	0.210
pH	4	217.6	54.41	2.431	0.071
Residuals	28	626.8	22.38		

Supplementary Table 3: Analysis of Variance for test pathogen *E. coli.*

Source of Variation	Degrees of freedom	Sum of Squares	Mean Square	F value	Pr(>F)
Isolates	7	99.97	14.282	1.567	0.1863
pH	4	125.65	31.412	3.447	0.0207
Residuals	28	255.15	9.113		

Supplementary Table 4: Tukey multiple comparisons of pH means for test pathogen *E. coli*.

pH	difference in the observed means	lower limit	upper limit	p-value after adjustment for the multiple comparisons
pH 6 and 5	0.625	-3.772467	5.0224674	0.9934806
pH 7 and 5	1.250	-3.147467	5.6474674	0.9196102
pH 8 and 5	0.875	-3.522467	5.2724674	0.9769986
pH 9 and 5	-3.625	-8.022467	0.7724674	0.1444956
pH 7 and 6	0.625	-3.772467	5.0224674	0.9934806
pH 8 and 6	0.250	-4.147467	4.6474674	0.9998199
pH 9 and 6	-4.250	-8.647467	0.1474674	0.0619624
pH 8 and 7	-0.375	-4.772467	4.0224674	0.9991049
pH 9 and 7	-4.875	-9.272467	-0.4775326	0.0241855
pH 9 and 8	-4.500	-8.897467	-0.1025326	0.0429481

Supplementary Table 5: Analysis of Variance for test pathogen *S. aureus*

Source of Variation	Degrees of freedom	Sum of Squares	Mean Square	F value	Pr(>F)
Isolates	7	99.6	14.23	1.241	0.315
pH	4	955.7	238.91	20.830	4.66e-08
Residuals	28	321.2	11.47		

Supplementary Table 6: Tukey multiple comparisons of pH means for test pathogen *S. aureus*.

pH	difference in the observed means	lower limit	upper limit	p-value after adjustment for the multiple comparisons
pH 6 and 5	1.625000e+00	-3.308542	6.558542	0.8706594
pH 7 and 5	8.750000e-01	-4.058542	5.808542	0.9849564
pH 8 and 5	-3.552714e-15	-4.933542	4.933542	1.0000000
pH 9 and 5	-1.150000e+01	-16.433542	-6.566458	0.0000021
pH 7 and 6	-7.500000e-01	-5.683542	4.183542	0.9915760
pH 8 and 6	-1.625000e+00	-6.558542	3.308542	0.8706594
pH 9 and 6	-1.312500e+01	-18.058542	-8.191458	0.0000002
pH 8 and 7	-8.750000e-01	-5.808542	4.058542	0.9849564
pH 9 and 7	-1.237500e+01	-17.308542	-7.441458	0.0000006
pH 9 and 8	-1.150000e+01	-16.433542	-6.566458	0.0000021

Supplementary Table 7: Analysis of Variance for test pathogen *B. cereus*.

Source of Variation	Degrees of freedom	Sum of Squares	Mean Square	F value	Pr(>F)
Isolates	7	79.9	11.41	0.619	0.736
pH	4	1036.6	259.15	14.046	2.1e-06
Residuals	28	516.6	18.45		

Supplementary Table 8: Tukey multiple comparisons of pH means for test pathogen *B. cerus*.

pH	difference in the observed means	lower limit	upper limit	p-value after adjustment for the multiple comparisons
pH 6 and 5	10.125	3.867771	16.382229	0.0005398
pH 7 and 5	10.375	4.117771	16.632229	0.0003952
pH 8 and 5	13.875	7.617771	20.132229	0.0000050
pH 9 and 5	13.875	7.617771	20.132229	0.0000050
pH 7 and 6	0.250	-6.007229	6.507229	0.9999558
pH 8 and 6	3.750	-2.507229	10.007229	0.4236340
pH 9 and 6	3.750	-2.507229	10.007229	0.4236340
pH 8 and 7	3.500	-2.757229	9.757229	0.4917718
pH 9 and 7	3.500	-2.757229	9.757229	0.4917718
pH 9 and 8	0.000	-6.257229	6.257229	1.0000000