CLAIMS

What is claimed is:

1. A method of treating waste comprising:

(a) providing an apparatus comprising a media bed comprising a substantially water tight container comprising a biomass, wherein (i) the biomass comprises water and viable worms that are submerged in the water, and (ii) the worms are at a density of about 1000 worms/m^3 to about 100,000 worms/m^3;

(b) introducing oxygen into the water of the biomass by an aeration means configured to introduce air or oxygen into the water, wherein a dissolved oxygen content of the water is maintained at a level of at least 4 ppm;

(c) maintaining the viable worms in an aquatic environment, wherein the worms are completely and constantly submerged in the water;

(d) contacting the biomass of the apparatus with oxidizable waste, thereby forming a mixture; and

(e) removing a portion of the mixture from the apparatus wherein the portion of the mixture that is removed comprises treated waste.

2. The method of claim 1, wherein the biomass comprises microbes of the genus Nitrosomonas and microbes of the genus Nitrobacter.

3. The method of claim 1, wherein the media bed comprises aggregates, fibers or particles and one or more plants.

4. The method of claim 1, wherein the worm density is maintained at about 1000 worms/m^3 to about 50,000 worms/m^3.