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- (54) **Title:** METHODS AND APPARATUS FOR DECELLULARIZATION OF BIOLOGICAL TISSUES AND ORGANS

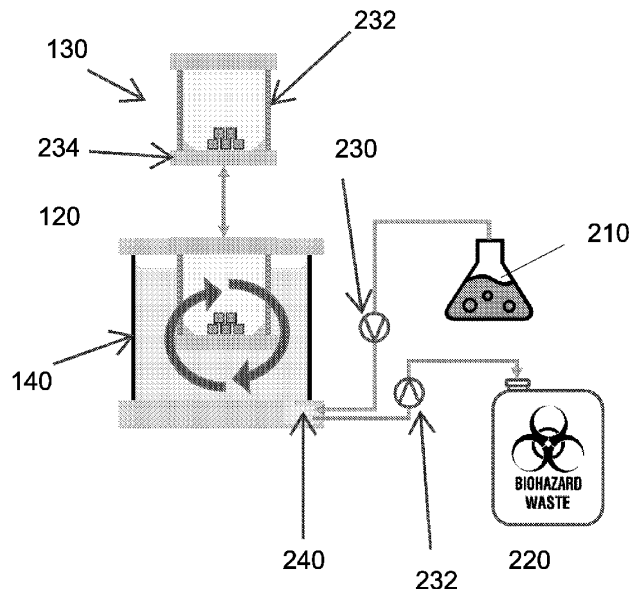


Figure 2

- (57) **Abstract:** Decellularization of tissue samples to produce decellularized extracellular matrix (dECM) by performing one or more wash cycles in a reactor using a reagent after at least partially submerging the tissue sample in the reagent. The reactor comprising a tissue chamber in fluid communication with a reactor chamber. Agitating the tissue sample and/or the reagent such that the tissue sample circulates in the reagent, while retaining the tissue sample in a tissue chamber or a decellularization reactor. Monitoring at least one parameter of the reagent and/or at least one parameter of the tissue sample and adjusting one or more wash cycles based on said monitoring.

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