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

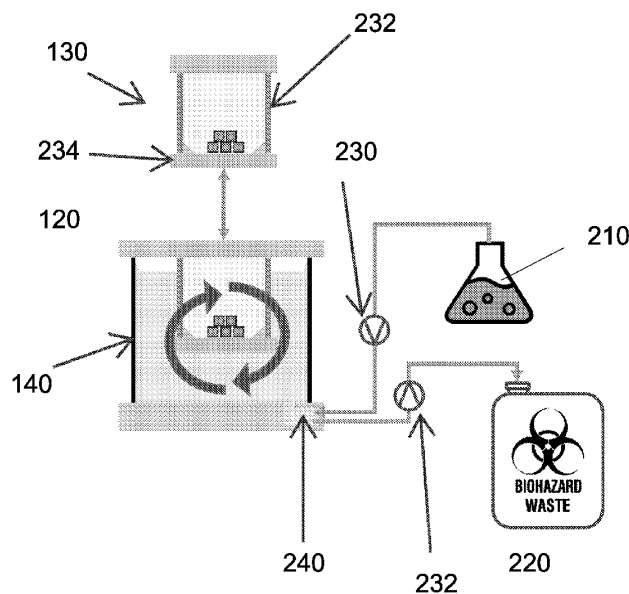


Figure 2

(57) Abstract: The invention relates to a method for 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, wherein the reactor comprising a tissue chamber in fluid communication with a reactor chamber. The method further comprising the steps of 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. The invention further relates to a decellularization reactor and a decellularization system for decellu larizing a tissue sample.

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