

Comparing SurForce® to CoreCyte®

Total Cell Count & Viability Testing

Cells were labeled with Acridine Orange / Propidium Iodide fluorescent stain (Logos Biosystems). The number of total cells and cell viability were measured using LunaStem™ Automated Fluorescence Cell Counter (Logos Biosystems) according to the manufacturer's instructions..

SurForce®

2,286,200 viable (70.8% ± 2.7%)



CoreCyte®

370,000 viable cells (25.0% ± 19%)

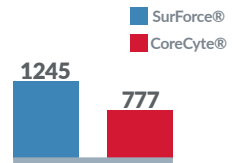


Hyaluronic Acid Testing

HA is viscoelastic and provides joint lubrication. In addition, HA creates an optimal 3D environment for cells and stimulates migration of synovial cells, chondrocytes and mesenchymal stem cells to the site of tissue defect [2].

Hyaluronic Acid Amount

Measured in ng/mL

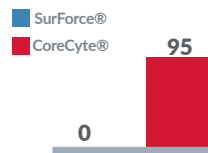


Blood Contamination Testing

Free hemoglobin was undetectable in all tested samples of SurForce®, while CoreCyte® contained 95 µg/ml of extracellular hemoglobin indicating blood contamination. Free hemoglobin is an indicator of hemolysis (red blood cell lysis) and can cause system toxicity [1].

Free Hemoglobin Amount

Measured in µg/mL



Visual Inspection

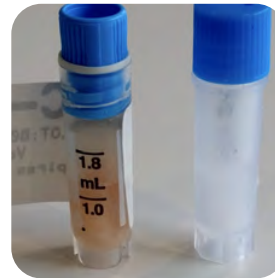
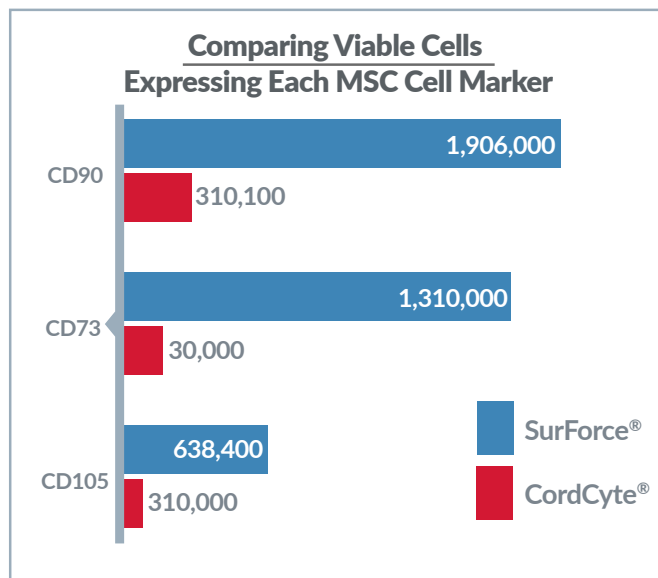


Figure 1. Initial visual inspection showed the differences in product color. SurForce® (tube on the right) has opaque white color, while CoreCyte® (tube on the left) has distinctive reddish/brownish tint that may indicate the presence of red blood cells.

Expression of Hematopoietic & Mesenchymal Stem Cell Markers

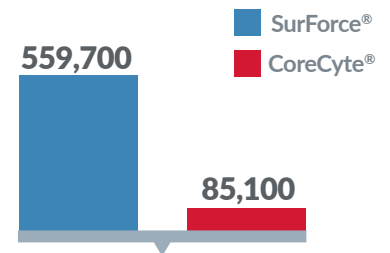
Determining the presence of hematopoietic markers and mesenchymal stem cell markers in SurForce® compared to CoreCyte®

Number of Viable Cells Expressing MSC Markers



Identifying MSCs

Viable Cells Per CC Concurrently Expressing All 3 MSC Markers*



* Estimation based on total viable cells per cc that expressed the 3 mesenchymal stem cell markers as defined by the International Society for Cellular Therapy.

To learn more visit www.surgenex.com

References

1. Gladwin, et al. Hemolysis and cell-free hemoglobin drive an intrinsic mechanism for human disease. J Clin Invest. 2012 Apr 2; 122(4): 1205-1208.
2. Maniwa S, et al. Effects of hyaluronic acid and basic fibroblast growth factor on motility of chondrocytes and synovial cells in culture. Acta Orthop Scand. 2001 Jun; 72(3):299-303.
3. Dominici, et al. Minimal criteria for defining multipotent mesenchymal stromal cells. The International Society for Cellular Therapy position statement Cytotherapy, 2006; 8(4):315-317.