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Davis et al.

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[54] **PROCESS FOR PREPARING ARTIFICIAL RED CELLS**

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[52] **U.S. Cl.** **252/316**; 424/36; 424/177

[58] **Field of Search** 252/316; 424/36, 177

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[57] **ABSTRACT**

A process for preparing artificial red cells comprising microdroplets of aqueous, stroma-free hemoglobin solution encapsulated in membranes of polymerized hemoglobin, said process comprising forming microdroplets of hemoglobin solution in a continuous oil phase, cross-linking the hemoglobin at the surface of the microdroplets with a suitable cross-linking agent to form the artificial red cells and recovering the cells. In one embodiment, a liquid membrane encapsulation technique employing a water-soluble cross-linking agent is used to form the cells. In another embodiment an oil-soluble cross-linking agent is present in the oil phase containing the hemoglobin microdroplets.

9 Claims, No Drawings