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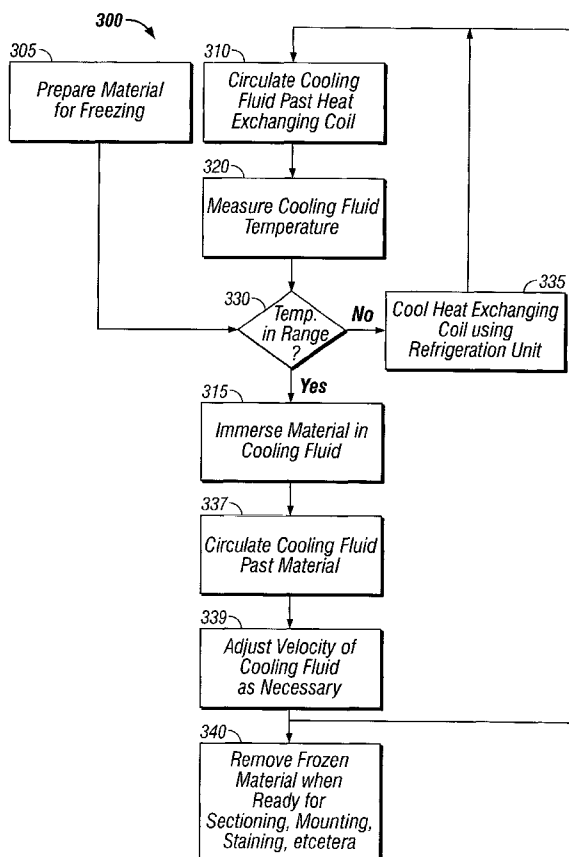
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(54) Title: METHOD AND SYSTEM FOR PREPARING TISSUE SAMPLES FOR HISTOLOGICAL AND PATHOLOGICAL EXAMINATION



(57) Abstract: Viable biological material is cryogenically preserved (cryopreservation) by immersing the material in a tank of cooling fluid, and circulating the cooling fluid past the material at a substantially constant predetermined velocity and temperature to freeze the material. The material may either be directly plunged into the cooling fluid without preparation, or chemically prepared prior to freezing. A method according to the present invention freezes the biologic material quickly enough to avoid the formation of ice crystals within cell structures (vitrification) and allows the samples to maintain anatomical structure and remain biochemically active after thaw. The temperature of the cooling fluid is preferably between -20 degrees centigrade and -30 degrees centigrade, which is warm enough to minimize the formation of stress fractures and other artefacts in cell membranes due to thermal changes.

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