

Under Development

Specification and appearance are subject to change without notice

Application  
note  
Vol.5

# CELLNETTA MZM1 SERIES

## Purification of culture media from cell suspensions

### Background

The purification of culture media from cell suspensions is commonly performed in cell-based experiments and in the manufacturing process of biopharmaceuticals. Here, we will introduce the method to purify the culture media from HL-60 cell suspensions.

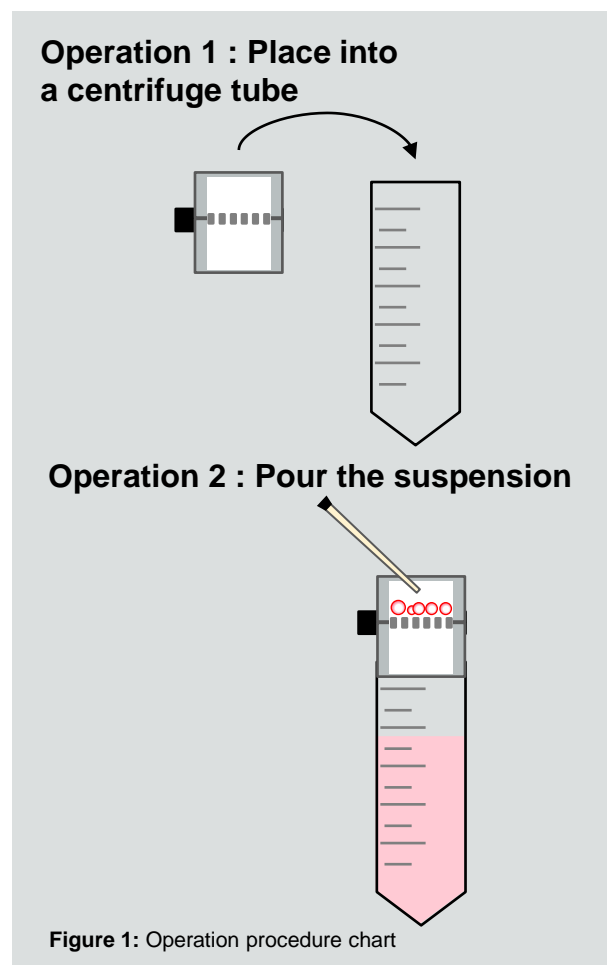
### Implementation method

- (1) Prepare a suspension of HL-60 cells.\*1
- (2) Apply hydrophilic treatment to the CELLNETTA. \*2
- (3) Place a 5- $\mu$ m mesh CELLNETTA into a centrifuge tube (Figure 1, Operation 1).
- (4) Pour the suspension through CELLNETTA (Figure 1, Operation 2).

\*1 Conditions for preparation of suspension

Cell	Type	HL-60
	Size	14 $\mu$ m
	Cell count	$9.70 \times 10^5$ cells
	Cell concentration	$1.94 \times 10^5$ cells/mL
Solvent	Type	RPMI medium
	Volume	5 mL

\*2 For more information, please refer to the “Hydrophilic Treatment Manual” in the CELLNETTA User Guide.

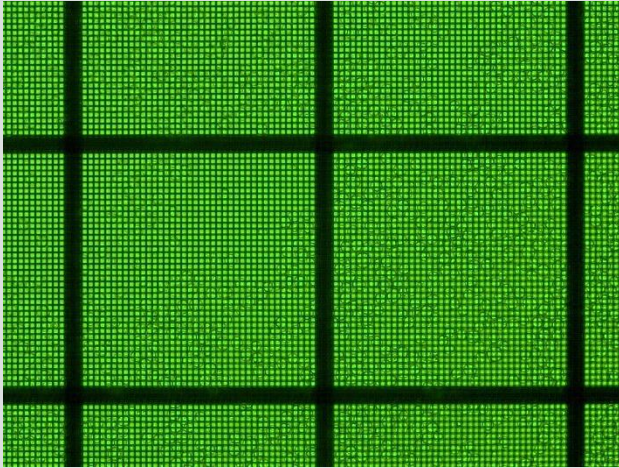


## Results

An image of the suspension after processing using CELLNETTA is shown in Figure 2. After processing using CELLNETTA, the cells in the cell suspension are trapped on the mesh (Figure 2-A, B). Observations of the cell suspension that passed through CELLNETTA indicate that all HL-60 cells are trapped on the mesh, and that the culture media is purified from the cell suspension (Table 1).

**These results indicate that it is possible to purify the culture media from a cell suspension by using CELLNETTA.**

This simple cell removal method using CELLNETTA is expected to be useful in the purification process of culture media after cell culture, and in the medium exchange procedure during cell culture.



**Figure 2:** (A) Cells trapped on the CELLNETTA mesh  
Mesh size: 5 μm



(B) Suspension after processing using CELLNETTA

		Input solution	Suspension after processing using CELLNETTA
Cell	Cell count	$9.70 \times 10^5$ cells	None observed
	Cell concentration	$1.94 \times 10^5$ cells/mL	None observed
Solvent	Volume	5 mL	4.5 mL

**Table 1:** Measurements and observation results of the suspension before and after processing using CELLNETTA

## Product used in this application note

Pore size	Gamma Irradiation	Product number (P/N)
5 μm	Gamma Irradiated	MZM1B005B50G
	Non-Gamma Irradiated	MZM1B005B50N

## Notes

- This product is not a medical device.
- This product is a sample for evaluation purpose.
- Please do not ship out your completed product with the sample.
- We shall not be liable for any claims on the sample in case it is shipped out to the market.

