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(57) Abstract :

ABSTRACT Disclosed is a method (100) for bioleaching metals from electronic wastes, includes subjecting (102) a 2-10% (w/v) initial e-waste load to bioleaching in a Fluidized bed bioreactor employing 150-350 ml spent medium of Alcaligenes aquatilis (NCIM 5667 and GenBank accession number KP772325) in a first stage for 72-120 hours, conducting (104) three sequential batches of metal bioleaching in the same Fluidized bed bioreactor employing the e-waste residue from the preceding batch as the e-waste load for the next batch in the first stage, transferring (106) thee-waste residue from the first stage to the second stage, subjecting (108) the e-waste residue to precious metal bioleaching in the Fluidized bed bioreactor by employing a two-step method with Chromobacterium violaceum(MTCC 2656), wherein 100-300 ml of a 18-36 hours grown culture is added to the residue for further bioleaching in subsequent batches in the second stage for 72-120 hours each. <

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