

Comparative Study by the Japanese Red Cross Society:

	8%DMSO+0.8% DEXTRAN (N=11)	HSC-BANKER 5%DMSO (N=11)
Total Nucleated Cell recovery rate	101.0±5.4	101.9±6.9
CD34 positive cell recovery rate	80.0±8.8	95.0±14.8
	P=0.008	
Total-colony forming unit recovery rate	85.8±12.4	95.7±16.8
colony forming unit-granulocyte macrophage recovery rate	92.7±17.9	92.3±21.5
Viable cells recovery rate (by fluorescence microscope) AO/EB	88.6±7.9	86.8±2.9
Viable cells recovery rate (Flow Cytometry) CD45	71.4±9.8	74.0±6.1
Viable cells recovery rate (Flow Cytometry) CD34	99.1±0.8	99.4±0.7

A comparative study on the cryopreservation of hematopoietic stem cells was performed by the Cord Blood Bank of the Japanese Red Cross Society. HSC-BANKER® (5% DMSO-1.5% glucose) was tested alongside another cryoprotective agent, 8D0.8D (8% DMSO-0.8% dextran) to cryopreserve umbilical cord blood. Cryoprotection with HSC-BANKER® produced significantly higher recovery and viability rates of CD34+ cells compared to that with 8D0.8D. In addition, cryoprotection with HSC-BANKER® showed significantly higher recovery rates of nucleated cells and CD34+ cells than that with 8D1.5G. The results suggest that the new cryoprotectant HSC-BANKER® may effectively replace 8D0.8D for cryoprotection of cord blood.

Adapted from Ito, M. et al (2018) A new cryoprotectant containing dimethyl sulfoxide and glucose for cord blood. Japanese Journal of Transfusion and Cell Therapy. 64 (3):496-501.

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