

Table.1: Screening of isolated microbes for Laccase, Manganese Peroxidase and Lignin peroxidase enzyme activity

SN.	Site of collection	Code representation	Laccase positive	MnP positive	LiP positive
1	Vyapar Vihar Dump sites,BSP	VDS (1-17)	VDS 3, VDS 4	VDS 3, VDS 8	VDS 1
2	GGV campus Dumpsites, BSP	GGV (1-9)	GGV9, GGV3	GGV9	-
3	Koni Road, BSP	KRB (1-11)	KRB 1	KRB 1	KRB5
4	Sarkanda, BSP	SKD (1-8)	-	SKD 2	-
5	Rajkishor nagar, BSP	RNB (1-8)	RNB7	RNB7	RNB4
6	Pali	PAN (1-6)	-	-	-
7	Tifra , BSP	TFB (1-8)	TFB1	TFB1	-
8	Railway station road, BSP	RSR (1-12)	RSR1	RSR1	RSR4
9	Nehru chowk, BSP	NCB (1-6)	-	NCB2	
10	Dongarnala, BSP	DNB (1-9)	-	DNB2	-
11	Agriculture college, BSP	ACB (1-6)	ACB3	ACB3	-
12	Ratanpur Road,RT	RRB (1-9)	-	RRB2	
13	Mahamaya mandir RT	MMB (1-10)	MMB2	MMB2	-
14	Girjaband	GBD (1-5)	-	GBD3	-
15	Ramtakri	RTB (1-6)	-	RTB1	-
16	Raipur city	RPC (1-9)	RPC2	RPC2	-
17	Simga	SMB (1-12)	-	-	-
18	Raipur station,R	RST (1-4)	RST1	RST1	-
19	Torwa	TWB (1-7)	TWB1	TWB1	TWB2
20	Palmgarh	PGH (1-6)	PGH1	PGH1	-
21	PG College RJG	RPG (1-6)	RPG4	RPG4	RPG1
22	Station road,Raipur	RSR (1-7)	-	RSR7	-
23	Rajim Lochan temple,Rajim	RLT (1-7)	-	RLT7	-
24	Kuleshwar T,Rajim	RKT (1-10)	-	-	-
25	Bhooteshwar Mahadev,Rajim	RBM (1-3)	RBM1	RBM1	-
26	Jagannath temple,Rajim	RJT (1-7)	RJT2	RJT2	RJT1
27	Mahanadi river side	RMR (1-3)	-	-	-
28	RajimCity Market	RCM (1-4)	RCM1	RCM1	-

29	Hasoud	HSD (1-11)	-	-	-
30	Jatmai	JTM (1-7)	-	JTM4	-
31	Ghatarani	GHR (1-9)	GHR5	GHR5	-
32	Janjgir-Chapa	JCP (1-10)	JCP6	JCP6	-
33	Durg	DUG (1-8)	-	-	-
34	Bus Stand, Durg	DBS (1-5)	DBS4	DBS4	-
35	Supela, Durg	DSS (1-3)	DSS1	DSS1	-
36	Durg Raipur Road	DRR (1-13)	DRR2	DRR2	-
37	Bhilai	BHI (1-5)	-	-	-
38	Chaiturgarh	KOC (1-7)	KOC3	KOC3	KOC1
39	Korba Mine sites	KMS (1-6)	-	-	-
-	Total	-	24	31	08

Table.2: Screening of isolated microbes for polyethylene (LDPE) degrading activity through dry Weight reduction test

SN	Microbes tested	LDPE film Weight before treatment (mg)	LDPE Film Weight after treatment (mg) Mean $\pm$ SD	Weight reduction (mg)	Percentage of weight reduction (%)
1	VDS3	10	9.87 $\pm$ 0.06	0.13	1.3
2	VDS4	10	9.98 $\pm$ 0.02	0.02	0.2
3	VDS8	10	10 $\pm$ 0.00	00	00
4	GGV9	10	9.95 $\pm$ 0.03	0.05	0.5
5	SKD2	10	9.99 $\pm$ 0.01	0.10	1.0
6	RNB7	10	9.48 $\pm$ 0.06	0.52	5.2
7	RNB4	10	10 $\pm$ 0.00	00	00
8	RSR1	10	9.84 $\pm$ 0.04	0.14	1.4
9	RSR4	10	9.48 $\pm$ 0.01	0.52	5.2
10	ACB3	10	9.70 $\pm$ 0.04	0.3	3.0
11	MMB2	10	10 $\pm$ 0.00	00	00

12	RRB2	10	9.56±0.04	0.44	4.4
13	RST1	10	9.86±0.03	0.14	1.4
14	TWB1	10	9.65±0.30	0.35	3.5
15	RBM1	10	9.76±0.05	0.24	2.4
16	RCM1	10	8.69±0.02	1.31	13.1
17	JCP6	10	9.55±0.04	0.45	4.5
18	DRR2	10	9.82±0.01	0.18	1.8
19	KOC1	10	9.83±0.01	0.17	1.7
20	KOC3	10	9.72±0.01	0.28	2.8

Table. 3: pH change of medium during study of RCM1 isolates:

SN	Time of incubation	pH of medium before inoculation	Mean ± SD	pH of medium after incubation
1.	1 day	7.0±1/2	7.06± 0.057	7.1
2.	15 day		6.9± 0.01	6.9
3.	1 month		6.34± 0.015	6.3
4.	45 days		6.04± 0.035	6.0
5.	2 month		5.93± 0.041	5.9

Table. 4: Visual observation and formation of bio films on the surface:

SN	Test Microbes (code)	Cracks or other physical changes	Roughness changes	Colour change of LDPE after treatment
1	RCMI	+	+	-
2	RBMI	-	-	+
3	RSR4	-	-	-
4	JCP6	-	-	-
5	DRR2	-	-	-