



**BACTERIAL INVENTORY  
OF  
FIRST FUNGAL CULTURE BANK OF PAKISTAN  
DEPARTMENT OF PLANT PATHOLOGY  
FACULTY OF AGRICULTURAL SCIENCES  
UNIVERSITY OF THE PUNJAB  
LAHORE, PAKISTAN**

## ANNEXURE II

## BACTERIAL INVENTORY

NAME OF BACTERIA	SOURCE OF ISOLATION	ISOLATION DETAILS	FCBP Acc. No.
<b>A</b>			
<i>Acetobacter acetii</i>	Air, IAGS, Lahore, (Saba Khurshid)	04.06.13. 35-37°C	FCBP-MB-0400
<i>Acetobacter acetii</i>	<i>Bougainvillea glabra</i> , Lahore, (Amna Ali)	15.06.12. 35-37°C	FCBP-PB-0362
<i>Acetobacter hansenii</i>	Rhizospheric soil of chillies ( <i>Capsicum annuum</i> ), Lahore, (Waheed Akram)	02.07.13, 35-37°C	FCBP-SB-0403
<i>Acetobacter</i> sp.	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12. 35-37°C	FCBP-WB-0393
<i>Acetobacter xylinum</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0239
<i>Acetobacterium</i> sp.	Paper sludge, Lahore, (Shiza Ayaz)	10.05.13. 35-37°C	FCBP-WB-0398
<i>Acidiphilium facilis</i>	<i>Solanum lycopersicum</i> (Hybird Tomato), Lahore, (Safida Anwar)	20.05.12. 35-37°C	FCBP-PB-0378
<i>Acidovorax facilis</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0251
<i>Acidovorax facilis</i>	<i>Ficus religiosa</i> (Peepal) soil, Lahore, (Amna Ali)	15.01.12, 35-37°C	FCBP-SB-0323
<i>Acidovorax facilis</i>	<i>Pisum sativum</i> (Hybird Pea) soil, Lahore, (Safida Anwar)	27.01.12, 35-37°C	FCBP-SB-0330
<i>Acidovorax facilis</i>	<i>Parthenium hysterophorus</i> , Lahore, (Amna Ali)	10.06.12. 35-37°C	FCBP-PB-0360
<i>Acidovorax facilis</i>	<i>Solanum lycopersicum</i> (Hybird Tomato), Lahore, (Safida Anwar)	20.05.12. 35-37°C	FCBP-PB-0373

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<i>Acidovorax facilis</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0464
<i>Acidovorax temperans</i>	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	05.04.12, 35-37°C	FCBP-SB-0339
<i>Acidovorax temperans</i>	Citrus leaf, Sargodha (Malik Sarfaraz)	03.06.09. 35-37°C	FCBP-PB-0227
<i>Acidovorax temperans</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0463
<i>Acidovorax temperans</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09. 35-37°C	FCBP-LB-0211
<i>Acineobacter haemolyticus</i>	<i>Spinacia oleracea</i> leaf, Lahore, , (Saira jabeen)	06.11.07. 35-37°C	FCBP-PB-0116
<i>Acinetobacter anitratus</i>	Polluted water, Kasur. (Hina Gulzeb (M.Sc) Zoology. P.U. LHR)	06.08.07. 35-37°C	FCBP-WB-0081
<i>Acinetobacter anitratus</i>	Drinking water, Garden Town, Lahore, (Nazia, CEES)	02.01.14. 35-37°C	FCBP-LB-0424
<i>Acinetobacter baumannii</i>	<i>Psidium guajava</i> fruit, Lahore, (Sana Khan)	12.08.07. 35-37°C	FCBP-PB-0124
<i>Acinetobacter baumannii</i>	Tap water, New Campus Lahore	12.08.06 35-37°C	FCBP-LB-0032
<i>Acinetobacter baumannii</i>	Canal water, Lahore (Ruqia Suliman)	15.01.09. 35-37°C	FCBP-LB-0207
<i>Acinetobacter calcoaceticus</i>	Drinking water, Lahore, (Nazia Shaheen, CEES)	19.10.13 35-37°C	FCBP-LB-0419
<i>Acinetobacter haemolyticus</i>	<i>Coriander</i> leaf, Lahore, (Darakhshan Iqbal)	06.11.07. 35-37°C	FCBP-PB-0130
<i>Acinetobacter haemolyticus</i>	Citrus leaf spot, Agriculture Division, NESPAK, Lahore, (Muhammad Majid Khan)	20.02.14. 35-37°C	FCBP-PB-0442
<i>Acinetobacter haemolyticus</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0461
<i>Acinetobacter haemolyticus</i>	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12. 35-37°C	FCBP-WB-0381
<i>Acinetobacter haemolyticus</i>	Filter water, MPPL P.U. Lahore. (M.Taufiq Asghar)	02.09.07. 35-37°C	FCBP-LB-0091
<i>Acinetobacter iwoffii</i>	<i>Spinacia oleracea</i> leaf, Lahore. 06.11.07, (Saira jabeen)	06.11.07. 35-37°C	FCBP-PB-0117

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<i>Acinetobacter jansani</i>	Butter, Shopping centre P.U Lahore. (Sadaf Zahid)	21.07.07. 35-37°C	FCBP-MB-0090
<i>Acinetobacter junii</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0458
<i>Acinetobacter lwoffii</i>	Wheat field soil, New Campus Lahore. (Sadaf Zahid)	12.08.07, 35-37°C	FCBP-SB-0096
<i>Acinetobacter lwoffii</i>	<i>Ficus religiosa</i> (Peepal) soil, Lahore (Amna Ali)	15.01.12, 35-37°C	FCBP-SB-0325
<i>Acinetobacter lwoffii</i>	<i>Psidium guajava</i> , Lahore, (Asma Murtaza)	06.11.07. 35-37°C	FCBP-PB-0129
<i>Acinetobacter lwoffii</i>	<i>Euphorbia esculenta</i> , Lahore, (Amna Ali)	05.06.12. 35-37°C	FCBP-PB-0357
<i>Acinetobacter lwoffii</i>	Citrus leaf spot, Agriculture Division, NESPAK, Lahore, (Muhammad Majid Khan)	20.02.14. 35-37°C	FCBP-PB-0435
<i>Acinetobacter lwoffii</i>	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12. 35-37°C	FCBP-WB-0386
<i>Acinetobacter sp</i>	<i>Lycopersicon esculantum</i> fruit, Lahore, (Sana Khan)	06.11.07. 35-37°C	FCBP-PB-0127
<i>Acinetobacter sp.</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0252
<i>Acinetobacter sp.</i>	Citrus root, Sargodha (Malik Sarfaraz)	03.06.09. 35-37°C	FCBP-PB-0230
<i>Acinetobacter sp.</i>	Diseased Fruit of <i>Citrus reticulata</i> (Citrus), Jhang, (Nosheen Akhtar)	02.03.12. 35-37°C	FCBP-PB-0334
<i>Acranobacterium bernardiae</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0141
<i>Actinomyces naesiundii</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0140
<i>Actinomyces scabies</i>	Diseased Potato, Lahore, (Amna Ali, IAGS)	24.09.13. 35-37°C	FCBP-PB-0415
<i>Actinomyces viscosus</i>	<i>Ocimum tenuiflorum</i> leave, Lahore. (Ruqia Suliman)	08.04.08. 35-37°C	FCBP-PB-0135
<i>Aerococcus sp</i>	Room carpet, colony house, PU, Lahore (Amna Ali)	17-02-11. 35-37°C	FCBP-MB-0304
<i>Aerococcus sp.</i>	Rhizospheric soil of <i>Allium sativum</i> (Garlic), Lahore, (Sana Khan)	25.05.11, 35-37°C	FCBP-SB-0318

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<i>Aerococcus</i> sp.	Diseased fruit of <i>Citrus reticulata</i> (Citrus), Bahawalnagar, (Nosheen Akhtar)	23.05.12. 35-37°C	FCBP-PB-0342
<i>Aeromicrobium erythreum</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09. 35-37°C	FCBP-LB-0217
<i>Aeromicrobium</i> sp.	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0246
<i>Aeromonas hydrophila</i>	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	28.02.12, 35-37°C	FCBP-SB-0331
<i>Aeromonas veronii</i>	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	16.05.12, 35-37°C	FCBP-SB-0349
<i>Aeromonas veronii</i>	<i>Triticum aestivum</i> (Hybird Wheat), Lahore, (Safida Anwar)	15.06.12. 35-37°C	FCBP-PB-0377
<i>Agromyces ramosis</i>	Guava canker, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14. 35-37°C	FCBP-PB-0440
<i>Alcaligenes latus</i>	Industrial effluent, Okara (Muhammad Atif)	26.01.09. 35-37°C	FCBP-WB-0197
<i>Alteromonas macleodii</i>	Drinking water, Tube well P.U, Lahore, (Nazia, CEES)	15.01.14. 35-37°C	FCBP-LB-0425
<i>Aminobacter aminovorans</i>	<i>Solanum lycopersicum</i> (Hybird Tomato), Lahore, (Safida Anwar)	20.05.12. 35-37°C	FCBP-PB-0374
<i>Aminobacter</i> sp.	Okra seeds, Lahore (Ruqia Suliman)	06.10.09. 35-37°C	FCBP-PB-0274
<i>Amphibacillus</i> sp.	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0200
<i>Amphibacillus xylans</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0255
<i>Ancylobacter aquaticus</i>	Rhizospheric soil of chillies ( <i>Capsicum annum</i> ), Lahore, (Waheed Akram)	02.07.13 35-37°C	FCBP-SB-0404
<i>Ancylobacter aquaticus</i>	Drinking water, Lahore, (Nazia Shaheen, CEES)	19.10.13 35-37°C	FCBP-LB-0418
<i>Arthrobacter globiformis</i>	Air, IAGS, Lahore, (Saba Khurshid)	04.06.13 35-37°C	FCBP-MB-0401
<i>Arthrobacter globiformis</i>	Citrus canker (leaf), Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14. 35-37°C	FCBP-PB-0438
<i>Arthrobacter</i> sp.	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	06.05.12, 35-37°C	FCBP-SB-0343

<i>Arthrobacter</i> sp.	Citrus root, Sargodha (Malik Sarfaraz)	03.06.09. 35-37°C	FCBP-PB- 0228
<i>Arthrobacter</i> sp.	Paper sludge, Lahore, (Shiza Ayaz)	10.06.12. 35-37°C	FCBP-WB- 0384
<i>Aureobacterium barkeri</i>	Citrus canker (leaf), Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14. 35-37°C	FCBP-PB- 0446
<i>Aureobacterium flavescens</i>	<i>Pisum sativum</i> (Wild Pea) soil, Lahore, (Safida Anwar)	27.01.12, 35-37°C	FCBP-SB- 0327
<i>Aureobacterium liquefaciens</i>	Rhizospheric soil of <i>Raphanus sativus</i> (Radish), Lahore, (Safida Anwar)	25.05.11, 35-37°C	FCBP-SB- 0309
<i>Aurobacterium flavescens</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB- 0242
<i>Azomonas agilis</i>	Okra seeds, Lahore (Ruqia Suliman)	06.10.09. 35-37°C	FCBP-PB- 0273
<i>Azomonas agilis</i>	Citrus leaf spot, Agriculture Division, NESPAK, Lahore, (Muhammad Majid Khan)	20.02.14. 35-37°C	FCBP-PB- 0447
<i>Azomonas agilis</i>	Paper sludge, Lahore, (Shiza Ayaz)	10.06.12. 35-37°C	FCBP-WB- 0385
<i>Azomonas insignis</i>	Guava soil, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14 35-37°C	FCBP-SB- 0451
<i>Azomonas macrocytogenes</i>	Guava soil, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14 35-37°C	FCBP-SB- 0452
<i>Azomonas macrocytogenes</i>	Drinking water, P.U., Lahore, (Nazia, CEES)	15.01.14 35-37°C	FCBP-LB- 0430
<i>Azospirillum brasilense</i>	Soil, Faisalabad	8.11.06, 35-37°C	FCBP-SB- 0025
<i>Azospirillum lipoferum</i>	Soil, Faisalabad	8.11.06, 35-37°C	FCBP-SB- 0022
<i>Azospirillum lipoferum</i>	<i>Euphorbia esculenta</i> , Lahore, (Amna Ali)	05.06.12. 35-37°C	FCBP-PB- 0356
<i>Azospirillum lipoferum</i>	Guava mumified, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14. 35-37°C	FCBP-PB- 0434
<i>Azotobacter insignis</i>	Drinking water, Lahore, (Nazia Shaheen, CEES)	19.10.13. 35-37°C	FCBP-LB- 0416
<i>Azotobacter nigricans</i>	<i>Alstonia scholaris</i> , leaf, P.U. Lahore, (Akeel Ahmad, IAGS)	02.12.13.	FCBP-PB-

<i>Azotobacter nigricans</i>	Citrus leaf spot, Agriculture Division, NESPAK, Lahore, (Muhammad Majid Khan)	35-37°C 20.02.14.	0422 FCBP-PB-
<i>Azotobacter nigricans</i>	Diseased tomato fruit, Lahore, (Amna & Tehmina, IAGS)	35-37°C 23.07.14.	0444 FCBP-PB-
		35-37°C	0468

## B

<i>Bacillus farraginis</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB- 0173
<i>Bacillus farraginis</i>	<i>Euphorbia esculenta</i> , Lahore, (Amna Ali)	05.06.12. 35-37°C	FCBP-PB- 0354
<i>Bacillus fortis</i>	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	FCBP-SB- 0182
<i>Bacillus fortis</i>	Compost, Lahore (Neelam Nazir)	24.06.08. 35-37°C	FCBP-WB- 0162
<i>Bacillus sp.</i>	Agricultural soil, Lahore	22.12.05, 35-37°C	FCBP-SB- 0019
<i>Bacillus sp.</i>	Rhizosphere Chiko plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	FCBP-SB- 0175
<i>Bacillus sp.</i>	Rhizospheric soil mango, Lahore (Hina Farooq)	16.02.09, 35-37°C	FCBP-SB- 0192
<i>Bacillus sp.</i>	Citrus field soil, Sargodha (Malik Sarfaraz)	03.06.09, 35-37°C	FCBP-SB- 0229
<i>Bacillus sp.</i>	Gram soil, Sargodha (Atif Hussain)	02.06.09, 35-37°C	FCBP-SB- 0234
<i>Bacillus sp.</i>	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	05.03.12, 35-37°C	FCBP-SB- 0336
<i>Bacillus subtilis</i>	Parthenium rhizospheric soil, Lahore (Aqeel Ahmad)	16.04.09, 35-37°C	FCBP-SB- 0223
<i>Bacillus subtilis</i>	<i>Ficus religiosa</i> (Peepal) soil, Lahore, (Amna Ali)	15.01.12, 35-37°C	FCBP-SB- 0324
<i>Bacillus subtilis</i>	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	FCBP-SB- 0189
<i>Bacillus subtilis</i>	Pharmaceutical effluents, Lahore	28.10.08.	FCBP-WB-

	(Fozia Naseem)	35-37°C	0174
<i>Bacillus thuringensis</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0199
<i>Bacillus thuringiensis</i>	Field soil, Lahore	27.11.05, 35-37°C	FCBP-SB-0002
<i>Bacillus thuringiensis</i>	Cow dung, Lahore	04.02.06. 35-37°C	FCBP-WB-0006
<i>Bacteriodes capillosus</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0160
<i>Bacteriodes fragilis</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0168
<i>Bacteriodes fragilis</i>	Compost, Lahore (Neelam Nazir)	24.06.08. 35-37°C	FCBP-WB-0164
<i>Bacteriodes ovatus</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0158
<i>Bacteriodes ovatus</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0166
<i>Bacteriodes ovatus</i>	Rhizospheric soil of guava Kasur, (Prof. Dr. Saleem Haider, IAGS)	22.09.13 35-37°C	FCBP-SB-0414
<i>Bacteriodes ovatus</i>	Rhizospheric soil of guava Kasur, (Prof. Dr. Saleem Haider, IAGS)	22.09.13. 35-37°C	FCBP-PB-0414
<i>Bacteriodes thetaiotaomicron</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0159
<i>Bacteriodes uniformis</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0156
<i>Bacteriodes uniformis</i>	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	FCBP-SB-0190
<i>Bacteriodes uniformis</i>	Canal Water, Lahore (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0165
<i>Bascillus sp</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0170
<i>Bifedobacterium Spp</i>	<i>Ocium sanctum</i> leave, Lahore. (Ruqia Suliman)	08.04.08. 35-37°C	FCBP-PB-0136
<i>Bordetella pertussis</i>	Tobacco soil, Sargodha (Atif Hussain)	02.06.09, 35-37°C	FCBP-SB-0263
<i>Bordetella parapertusis</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09 35-37°C	FCBP-LB-

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<i>Bordetella parapertussis</i>	Soil, Changa Manga (Amna Ali)	12.12.10, 35-37°C	0212 FCBP-SB-0297
<i>Bordetella parapertussis</i>	Eucalyptus rhizospheric soil, Farm house (Fozia Naseem)	16.09.09, 35-37°C	FCBP-SB-0259
<i>Bordetella parapertussis</i>	Rhizospheric soil of <i>Raphanus sativus</i> (Radish), Lahore, (Safida Anwar)	25.05.11, 35-37°C	FCBP-SB-0313
<i>Bordetella pertussi</i>	Radish ( <i>Raphanus sativus</i> ), Lahore, (Amna Ali)	28.08.13. 35-37°C	FCBP-PB-0409
<i>Bordetella pertussis</i>	Gram soil, Sargodha (Atif Hussain)	02.06.09, 35-37°C	FCBP-SB-0232
<i>Bordetella pertussis</i>	Diseased fruit of <i>Citrus reticulata</i> (Citrus), Lahore, (Nosheen Akhtar)	02.03.12. 35-37°C	FCBP-PB-0333
<i>Bordetella pertussis</i>	<i>Bougainvillea glabra</i> , Lahore, (Amna Ali)	15.06.12. 35-37°C	FCBP-PB-0363
<i>Bordetella pertussis</i>	Textile industrial effluent, Sheikhpura (Amna Ali)	22.12.10. 35-37°C	FCBP-WB-0292
<i>Bordetella</i> sp.	Rhizospheric soil of <i>Raphanus sativus</i> (Radish), Lahore, (Safida Anwar)	25.05.11, 35-37°C	FCBP-SB-0311
<i>Brachybacterium facium</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09. 35-37°C	FCBP-LB-0215
<i>Brachybacterium faecium</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0241
<i>Bradyrhizobium japonicum</i>	Rhizospheric soil of Mash, Lahore, (Khalid Abbas)	11.07.13 35-37°C	FCBP-SB-0406
<i>Brevibacterium iodinum</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09. 35-37°C	FCBP-LB-0218
<i>Brochothrix</i> sp.	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	FCBP-SB-0187
<i>Brucella abortis</i>	Vegetables field soil, Lahore (Ruqia Suliman)	15.11.09, 35-37°C	FCBP-SB-0287
<i>Brucella melitensis</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0237
<i>Brucella melitensis</i>	Pepal rhizospheric soil, Farm house (Ibatsam Khokhar)	16.09.09, 35-37°C	FCBP-SB-0272

<i>Brucella melitensis</i>	<i>Eucalyptus globulus</i> soil, Lahore (Amna Ali)	05.01.11, 35-37°C	FCBP-SB-0293
<i>Burkholderia capacia</i>	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	05.03.12, 35-37°C	FCBP-SB-0337
<i>Burkholderia glumae</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0459
<i>Burkholderia mallei</i>	Sugarcane stem, Bahawalnagar	6.11.06. 35-37°C	FCBP-PB-0052
<i>Burkholderia pseudomallei</i>	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	28.02.12, 35-37°C	FCBP-SB-0332
<i>Burkholderia pseudomallei</i>	<i>Zea mays</i> (Wild maize) soil, Lahore, (Safida Anwar)	29.03.12, 35-37°C	FCBP-SB-0340
<i>Burkholderia pseudomallei</i>	Rhizospheric soil of guava, Kasur, (Prof. Dr. Saleem Haider, IAGS)	22.09.13 35-37°C	FCBP-SB-0411
<i>Burkholderia pseudomallei</i>	Sugarcane stem, Hugra Shah Muqim	29.10.06. 35-37°C	FCBP-PB-0036
<i>Burkholderia pseudomallei</i>	Sugarcane stem, Kasur	10.11.06. 35-37°C	FCBP-PB-0055
<i>Burkholderia pseudomallei</i>	Root nodules (wild pea), New Campus Lahore.(Ruqia Suliman)	03.03.07. 35-37°C	FCBP-PB-0087
<i>Burkholderia pseudomallei</i>	Diseased Fruit of <i>Citrus reticulata</i> (Citrus), Lahore, (Nosheen Akhtar)	11.06.12. 35-37°C	FCBP-PB-0350
<i>Burkholderia pseudomallei</i>	Rhizospheric soil of guava, Kasur, (Prof. Dr. Saleem Haider, IAGS)	22.09.13. 35-37°C	FCBP-PB-0411
<i>Burkholderia pseudomallei</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0460
<i>Burkholderia pseudomellei</i>	Air, Ichra, Lahore. (Zaheer Ahmad)	26.8.07. 35-37°C	FCBP-B-0102
<i>Buttiauxella agrestis</i>	Vegetables field soil, Lahore (Ruqia Suliman)	15.11.09, 35-37°C	FCBP-SB-0276
<i>Buttiauxella</i> sp.	Vegetables field soil, Lahore (Ruqia Suliman)	15.11.09, 35-37°C	FCBP-SB-0286

## C

<i>Carnobacterium divergens</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09.	FCBP-LB-
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<i>Carnobacterium mobile</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	35-37°C 03.06.09, 35-37°C	0221 FCBP-SB-0245
<i>Carnobacterium mobile</i>	Rhizospheric soil of guava Kasur, (Prof. Dr. Saleem Haider, IAGS)	22.09.13 35-37°C	FCBP-SB-0413
<i>Carnobacterium mobile</i>	Rhizospheric soil of guava Kasur, (Prof. Dr. Saleem Haider, IAGS)	22.09.13. 35-37°C	FCBP-PB-0413
<i>Cedecea davisae</i>	<i>Spinacia oleracea</i> leaf, Lahore. (Saira jabeen)	06.11.07. 35-37°C	FCBP-PB-0114
<i>Cedecea davisae</i>	<i>Euphorbia esculenta</i> , Lahore, (Amna Ali)	05.06.12. 35-37°C	FCBP-PB-0358
<i>Cedecea lapagei</i>	Polluted water, Lahore,	16.03.06. 35-37°C	FCBP-WB-0017
<i>Cellomonas gelida</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0148
<i>Chromohalobacter marismortui</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0238
<i>Citrobacter diversus</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0455
<i>Citrobacter freundii</i>	Dry milk (Brand A), Lahore, (Danish Mahmood and Hamid Iqbal)	19.05.07 35-37°C	FCBP-LB-0063
<i>Citrobacter freundii</i>	Canal water, Lahore (Ruqia Suliman)	15.01.09. 35-37°C	FCBP-LB-0210
<i>Citrobacter</i> sp 10	Tap water, New Campus Lahore	12.08.06 35-37°C	FCBP-LB-0033
<i>Citrobacter</i> sp.	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0249
<i>Clostridium difficile</i>	<i>Mentha Spp</i> roots, Lahore (Ruqia Suliman)	08.04.08. 35-37°C	FCBP-PB-0138
<i>Clostridium</i> sp.	Canal water, Lahore (Ruqia Suliman)	15.01.09. 35-37°C	FCBP-LB-0205
<i>Coprococcus</i> sp.	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0240
<i>Cornynebacterium</i> sp.	Tap water, IAGS, Lahore, (Amna Ali)	16.12.12. 35-37°C	FCBP-LB-0391
<i>Corynebacterium bovis</i>	Canal Water, Lahore.	04.09.07.	FCBP-LB-

	(Ruqia Suliman)	35-37°C	0150
<i>Corynebacterium minutissimum</i>	<i>Convolvulus arvensis</i> , Lahore, (Amna Ali)	12.06.12. 35-37°C	FCBP-PB-0353
<i>Corynebacterium minutissimum</i>	<i>Mentha Spp Leaves</i> , Lahore (Ruqia Suliman)	08.04.08. 35-37°C	FCBP-PB-0137
<i>Corynebacterium minutissimum</i>	<i>Ocimum tenuiflorum</i> stem, Lahore. (Ruqia Suliman)	08.04.08. 35-37°C	FCBP-PB-0154
<i>Corynebacterium renale</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0149
<i>Corynebacterium</i> sp.	Gram soil, Sargodha (Atif Hussain)	02.06.09, 35-37°C	FCBP-SB-0233
<i>Corynebacterium striatum</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0147
<i>Cupriabiridus</i> sp.	<i>Parthenium</i> rhizospheric soil, Lahore (Aqeel Ahmad)	16.04.09, 35-37°C	FCBP-SB-0222
<i>Cupriavidus</i> sp.	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	04.04.12, 35-37°C	FCBP-SB-0338
<i>Cupriavidus necator</i>	Glass industry soil, Sheikhpura (Ibatsam Khokhar)	16.09.09, 35-37°C	FCBP-SB-0268
<i>Cupriavidus</i> sp.	Vegetables field soil, Lahore (Ruqia Suliman)	15.11.09, 35-37°C	FCBP-SB-0280
<i>Curtobacterium albidum</i>	Gram soil, Sargodha (Atif Hussain)	02.06.09, 35-37°C	FCBP-SB-0235
<i>Curtobacterium albidum</i>	Rhizospheric soil of <i>Allium sativum</i> (Garlic), Lahore, (Sana Khan)	25.05.11, 35-37°C	FCBP-SB-0319
<i>Curtobacterium albidum</i>	<i>Chenopodium album</i> , Lahore, (Amna Ali)	15.06.12. 35-37°C	FCBP-PB-0361
<i>Curtobacterium albidum</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09. 35-37°C	FCBP-LB-0216
<i>Curtobacterium pusillum</i>	Soil, Changa Manga (Amna Ali)	12.12.10, 35-37°C	FCBP-SB-0296
<i>Curtobacterium</i> sp.	Soil, Changa Manga (Amna Ali)	25.03.11, 35-37°C	FCBP-SB-0316

## D

<i>Deinobacter grandis</i>	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12 35-37°C	FCBP-WB-0394
<i>Deinobacter grandis</i>	Drinking water, Lahore, 19.11.13 (Nazia Shaheen, CEES)	19.10.13 35-37°C	FCBP-LB-0420
<i>Deinococcus proteolyticus</i>	Textile industrial effluent, Sheikhpura (Fozia Naseem)	06.10.09. 35-37°C	FCBP-WB-0262
<i>Deinococcus radiophilus</i>	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12. 35-37°C	FCBP-WB-0388

## E

<i>E.coli-1</i>	Air, Okara. (Zaheer Ahmad)	24.9.07. 35-37°C	FCBP-MB-0108
<i>Edwardsiella ictaluri</i>	Vegetables field soil, Lahore (Ruqia Suliman)	15.11.09, 35-37°C	FCBP-SB-0279
<i>Ensifer adhaerens</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0248
<i>Ensifer adhaerens</i>	Rhizospheric soil of <i>Allium sativum</i> (Garlic), Lahore, (Sana Khan)	25.05.11, 35-37°C	FCBP-SB-0321
<i>Ensifer adhaerens</i>	Rhizospheric soil of chillies ( <i>Capsicum annum</i> ), Lahore, (Waheed Akram)	02.07.13, 35-37°C	FCBP-SB-0402
<i>Ensifer adhaerens</i>	Guava soil, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14 35-37°C	FCBP-SB-0449
<i>Ensifer adhaerens</i>	Diseased Fruit of <i>Citrus reticulata</i> (Citrus), Sargodha, (Nosheen Akhtar)	02.03.12. 35-37°C	FCBP-PB-0335
<i>Ensifer sp.</i>	<i>Zea mays</i> (Hybird maize) soil, Lahore, (Safida Anwar)	12.04.12, 35-37°C	FCBP-SB-0341
<i>Enteric Gp59</i>	Polluted water, Lahore	12.08.06. 35-37°C	FCBP-WB-0030
<i>Enterobacter aerogenes</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0250
<i>Enterobacter aerogenes</i>	<i>Pisum sativum</i> (Hybird Pea) soil, Lahore, (Safida Anwar)	27.01.12, 35-37°C	FCBP-SB-

<i>Enterobacter agglomerans</i>	<i>Rosa indica</i> leaf, Lahore. (Ambrin Ilyas)	06.11.07. 35-37°C	0326 FCBP-PB-0111
<i>Enterobacter agglomerans</i>	<i>Cucumis sativus</i> leaf, Lahore., (Amna Mukhtar)	06.11.07. 35-37°C	FCBP-PB-0120
<i>Enterobacter agglomerans</i>	<i>Spinacia oleracea</i> leaf, Lahore, (Javeed Iqbal)	06.11.07. 35-37°C	FCBP-PB-0128
<i>Enterobacter agglomerans</i>	<i>Euphorbia esculenta</i> , Lahore, (Amna Ali)	05.06.12. 35-37°C	FCBP-PB-0355
<i>Enterobacter agglomerans</i>	Apple, Lahore, (Amna Ali)	25.08.13. 35-37°C	FCBP-PB-0410
<i>Enterobacter agglomerans</i>	Stool specimen Lahore	04.02.06 35-37°C	FCBP-WB-0015
<i>Enterobacter agglomerans</i>	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12. 35-37°C	FCBP-WB-0379
<i>Enterobacter agglomerans</i> strain A	Tap water, Askari housing complex Gulberg III, Lahore,	20.01.07. 35-37°C	FCBP-LB-0021
<i>Enterobacter agglomerans</i> strain B	Tap water, New Campus Lahore 12.08.06	12.08.06 35-37°C	FCBP-LB-0034
<i>Enterobacter asburiae</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0465
<i>Enterobacter cloacae</i>	Sugarcane stem, Bahawalnagar	6.11.06. 35-37°C	FCBP-PB-0051
<i>Enterobacter gergoviae</i>	Air, Ichra, Lahore. (Zaheer Ahmad)	26.8.07. 35-37°C	FCBP-MB-0101
<i>Enterobacter intermedius</i>	Citrus leaf spot, Agriculture Division, NESPAK, Lahore, \ (Muhammad Majid Khan)	20.02.14. 35-37°C	FCBP-PB-0453
<i>Enterobacter</i> sp.	Vegetables field soil, Lahore (Ruqia Suliman)	15.11.09, 35-37°C	FCBP-SB-0284
<i>Enterobacter</i> sp.	Rhizospheric soil of <i>Allium sativum</i> (Garlic), Lahore, (Sana Khan)	25.05.11, 35-37°C	FCBP-SB-0320
<i>Erwinia carotovora</i>	Diseased Potato, ABG, Seed Company, Lahore, (Prof. Dr. Saleem Haider, IAGS)	23.12.13. 35-37°C	FCBP-PB-0421
<i>Escherichia coli</i>	Agricultural soil, Lahore	21.03.06, 35-37°C	FCBP-SB-0011
<i>Escherichia coli</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-

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<i>Escherichia coli</i>	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	0171 FCBP-SB-0178
<i>Escherichia coli</i>	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	FCBP-SB-0183
<i>Escherichia coli</i>	Rhizospheric soil mango, Lahore (Hina Farooq)	16.02.09, 35-37°C	FCBP-SB-0195
<i>Escherichia coli</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0257
<i>Escherichia coli</i>	Sugarcane stem, Bahawalnagar	6.11.06. 35-37°C	FCBP-PB-0046
<i>Escherichia coli</i>	Polluted water, Lahore	16.03.06. 35-37°C	FCBP-WB-0005
<i>Escherichia coli</i>	Stool specimen	18.12.05 35-37°C	FCBP-WB-0012
<i>Escherichia coli</i>	Compost, Lahore (Neelam Nazir)	24.06.08. 35-37°C	FCBP-WB-0163
<i>Escherichia coli</i>	Tap water, IAGS, Lahore, (Amna Ali)	15.07.12. 35-37°C	FCBP-LB-0387
<i>Escherichia coli enactive</i>	<i>Pisum sativum</i> legume, Lahore,. (Sana Khan)	06.11.07. 35-37°C	FCBP-PB-0123
<i>Escherichia coli enactive</i>	Stool specimen Lahore,	18.12.05. 35-37°C	FCBP-WB-0020
<i>Escherichia coli- inactive</i>	Field soil, New campus Lahore	22.10.06, 35-37°C	FCBP-SB-0024
<i>Eubacterium sp.</i>	Tobacco soil, Sargodha (Atif Hussain)	02.06.09, 35-37°C	FCBP-SB-0236

## F

<i>Flavibacterium aquatile</i>	Textile industrial effluent, Sheikhpura (Amna Ali)	22.12.10. 35-37°C	FCBP-WB-0288
<i>Flavobacterium odoratum</i>	Rhizospheric soil of <i>Allium sativum</i> (Garlic), Lahore, (Sana Khan)	10.08.12, 35-37°C	FCBP-SB-0376
<i>Francisella novicida</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09. 35-37°C	FCBP-LB-0220

## G

<i>Gardnerella</i> sp.	Canal water, Lahore (Ruqia Suliman)	15.01.09. 35-37°C	FCBP-LB- 0203
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## H

<i>Hafnia alvei</i>	Tap water, New Campus Lahore	12.08.06 35-37°C	FCBP-LB- 0027
<i>Hafnia alvei</i>	<i>Pisum sativum</i> legume, Lahore, (Sana Khan)	06.11.07. 35-37°C	FCBP-PB- 0131
<i>Hafnia alvei</i> biogp1	Tap water, MPPL P.U. Lahore. (M.Taufiq Asghar)	02.09.07. 35-37°C	FCBP-LB- 0092

## J

<i>Janthinobacterium lividum</i>	Guava mumified, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14. 35-37°C	FCBP-PB- 0436
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## K

<i>Klebsiella oxytoca</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB- 0456
<i>Klebsiella planticola</i>	Citrus canker (leaf), Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14. 35-37°C	FCBP-PB- 0439
<i>Klebsiella planticola</i>	Canal water, Lahore (Ruqia Suliman)	15.01.09. 35-37°C	FCBP-LB- 0206
<i>Klebsiella pneumonia</i>	Air, Okara. (Zaheer Ahmad)	24.9.07. 35-37°C	FCBP-MB- 0110
<i>Klebsiella pneumonia</i> s. sp <i>rhinoscleromatis</i>	Air, Ichra, Lahore. (Zaheer Ahmad)	26.8.07. 35-37°C	FCBP-MB- 0103
<i>Klebsiella pneumoniae</i>	Sugarcane stem, Bahawalnagar	6.11.06. 35-37°C	FCBP-PB- 0047
<i>Klebsiella pneumoniae</i>	Sugarcane root, Okara	26.10.06	FCBP-PB-



<i>Klebsiella pneumoniae</i>	Sugarcane stem , Hugra Shah Muqim, (Sadaf Zahid)	35-37°C 22.04.07.	0050 FCBP-PB-0076
<i>Klebsiella pneumoniae</i>	Stool specimen Lahore	35-37°C 27.11.05	FCBP-WB-0014
<i>Klebsiella pneumoniae</i>	Pharmaceutical effluents, Lahore (Fozia Naseem)	35-37°C 28.10.08.	FCBP-WB-0179
<i>Klebsiella pneumoniae</i>	Dry milk(Brand A), Lahore, (Danish Mahmood and Hamid Iqbal)	35-37°C 19.05.07.	FCBP-LB-0068
<i>Klebsiella pneumoniae</i> s. sp <i>rhinoscleromatis</i>	Canal water, Lahore, (Ruqia Suliman)	35-37°C 08.05.07.	FCBP-LB-0077
<i>Klebsiella pneumoniae</i> s. sp. <i>Rhinoscleromatis</i>	Sugarcane root, Okara	35-37°C 26.10.06.	FCBP-PB-0059
<i>Klebsiella</i> sp.	<i>Convolvulus arvensis</i> , Lahore, (Amna Ali)	35-37°C 12.06.12.	FCBP-PB-0351
<i>Kurthia gibsonii</i>	Citrus field soil, Sargodha (Malik Sarfaraz)	03.06.09, 35-37°C	FCBP-SB-0225
<i>Kurthia gibsonii</i>	Soil, Changa Manga (Amna Ali)	12.12.10, 35-37°C	FCBP-SB-0306
<i>Kurthia gibsonii</i>	Diseased fruit of <i>Citrus reticulata</i> (Citrus), Faisalabad, (Nosheen Akhtar)	03.06.12 35-37°C	FCBP-PB-0345
<i>Kurthia gibsonii</i>	Canal water, Lahore (Ruqia Suliman)	15.01.09. 35-37°C	FCBP-LB-0204
<i>Kurthia sibirica</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14. 35-37°C	FCBP-PB-0462
<i>Kurthia</i> sp.	<i>Pisum sativum</i> (Hybird Pea) soil, Lahore (Safida Anwar)	27.01.12, 35-37°C	FCBP-SB-0329
<i>Kurthia</i> sp.	Tap water, IAGS, Lahore, (Amna Ali)	16.12.12 35-37°C	FCBP-LB-0390
<i>Kurthia zopfii</i>	Guava soil, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14 35-37°C	FCBP-SB-0448
<i>Kurthia zopfii</i>	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.13. 35-37°C	FCBP-WB-0397
<i>Kurthia zopfii</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0155
<i>Kurtia</i> sp.	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-

## L

<i>Lactobacillus</i>	Dairy milk, Lahore,	03.04.06. 35-37°C	FCBP-LB-0004
<i>Lactobacillus</i> Spp	Yougart,Lahore, (Farkhanda Aslam )	12.03.08. 35-37°C	FCBP-LB-0139
<i>Lactococcus citreum</i>	Soil, Changa Manga (Amna Ali)	12.12.10, 35-37°C	FCBP-SB-0303
<i>Lactococcus lactis</i>	<i>Bougainvillea glabra</i> , Lahore, (Amna Ali)	15.06.12. 35-37°C	FCBP-PB-0364
<i>Leifsonia aquatica</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0143
<i>Listera</i> sp.	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	FCBP-SB-0185
<i>Listeria innocua</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0142
<i>Listeria monocytogenes</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0144
<i>Listeria murrayi</i>	Citrus canker (leaf), Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14. 35-37°C	FCBP-PB-0441
<i>Listeria seeligeri</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0151
<i>Listeriaweishimeri</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0152

## M

<i>Marinococcus albus</i>	Sea water, Karachi (Muhammad Atif)	15.01.09. 35-37°C	FCBP-LB-0191
<i>Mesophilobacter marinus</i>	Drinking water, DHA, Lahore, (Nazia, CEES)	21.01.14 35-37°C	FCBP-LB-0429
<i>Methylobacterium organophilum</i>	Drinking water, DHA, Lahore, (Nazia, CEES)	21.01.14 35-37°C	FCBP-LB-0428
<i>Methylobacterium rhodinum</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14.	FCBP-PB-

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<i>Methylophilus methylotrophus</i>	Drinking water, Wapda Town, Lahore, (Nazia, CEES)	35-37°C 14.01.14 35-37°C	0466 FCBP-LB-0427
<i>Methylovorus glucosotrophus</i>	Drinking water, Wapda Town, Lahore, (Nazia, CEES)	14.01.14 35-37°C	FCBP-LB-0426
<i>Microbacterium lacticum</i>	Gram soil, Sargodha, (Atif Hussain)	02.06.09, 35-37°C	FCBP-SB-0261
<i>Microbacterium lacticum</i>	<i>Abelmoschus esculentus</i> (Hybird okra) soil, Lahore, (Safida Anwar)	28.05.12, 35-37°C	FCBP-SB-0348
<i>Microbacterium lacticum</i>	<i>Trifolium pratense</i> , Lahore, (Amna Ali)	20.06.12. 35-37°C	FCBP-PB-0371
<i>Microbacterium lacticum</i>	Textile industrial effluent, Sheikhpura (Amna Ali)	22.12.10. 35-37°C	FCBP-WB-0291
<i>Microbacterium lacticum</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09. 35-37°C	FCBP-LB-0219
<i>Micrococcus kristinae</i>	Sea water, Karachi (Muhammad Atif)	15.01.09. 35-37°C	FCBP-LB-0194
<i>Micrococcus agilis</i>	Rhizospheric soil of <i>Allium sativum</i> (Garlic), Lahore, (Sana Khan)	10.05.11, 35-37°C	FCBP-SB-0317
<i>Micrococcus dentarius</i>	Textile industrial effluent, Sheikhpura (Fozia Naseem)	06.10.09. 35-37°C	FCBP-WB-0258
<i>Micrococcus luteus</i>	<i>Citrus reticulata</i> , Lahore, (Amna Ali)	15.06.12. 35-37°C	FCBP-PB-0367
<i>Micrococcus lylae</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0243
<i>Micrococcus roseus</i>	Wash room wall, colony house, Lahore (Amna Ali)	09-02-11. 35-37°C	FCBP-MB-0301
<i>Micrococcus sedentarius</i>	Textile industry soil, Sheikhpura (Fozia Naseem)	04.11.09, 35-37°C	FCBP-SB-0269
<i>Micrococcus varians</i>	Textile industry soil, Sheikhpura (Fozia Naseem)	04.11.09, 35-37°C	FCBP-SB-0265
<i>Moellerella visconsensis</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0253
<i>Moellerella wisconsensis</i>	Rhizospheric soil of <i>Allium sativum</i> (Garlic), Lahore, (Sana Khan)	25.05.11, 35-37°C	FCBP-SB-0322
<i>Moraxella</i> sp.	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12.	FCBP-WB-

<i>Morganella morganii</i>	Wheat field soil, New Campus Lahore. (Sadaf Zahid)	35-37°C 12.08.07, 35-37°C	0380 FCBP-SB-0094
<i>Morganella morganii</i> <i>biogb 1</i>	<i>Pyrus malus</i> fruit, Lahore, (Asma Murtaza)	06.11.07. 35-37°C	FCBP-PB-0122
<i>Morococcus</i> sp.	Vegetables field soil, Lahore (Ruqia Suliman)	15.11.09, 35-37°C	FCBP-SB-0283

## O

<i>Oreskovia</i> spp	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0145
<i>Oscillospira</i> sp.	Citrus field soil, Sargodha (Malik Sarfaraz)	03.06.09, 35-37°C	FCBP-SB-0231
<i>Oscillospira</i> sp.	Rhizospheric soil of <i>Zingiber officinale</i> (Ginger), Lahore, (Sana Khan)	04.04.12, 35-37°C	FCBP-SB-0347
<i>Oscillospira</i> sp.	Citrus field soil, Sargodha (Malik Sarfaraz)	03.06.09. 35-37°C	FCBP-PB-0231
<i>Oxalobacter formigenes</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0169

## P

<i>Pantoea agglomerans</i>	Citrus canker (leaf), Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14. 35-37°C	FCBP-PB-0454
<i>Pantoea</i> sp.	Wheat field soil, New Campus Lahore. (Sadaf Zahid)	12.08.07, 35-37°C	FCBP-SB-0084
<i>Pantoea</i> sp.	<i>Bougainvillea glabra</i> , Lahore, (Amna Ali)	15.06.12. 35-37°C	FCBP-PB-0365
<i>Pantoea</i> spp	Butter, Shopping centre P.U Lahore. (Sadaf Zahid)	21.07.07. 35-37°C	FCBP-MB-0100
<i>Pantoea</i> spp	Air, Ichra, Lahore. (Zaheer Ahmad)	26.8.07. 35-37°C	FCBP-MB-0106
<i>Pantoea-1</i>	Sugarcane stem, Kasur	10.11.06. 35-37°C	FCBP-PB-0037

<i>Pasteurella gallinarum</i>	Root nodules (wild pea), New Campus Lahore.(Ruqia Suliman)	03.03.07. 35-37°C	FCBP-PB- 0088
<i>Pasteurella haemolytica</i>	Rhizospheric soil of <i>Raphanus sativus</i> (Radish), Lahore, (Safida Anwar)	25.05.11, 35-37°C	FCBP-SB- 0315
<i>Pasteurella haemolytica</i>	Room carpet, colony house, PU, Lahore (Amna Ali)	17-02-11. 35-37°C	FCBP-MB- 0305
<i>Pasteurella hemolytica type-T</i>	Wheat field soil, New Campus Lahore. (Sadaf Zahid)	12.08.07, 35-37°C	FCBP-SB- 0086
<i>Pasteurella multocida</i>	Sugarcane stem, Kasur	10.11.06. 35-37°C	FCBP-PB- 0039
<i>Pasteurella</i> sp. (hemolytical type A)	Sugarcane stem, Okara	26.10.06. 35-37°C	FCBP-PB- 0053
<i>Pasteurella</i> sp. (hemolytical type A)	Sugarcane root, Okara	26.10.06. 35-37°C	FCBP-PB- 0057
<i>Pasteurella</i> sp. (hemolytical type A)	Dry milk (Brand B), Lahore, (Danish Mahmood and Hamid Iqbal)	13.05.07. 35-37°C	FCBP-LB- 0080
<i>Pasteurella</i> sp. (hemolytical type T)	Sugarcane stem, Kasur	10.11.06. 35-37°C	FCBP-PB- 0044
<i>Pasteurella</i> sp. (hemolytical type T)	Dry milk(Brand B), Lahore (Danish Mahmood and Hamid Iqbal)	13.05.07. 35-37°C	FCBP-LB- 0066
<i>Pasteurella</i> sp. (hemolytical type T)	Dry milk (Brand A), Lahore, (Danish Mahmood and Hamid Iqbal)	19.05.07. 35-37°C	FCBP-LB- 0079
<i>Pasteurella ureae</i>	Sugarcane root, Okara	26.10.06. 35-37°C	FCBP-PB- 0054
<i>Pasteurella ureae</i>	Sugarcane stem, Okara	26.10.06. 35-37°C	FCBP-PB- 0058
<i>Pasteurella ureae</i>	Sugarcane stem, Bahawalnagar	6.11.06. 35-37°C	FCBP-PB- 0062
<i>Pasteurella ureae</i>	Root nodules (wild pea), New Campus Lahore. 03.03.07 (Ruqia Suliman)	03.03.07. 35-37°C	FCBP-PB- 0085
<i>Pasteurella ureae</i>	Canal water, Lahore, (Ruqia Suliman)	08.05.07. 35-37°C	FCBP-LB- 0070
<i>Pediococcus dextrinicus</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB- 0202
<i>Pediococcus damnosus</i>	<i>Citrus reticulata</i> , Lahore, (Amna Ali)	15.06.12. 35-37°C	FCBP-PB- 0369

Inventory of FCBP

<i>Pediococcus halophilus</i>	Rhizospheric soil of <i>Raphanus sativus</i> (Radish), Lahore, (Safida Anwar)	25.05.11, 35-37°C	FCBP-SB-0308
<i>Pediococcus</i> sp.	Soil, Changa Manga (Amna Ali)	12.12.10, 35-37°C	FCBP-SB-0302
<i>Pelobacter</i> sp	Compost, Lahore (Neelam Nazir)	24.06.08. 35-37°C	FCBP-WB-0167
<i>Peptococcus</i> sp.	Parthenium rhizospheric soil, Lahore (Aqeel Ahmad)	16.04.09, 35-37°C	FCBP-SB-0224
<i>Peptococcus</i> sp.	Tobacco soil, Sargodha (Atif Hussain)	02.06.09, 35-37°C	FCBP-SB-0266
<i>Peptococcus</i> sp.	<i>Parthenium hysterophorus</i> , Lahore, (Amna Ali)	10.06.12. 35-37°C	FCBP-PB-0359
<i>Peptostreptococcus</i> sp	Soil, Changa Manga (Amna Ali)	12.12.10, 35-37°C	FCBP-SB-0300
<i>Peptostreptococcus</i> sp.	Rhizospheric soil of <i>Raphanus sativus</i> (Radish), Lahore, (Safida Anwar)	25.05.11, 35-37°C	FCBP-SB-0314
<i>Phenylobacterium immobile</i>	Citrus leaf spot, Agriculture Division, NESPAK, Lahore, (Muhammad Majid Khan)	20.02.14. 35-37°C	FCBP-PB-0445
<i>Phenylobacterium</i> sp.	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12. 35-37°C	FCBP-WB-0392
<i>Phyllobacterium myrsinacearum</i>	<i>Alstonia scholaris</i> , leaf, P.U. Lahore, (Akeel Ahmad, IAGS)	02.12.13. 35-37°C	FCBP-PB-0423
<i>Planococcus citreus</i>	Sea water, Karachi (Muhammad Atif)	15.01.09. 35-37°C	FCBP-LB-0198
<i>Prevotella disiens</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0157
<i>Prevotella intermedia</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0172
<i>Prevotella oris</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07, 35-37°C	FCBP-SB-0161
<i>Proteus merabillis</i>	Sugar cane stem, Okara	26.10.06. 35-37°C	FCBP-PB-0043
<i>Proteus merabillis</i>	Pharmaceutical effluents, Lahore (Fozia Naseem)	28.10.08. 35-37°C	FCBP-WB-0177
<i>Proteus myxofaciens</i>	<i>Spinacia oleracea</i> leaf, Lahore, (Javeed Iqbal)	06.11.07.	FCBP-PB-

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<i>Proteus vulgaris</i>	Sugarcane stem, Hugra Shah Muqim, (Sadaf Zahid)	35-37°C 22.04.07.	0125 FCBP-PB-0064
<i>Proteus vulgaris</i>	<i>Citrus reticulata</i> , Lahore, (Amna Ali)	35-37°C 15.06.12.	FCBP-PB-0368
<i>Proteus vulgaris</i>	Canal water, Lahore, (Ruqia Suliman)	08.05.07 35-37°C	FCBP-LB-0074
<i>Providencia alcalifaciens</i>	Polluted water, Kasur. (Hina Gulzeb (M.Sc) Zoology P.U. LHR.)	06.08.07 35-37°C	FCBP-WB-0089
<i>Providencia rettgeri</i> gp a	Sugarcane stem, Okara	26.10.06 35-37°C	FCBP-PB-0041
<i>Pseudomonas alcaligenes</i>	Rhizospheric soil of <i>Allium sativum</i> (Garlic), Lahore, (Sana Khan)	10.08.12, 35-37°C	FCBP-SB-0372
<i>Pseudomonas flourescene</i>	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08, 35-37°C	FCBP-SB-0188
<i>Pseudomonas fluorescens</i>	<i>Pisum sativum</i> (Wild Pea) soil, Lahore, (Safida Anwar)	27.01.12, 35-37°C	FCBP-SB-0328
<i>Pseudomonas fluorescens</i>	Root nodules (wild pea), New Campus Lahore. (Ruqia Suliman)	03.03.07. 35-37°C	FCBP-PB-0083
<i>Pseudomonas fluorescens</i>	Pharmaceutical effluents, Lahore (Fozia Naseem)	28.10.08 35-37°C	FCBP-WB-0180
<i>Pseudomonas malophilia</i>	Wheat field soil, New Campus Lahore. (Sadaf Zahid)	12.08.07, 35-37°C	FCBP-SB-0097
<i>Pseudomonas malophilia</i>	Root nodules (wild pea), New campus Lahore.(Ruqia Suliman)	03.03.07. 35-37°C	FCBP-PB-0099
<i>Pseudomonas malophilia</i>	Pharmaceutical effluents, Lahore (Fozia Naseem)	28.10.08. 35-37°C	FCBP-WB-0181
<i>Pseudomonas syringae</i>	Wheat Plant Leaves ( <i>Triticum aestivum</i> ), Lahore, (Muhammad Waheed Anwar, Kanzo Quality Seed Department)	09.05.13. 35-37°C	FCBP-PB-0405
<i>Pseudomonas syringae</i> pv <i>populans</i>	<i>Pyrus malus</i> fruit, Lahore,	18.12.05 35-37°C	FCBP-PB-0010
<i>Pseudomonas syringae</i> pv <i>populans</i>	<i>Pyrus malus</i> fruit, Lahore,	22.12.05. 35-37°C	FCBP-PB-0013
<i>Pseudomonas syringae</i> pv <i>syringae</i>	Cherry fruit, Lahore,	18.12.05 35-37°C	FCBP-PB-0009

## R

<i>Ralstonia pickettii</i>	Sugarcane stem, Bahawalnagar	6.11.06. 35-37°C	FCBP-PB- 0049
<i>Ralstonia pickettii</i>	Dry milk (Brand A), Lahore, Danish Mahmood and Hamid Iqbal)	19.05.07. 35-37°C	FCBP-LB- 0065
<i>Ralstonia solanacearum</i>	Potato ( <i>Solanum nigrum</i> ), Lahore, (Amna Ali)	28.08.13. 35-37°C	FCBP-PB- 0407
<i>Rhizobacter daucus</i>	Guava soil, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14 35-37°C	FCBP-SB- 0450
<i>Rhizomonas suberifaciens</i>	Citrus leaf spot, Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14 35-37°C	FCBP-PB- 0437
<i>Rhodococcus equi</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB- 0146
<i>Rikenella microfusus</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09 35-37°C	FCBP-LB- 0213

## S

<i>Salmonella .sp.</i>	Canal water, Lahore, (Ruqia Suliman)	08.05.07. 35-37°C	FCBP-LB- 0075
<i>Salmonella gallinarum</i>	Air, Ravi, Lahore. (Zaheer Ahmad)	12.9.07 35-37°C	FCBP-MB- 0105
<i>Salmonella gallinarum</i>	Sugarcane stem, Hagra Shah Muqim	29.10.06. 35-37°C	FCBP-PB- 0038
<i>Salmonella gallinarum</i>	Dry milk(Brand A), Lahore, (Danish Mahmood and Hamid Iqbal)	19.05.07. 35-37°C	FCBP-B- 0073
<i>Salmonella gallinarum</i>	Canal water, Lahore (Ruqia Suliman)	15.01.09. 35-37°C	FCBP-LB- 0208
<i>Salmonella paratyphi A</i>	Air, Ravi, Lahore. (Zaheer Ahmad)	12.9.07. 35-37°C	FCBP-MB- 0104
<i>Salmonella typhi</i>	Sugarcane stem, Bahawalnagar	6.11.06. 35-37°C	FCBP-PB- 0042
<i>Salmonella typhii</i>	Dry milk (Brand A), Lahore,	19.05.07.	FCBP-LB-



<i>Sarcina maxima</i>	(Danish Mahmood and Hamid Iqbal) Rhizospheric soil of <i>Raphanus sativus</i> (Radish), Lahore, (Safida Anwar)	35-37°C 25.05.11, 35-37°C	0067 FCBP-SB- 0310
<i>Sarcina ventriculi</i>	Soil, Changa Manga (Amna Ali)	12.12.10, 35-37°C	FCBP-SB- 0299
<i>Serratia liquefaciens</i>	Tap water, New Campus Lahore 12.08.06	12.08.06. 35-37°C	FCBP-LB- 0035
<i>Serratia marcescens</i>	Pharmaceutical effluents, Lahore (Fozia Naseem)	28.10.08. 35-37°C	FCBP-WB- 0184
<i>Serratia marcescens</i> biogp 1 strain A	Tap water, Model Town Lahore	12.08.06. 35-37°C	FCBP-LB- 0023
<i>Serratia marcescens</i> biogp1 strain B	Tap water, Model Town Lahore	12.08.06. 35-37°C	FCBP-LB- 0031
<i>Serratia plymuthica</i>	Tap water, New Campus Lahore	06.09.06 35-37°C	FCBP-LB- 0028
<i>Serratia rubidaea</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB- 0247
<i>Serratia rubidaea</i>	Sugarcane stem, Bahawalnagar	19.12.06. 35-37°C	FCBP-PB- 0045
<i>Serratia rubidaea</i>	Sugarcane root, Okara	26.10.06. 35-37°C	FCBP-PB- 0060
<i>Serratia rubidaea</i>	Tap water, New Campus Lahore	06.09.06 35-37°C	FCBP-LB- 0026
<i>Serratia rubidaea</i>	Canal water, Lahore (Ruqia Suliman)	15.01.09 35-37°C	FCBP-LB- 0209
<i>Shewanella putrefaciens</i>	Canal water, Lahore, (Ruqia Suliman)	08.05.07. 35-37°C	FCBP-LB- 0069
<i>Shewanella putrefaciens</i>	Liquid milk, Lahore, (Ruqia Suliman)	13.05.07. 35-37°C	FCBP-LB- 0071
<i>Shigella dysenteriae</i>	Sugarcane root, Hugra Shah Muqim, (Sadaf Zahid)	29.10.06. 35-37°C	FCBP-PB- 0072
<i>Solmonella pullorum</i>	Air, Ravi, Lahore. (Zaheer Ahmad)	12.9.07. 35-37°C	FCBP-MB- 0107
<i>Sphaerobacter thermophilus</i>	Paper sludge, Lahore, (Shiza Ayaz)	10.05.13. 35-37°C	FCBP-WB- 0399
<i>Spirillospora albida</i>	<i>Bougainvillea glabra</i> , Lahore, 15.06.12 (Amna Ali)	15.06.12.	FCBP-PB-

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<i>Spirosoma linguale</i>	Drinking water, Lahore, (Nazia Shaheen, CEES)	35-37°C 19.10.13 35-37°C	0366 FCBP-LB-0417
<i>Sporosarcina</i> sp.	Sea water, Karachi (Muhammad Atif)	15.01.09. 35-37°C	FCBP-LB-0196
<i>Sporosarcina ureae</i>	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0244
<i>Sporosarcina ureae</i>	Compost, Lahore(Neelum Nazir)	24.06.08. 35-37°C	FCBP-WB-0193
<i>Staphylococcus caprae</i>	Soil, Changa Manga (Amna Ali)	12.12.10, 35-37°C	FCBP-SB-0307
<i>Staphylococcus caprae</i>	Textile industrial effluent, Sheikhpura (Fozia Naseem)	06.10.09. 35-37°C	FCBP-WB-0260
<i>Staphylococcus carnosus</i>	Glass industry soil, Sheikhpura (Fozia Naseem)	04.11.09, 35-37°C	FCBP-SB-0267
<i>Staphylococcus carnosus</i>	Rhizospheric soil of <i>Raphanus sativus</i> (Radish), Lahore (Safida Anwar)	25.05.11, 35-37°C	FCBP-SB-0312
<i>Staphylococcus carnosus</i>	Textile industrial effluent, Sheikhpura (Amna Ali)	22.12.10. 35-37°C	FCBP-WB-0294
<i>Staphylococcus caseolyticus</i>	Canal water, Mianwali (Ruqia Suliman)	03.02.09. 35-37°C	FCBP-LB-0214
<i>Staphylococcus intermedius</i>	Textile industrial effluent, Sheikhpura (Fozia Naseem)	04.11.09. 35-37°C	FCBP-WB-0271
<i>Stenotrophomonas maltophilia</i>	Wheat field soil, New Campus Lahore. (Sadaf Zahid)	12.08.07, 35-37°C	FCBP-SB-0095
<i>Stenotrophomonas maltophilia</i>	Sugarcane stem, Kasur	10.11.06. 35-37°C	FCBP-PB-0048
<i>Stenotrophomonas maltophilia</i>	Sugarcane stem, Okara	26.10.06. 35-37°C	FCBP-PB-0061
<i>Stenotrophomonas maltophilia</i>	<i>Allium cepa</i> fruit, Lahore, (Darakhshan Iqbal M.Sc)	06.11.07. 35-37°C	FCBP-PB-0121
<i>Stenotrophomonas maltophilia</i>	<i>Citrus reticulata</i> , Lahore, (Amna Ali)	15.06.12. 35-37°C	FCBP-PB-0370
<i>Streptococcus</i> sp.	Tap water, IAGS, Lahore, (Amna Ali)	16.12.12. 35-37°C	FCBP-LB-0389
<i>Syntrophospora</i> sp.	Textile industrial effluent, Sheikhpura (Amna Ali)	22.12.10.	FCBP-WB-

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<i>Syntrophospora</i> sp.	Citrus field soil, Sargodha (Malik Sarfaraz)	35-37°C 03.06.09, 35-37°C	0290 FCBP-SB-0226
<i>Syntrophospora</i> sp.	Diseased fruit of <i>Citrus reticulata</i> (Citrus), Jhelum, (Nosheen Akhtar)	04.06.12. 35-37°C	FCBP-PB-0346
<i>Syntrophospora</i> sp.	Textile industrial effluent, Sheikhpura (Fozia Naseem)	06.10.09. 35-37°C	FCBP-WB-0264
<i>Syntrophospora</i> sp.	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.13. 35-37°C	FCBP-WB-0396

## T

<i>Tatumella ptyseos</i>	Stool specimen Lahore,	03.04.06 35-37°C	FCBP-WB-0016
<i>Tatumella ptyseos</i>	Stool specimen Lahore,	29.03.06. 35-37°C	FCBP-WB-0018
<i>Thermus</i> sp.	<i>Triticum aestivum</i> (Hybird Wheat), Lahore, (Safida Anwar)	15.06.12. 35-37°C	FCBP-PB-0375
<i>Trichococcus flocculiformis</i>	Tannery sludge, Kasur, (Shiza Ayaz)	04.05.12. 35-37°C	FCBP-WB-0395
<i>Trichococcus</i> sp	<i>Ficus religiosa</i> (peepal) soil, Lahore (Amna Ali)	20.01.11, 35-37°C	FCBP-SB-0295
<i>Trichococcus</i> sp.	Vegetable rhizospheric soil, Mianwali (Ruqia Suliman)	03.06.09, 35-37°C	FCBP-SB-0254
<i>Trichococcus</i> sp.	Textile industry soil, Sheikhpura (Ibatsam Khokhar)	04.11.09, 35-37°C	FCBP-SB-0270
<i>Trichococcus</i> sp.	Paper sludge, Lahore, (Shiza Ayaz)	10.06.12. 35-37°C	FCBP-WB-0383
<i>Turticella ottidis</i>	Canal Water, Lahore. (Ruqia Suliman)	04.09.07. 35-37°C	FCBP-LB-0153

## V

<i>Vagococcus</i> sp.	Textile industrial effluent, Sheikhpura (Amna Ali)	22.12.10.	FCBP-WB-
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35-37°C

0289

**X**

<i>Xanthobacter agilis</i>	Rhizospheric soil of guava Kasur, (Prof. Dr. Saleem Haider, IAGS)	22.09.13	35-37°C	FCBP-SB-0412
<i>Xanthobacter agilis</i>	Rhizospheric soil of guava Kasur, (Prof. Dr. Saleem Haider, IAGS)	22.09.13.	35-37°C	FCBP-PB-0412
<i>Xanthobacter agilis</i>	Citrus leaf spot, Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14.	35-37°C	FCBP-PB-0431
<i>Xanthobacter agilis</i>	Rice discoloration, Lahore, (Sana Siddiqui, IAGS)	17.08.14.	35-37°C	FCBP-PB-0457
<i>Xanthobacter agilis</i>	Diseased tomato fruit, Lahore, (Amna & Tehmina, IAGS)	23.07.14.	35-37°C	FCBP-PB-0467
<i>Xanthobacter autotrophicus</i>	Wheat field soil, Lahore (Ruqia Suliman)	14.08.07,	35-37°C	FCBP-SB-0201
<i>Xanthobacter autotrophicus</i>	Citrus gumosis, Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14.	35-37°C	FCBP-PB-0432
<i>Xanthobacter flavus</i>	Soil, Changa Manga (Amna Ali)	12.12.10,	35-37°C	FCBP-SB-0298
<i>Xanthobacter flavus</i>	Guava stem rot, Sharakpur Sharif, Okara, (Zoya Arshad, IAGS)	14.02.14.	35-37°C	FCBP-PB-0433
<i>Xanthomonas axonopodis</i> (= <i>X.campestris</i> pv <i>citri</i> )	Citrus fruit, Lahore,	22.12.05	35-37°C	FCBP-PB-0007
<i>Xanthomonas axonopodis</i>	Rhizosphere Chiku plant, Lahore (Fozia Naseem)	13.11.08,	35-37°C	FCBP-SB-0186
<i>Xanthomonas axonopodis</i> (= <i>X.campestris</i> pv <i>citri</i> )	<i>Citrus sinensis</i> fruit, MIA	22.12.05.	35-37°C	FCBP-PB-0001
<i>Xanthomonas campestris</i> pv. <i>mangiferae indica</i>	<i>Mangifera indica</i> leaf, Lahore,	18.12.05	35-37°C	FCBP-PB-0008
<i>Xanthomonas campestris</i> pv. <i>vesicatoria</i>	<i>Lycopersicon esculantum</i> fruit, Lahore,	04.02.06.	35-37°C	FCBP-PB-0003
<i>Xanthomonas maltophilia</i>	<i>Brassica oleracea</i> leaf, Lahore. 06.11.07, (Saira jabeen)	06.11.07.	35-37°C	FCBP-PB-0118
<i>Xanthomonas maltophilia</i>	<i>Pisum sativum</i> legume, Lahore, (Sana Khan)	06.11.07.	35-37°C	FCBP-PB-0132

<i>Xanthomonas maltophilia</i>	Filter water, MPPL P.U. Lahore. (M.Taufiq Asghar)	02.09.07. 35-37°C	FCBP-LB-0093
<i>Xanthomonas nematophilis</i>	Wheat field soil, Lahore, (Justina jane)	12.02.08, 35-37°C	FCBP-SB-0134
<i>Xanthomonas nematophilis</i>	<i>Citrus sinensis</i> leaf, Lahore. (Saira jabeen)	06.11.07. 35-37°C	FCBP-PB-0112
<i>Xanthomonas nematophilis</i>	<i>Brassica oleracea</i> leaf, Lahore. (Saira jabeen)	06.11.07 35-37°C	FCBP-PB-0115
<i>Xanthomonas nematophilus</i>	Root nodules (wild pea), New campus Lahore. (Ruqia Suliman)	03.03.07. 35-37°C	FCBP-PB-0098
<i>Xanthomonas oryzae</i>	<i>Oryza sativa</i> leaf, Lahore, (Sana Amjad)	29.01.08. 35-37°C	FCBP-PB-0133
<i>Xenorhabdus luminescens</i>	<i>Citrus sinensis</i> fruit, Lahore., (Ruqia Suliman)	09.01.08. 35-37°C	FCBP-PB-0119
<i>Xenorhabdus nematophila</i>	<i>Abelmoschus esculentus</i> (Wild okra) soil, Lahore, (Safida Anwar)	20.06.12, 35-37°C	FCBP-SB-0344
<i>Xylella</i> sp.	Citrus leaf spot, Renala-khurd Micheals farm, (Sidra Naveed, IAGS)	03.02.14. 35-37°C	FCBP-PB-0443
<i>Xylophilus</i> sp.	Tomato fruit, Lahore (Ruqia Suliman)	06.10.09. 35-37°C	FCBP-PB-0281

## Y

<i>Yersinia a typical group-1</i>	Air, Okara. (Zaheer Ahmad)	24.9.07. 35-37°C	FCBP-MB-0109
<i>Yersinia enterocolitica</i>	Sugarcane stem, Kasur	10.11.06. 35-37°C	FCBP-PB-0056
<i>Yersinia pseudotuberculosis</i>	Polluted water, Kasur. (Hina Gulzeb (M.Sc) Zoology P.U LHR)	06.08.07. 35-37°C	FCBP-WB-0082
<i>Yersinia ruckeri</i>	<i>Cucumis sativus</i> leaf, Lahore, (Asma Murtaza)	06.11.07. 35-37°C	FCBP-PB-0126
<i>Yersinia ruckeri</i>	<i>Convolvulus arvensis</i> , Lahore, (Amna Ali)	12.06.12. 35-37°C	FCBP-PB-0352
<i>Yersinia ruckeri</i>	Spinach, Lahore, (Amna Ali)	25.08.13. 35-37°C	FCBP-PB-0408
<i>Yersinia ruckeri</i>	Tap water, Askari housing complex Gulberg III, Lahore,	20.01.07.	FCBP-LB-

Inventory of FCBP

<i>Yersinia sp</i>	<i>Coriander</i> leaf, Lahore. (Rabia Kalsoom)	35-37°C 06.11.07.	0029 FCBP-PB-
<i>Yersinia sp.</i>	Pharmaceutical effluents, Lahore (Fozia Naseem)	35-37°C 28.10.08.	0113 FCBP-WB-
<i>Yersinia sp.</i> (typical group-1)	Sugarcane stem ,Hugra Shah Muqim	35-37°C 29.10.06. 35-37°C	0176 FCBP-PB- 0040