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(54) Title: SYSTEMS AND METHODS FOR FREEZING AND STORING BIOPHARMACUETICAL MATERIAL

(57) Abstract: The present invention provides a system for freezing, thawing, and storing biopharmaceutical materials which includes a flexible container, a conduit, and a temperature control unit. The flexible container is adapted to receive a biopharmaceutical material therein for freezing, thawing, and storing. The container is formed of a first substantially flat sheet of flexible material joined together by a seam with a second substantially flat sheet of flexible material so as to lie substantially flat when empty. The container fully encloses an interior portion for receiving the biopharmaceutical material. Also, the container is configured to form a three dimensional shape when filled with the biopharmaceutical material, wherein the three dimensional shape has a first side and a second side opposite the first side. The conduit is connected to the flexible container with the outside of the container being in fluid communication with the interior portion via the conduit. The temperature control unit includes a first surface and a second surface facing the first surface and the temperature control unit is configured to receive the flexible container therein, when the container is filled with the biopharmaceutical material. The container conforms to the shape of the interior of the temperature control unit and the first side and the second side of the container contact the first surface and the second surface of the temperature control unit. The first surface and/or the second surface of temperature control unit include heat transfer surface(s).