

Supplementary Material

Table S1 Morphological Attributes of Isolated Bacterial Strain

Strain Name	Gram Stainig	Size	Shape	Pigmentation	Texture	Margin	Elevation	Appearance	Opticle	Motility
S1	Positive	Large	Rod	White	Smooth	Rough	Raised	Dull	Translucent	Motile
S2	Positive	Small	Vibroid	Creamy	Smooth	Entire	Raised	Shiny	Opaque	Motile
S3	Negative	Medium	Vibroid	Yellowish	Smooth	Regular	Convex	Pearlescent	Opaque	Motile

Table S2 Plant Growth Promoting Attributes of Isolated Bacterial Strain

Bacteria Name	Phosphate Solublization	Siderophore Production	HCN Production	IAA Production	ACCD Production
S1	-	-	-	+	+
S2	+	-	-	-	+
S3	+	+	+	+	+

Table S3 Biochemical attributes of isolated bacteria.

Tests	Results		
	S1	S2	S3
Biochemical	S1	S2	S3
Catalase	-	-	+
Oxidase	+	-	+
Indole	-	-	-
Citrate utilization	+	+	+
Methyl Red	-	-	-
Nitrate Reduction	-	-	+
Mannitol	-	-	-
Urease	-	-	-

Table S4 Degrading efficiency of isolated bacteria

Bacteria Name	Initial Weight (g)	Final Weight (g)	% Weight Loss
S1	2.0	1.963	1.85
S2	2.0	1.959	2.05
S3	2.0	1.863	6.85

Table S5 Chemical attributes of biochar

pH	EC (ms/cm)
8	0.9

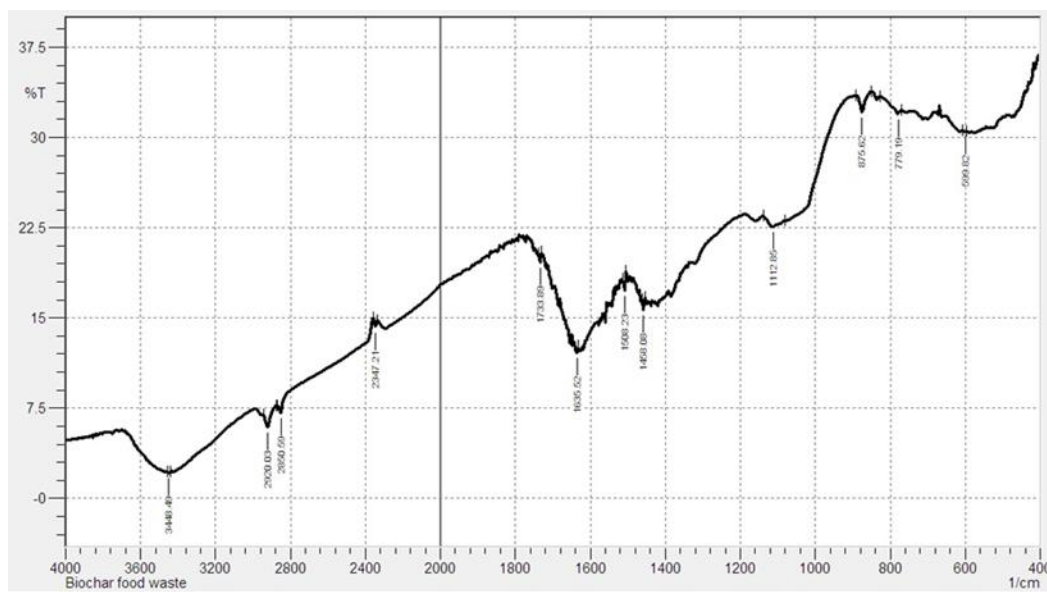


Fig. S1. FTIR analysis of food waste biochar

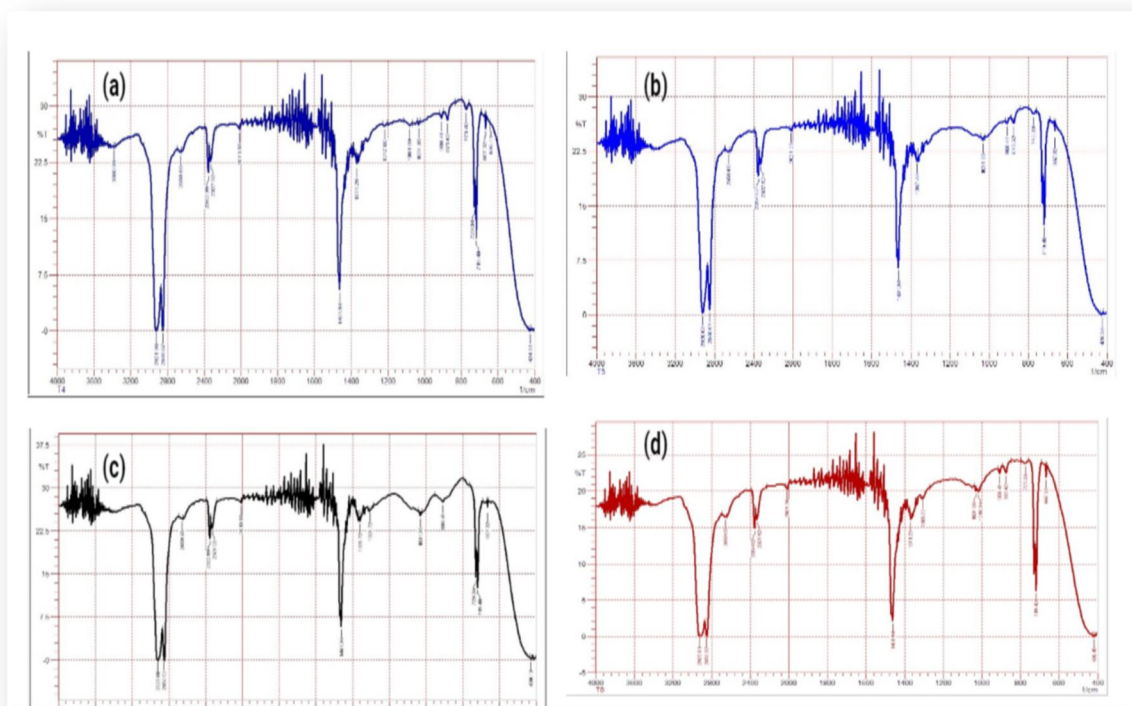


Fig. S2. FTIR analysis of (a) untreated MPs PE (b) MPs PE treated with *Pseudomonas aeruginosa* (c) MPs PE treated with Biochar (d) MPs PE treated with UV