

ABSTRACT
METHOD FOR BIOLEACHING OF SILVER NANOPARTICLES UNDER
THERMOPHILIC CONDITIONS

5 There is disclosed a method for producing nanomaterials based on hazardous
wastes, and by way of bioleaching using thermophilic microorganisms. The method
comprises of preparing nanoparticle production media containing a substrate for
microbial inoculation; incubating microorganisms at approximately 50 degrees in
10 media having nanoparticles loaded therein; subjecting the harvested nanoparticles to
a fixation process using glutaraldehyde; centrifuging the nanoparticles and
resuspending cells in a buffer; subjecting the nanoparticles to a post fixation process;
subjecting the nanoparticles to a dehydration process using acetone, subjecting the
nanoparticles to polymerization; and subjecting the nanoparticles to characterization.

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FIG 1