

Comparison of preservation efficiency of mouse fibroblast cell lines

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The preservation efficiency was compared using Bambanker® (CS-02-001) and self-prepared preservative solution (FBS containing 10% DMSO), which is regularly used at many laboratories, for freeze preservation of mouse fibroblast cell lines (MEF) cultured and maintained in our laboratory.

- Cells used:
Mouse fibroblast cell lines (MEF obtained from American Type Culture Collection)
- Number of cells stored:
 4×10^6 cells/vial. Each cell was suspended in 1 ml of preservative solution.
- Storage temperature:
-80°C. Cells were directly placed in a storage box and cooled without using BICELL, etc.
- Storage period: 45 days
- Thawing method: Cells were thawed according to the conventional method.

- Method of measuring preservation efficiency:
After thawing, 5×10^4 cells were inoculated into a 24-well culture plate with 1 ml DMEM medium, and the cell density per culturing area was measured by successive time-lapse imaging.

- Conclusion:
Better cell viability was obtained using Bambanker® than self-prepared preservative solution.

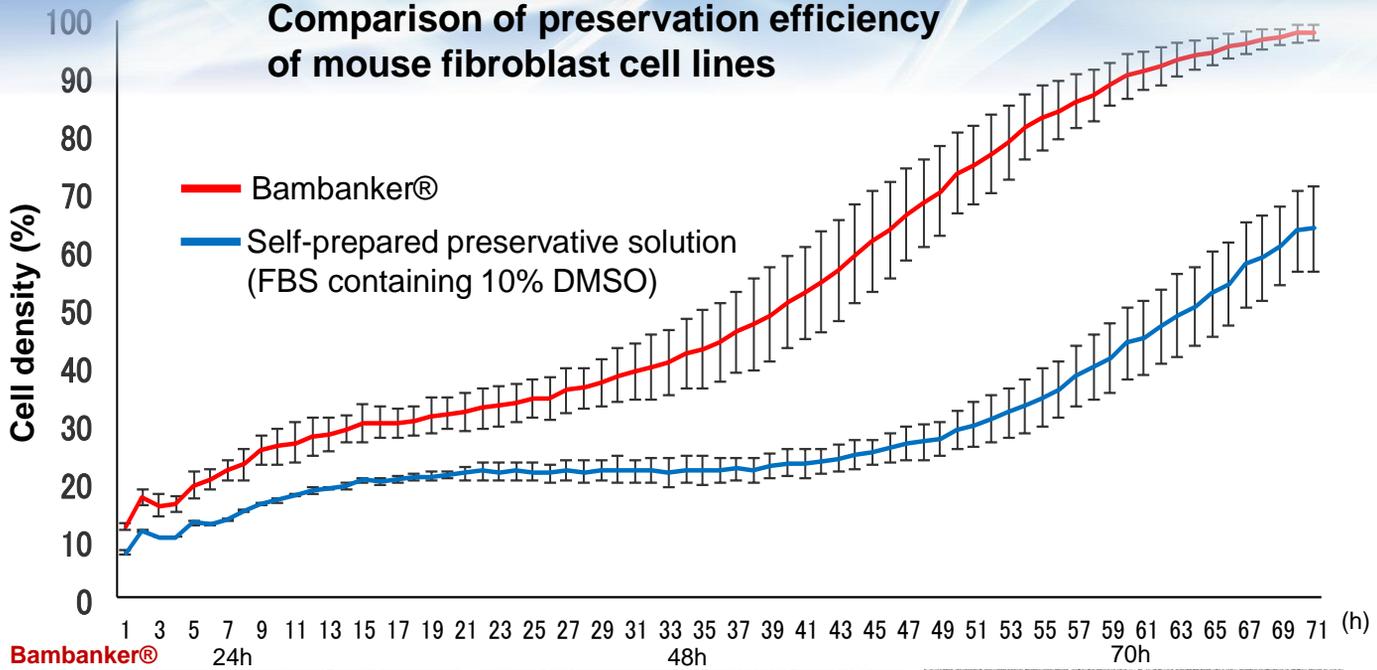
Comments

Good storage efficiency was obtained by using Bambanker® even in delicate cells such as mouse fibroblast cell lines (MEF). In addition, good results are obtained with leukemia cell lines and various other cell lines.

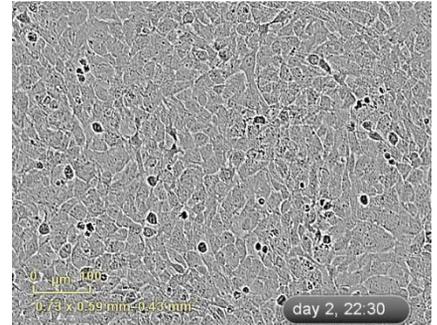
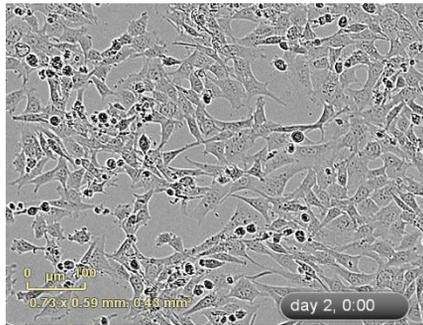
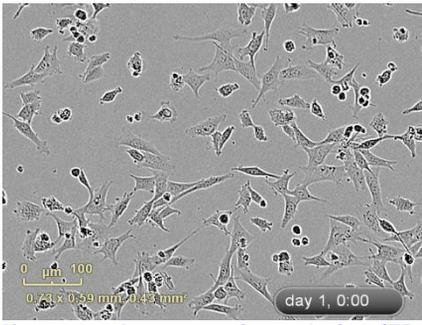
Bambanker® has been used by many researchers both in Japan and abroad since its launch in 1999. Unlike conventional methods and other companies' products, not using serum eliminates differences between product lots and enables stable, efficient storage.

I feel safe using the product since it is manufactured in facilities complying with the a manufacturing standard equivalent to GMP guidelines. (Good Manufacturing Practice for Drugs and Quasi-drugs)and sterility tests are carried out using the colorimetric method (endotoxin), PCR method (mycoplasma), and agar medium method (fungi, bacteria). In addition, its inexpensive price is attractive, and it is likely to become the first choice for cell preservation solution (first-line reagent) in the near future. I strongly recommend trying Bambanker® for cells that suffer poor viability with existing preservative solution.

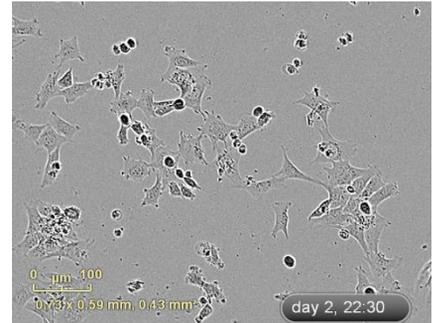
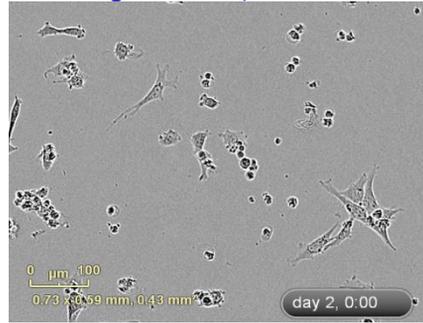
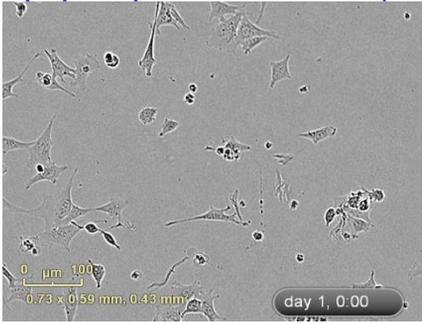
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● Bambanker®



● Self-prepared preservative solution (FBS containing 10% DMSO)



A number of dead cells as well as stagnation of growth potential were observed in self-prepared preservative solution; however, Bambanker® showed vigorous cell proliferation ability immediately after thawing, and survival of almost all cells was confirmed.

Cell lines actually used by the evaluator:

- HL-60
- THP-1
- H226
- MDA-MB-468
- HT-29
- KMS-12-PE
- K-562
- Panc-1
- A549
- BT474
- Colo 201
- HEK 293T
- U937
- BxPC-3
- MDA-MB-231
- CAL 27
- RPMI 8226
- HeLa
- Jurkat
- Capan-1
- MCF-7
- Detroit 562
- IM-9
- HepG2

Note: High survival rate and proliferation have also been confirmed in many other cell lines.

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