

References & Data for E-Waste Bioleaching Simulation

References:

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<https://knowledge-hub.circle-economy.com/article/11560?n=Bioleaching-electronic-waste-the-future-of-clean-and-energy-efficient-recycling>
<https://ijrpr.com/uploads/V4ISSUE10/IJRPR18339.pdf>
<https://2025.cedare.org/wp-content/uploads/2025/03/E-Waste-Management-in-Egypt-Status-Report-2024.pdf>

Data Table:

Method	Energy_kWh_per_t	Chemicals_cost_per_t	Capex_per_t	Au_recovery	Pd_recovery	Cu_recovery
Pyrometallurgy	3500	1200	500	0.9	0.75	0.85
Hydrometallurgy	2500	1500	400	0.92	0.8	0.88
Bio_Acidithiobacillus	800	600	300	0.85	0.7	0.8
Bio_Ferrooxidans	750	650	320	0.83	0.68	0.82
Bio_Fungus	900	700	350	0.88	0.72	0.79
Informal (Egypt)	1500	400	100	0.5	0.4	0.55