Bioleaching Research References & Data Summary

Key References:

1. Anglo American. (n.d.). Bioleaching – definition and process. Retrieved from https://www.angloamerican.com/futuresmart/stories/our-industry/mining-explained/mining-terms-explained-a-to-z/bioleaching-definition-and-process
2. Circle Economy Knowledge Hub. (2023). Bioleaching electronic waste: The future of clean and energy-efficient recycling.
3. International Journal of Research Publication and Reviews, Vol 4, Issue 10 (2023): 'Bioleaching Process for Metal Recovery from E-Waste.'
4. CEDARE (2024). E-Waste Management in Egypt: Status Report 2024.

Dataset Summary (used for simulation)

arameter	Unit	Pyro	Hydro	Bio (A. ferrooxidans)	Bio (L. ferrooxidans)	Bio (A. thiooxidans)	Current Eg
Cost	USD/ton e-waste	1500	1200	600	650	700	1300
Energy	kWh/ton e-waste	5000	3500	800	850	900	4000
Recovery	%	92	95	85	80	82	60
Recovery	%	88	90	50	45	40	35
Recovery	%	75	78	35	30	28	25

Prepared for the Egyptian Bioleaching Application Simulation Project.