

## VitroGel® Cell Recovery Solution

Catalog Numbers:  
MS03-100

**Usage restrictions:** For Research Use Only. Not For Use In Diagnostic Procedures.

### PRODUCT DESCRIPTION

VitroGel® Cell Recovery Solution is a ready-to-use, enzyme-free solution to harvest 2D or 3D cultured cells from VitroGel hydrogel fast and safely. The solution can harvest cells from VitroGel hydrogels in 15 minutes.

VitroGel Cell Recovery Solution is room temperature stable, has a neutral pH, and works at 37 °C operating temperature. The solution can maintain high cell viability during the recovery process. Recovered cells can be sub-culture in both 2D and 3D culture.

The VitroGel Cell Recovery Solution can be used before or after the fixation and stained preparation of hydrogel specimens to ensure high-quality downstream data analysis.

Specifications	
Use	Recover cells from VitroGel hydrogel
Downstream	Recovered cells can be sub-culture in both 2D and 3D culture.
Formulation	Enzyme-free
pH	Neutral
Physical State	Liquid
Color	Clear
Storage	Room temperature (+15-30°C)
Stability	60 months from date of manufacturing

### GUIDELINE FOR USE

[Download the full handbook for detail usage at www.thewellbio.com/protocols](http://www.thewellbio.com/protocols)

(Using 24 well-plate, 300 µL gel/well as an example)

**The selection of Method 1 and Method 2 is depended on the conditions of cells and hydrogel: if the sizes of cells in hydrogel are bigger than 500 µm in diameter, Method 1 is recommended; if using VitroGel at a high gel concentration (1-0 or 1-1 dilution) or the sizes of cells in hydrogel are smaller than 500 µm in diameter, Method 2 is recommended.**

#### Method 1 (Using a serological pipette to break the hydrogel into small pieces)

1. Warm the VitroGel Cell Recovery Solution to 37 °C.
2. Take the cells out of the incubator and remove the medium covering the top of the hydrogel. Wash the hydrogel two times with DPBS.
3. Add 1 mL warm VitroGel Cell Recovery Solution to the well and use a 10 mL serological pipette to gently break the hydrogel into small pieces by gently pipetting up and down. This step can accelerate the hydrogel dissolving process.
4. Add 5 mL warm VitroGel Cell Recovery Solution to a 15 mL conical tube and transfer the hydrogel to the tube.  
Optional: Rinse the well with 1 mL warm VitroGel Cell Recovery Solution and combine the solution to the centrifuge tube.
5. Rock the conical tube for 20 times and then put the tube back to the water bath for 2-3 minutes. Repeat this cycle for 3-5 times.  
(Optimize the rocking time and repeats according to the gel strength and cell type).
6. Centrifuge at 100 x g for 3-5 minutes at room temperature to collect the cell pellet.  
(Optimize the speed and time of centrifuge according to different cell types).  
OPTIONAL: If there is still some hydrogel on top of the cell pellet, resuspend the cell with 5 mL warm cell recovery solution and repeat steps 5 and 6 one more time.

## Method 2 (Using a lab spatula to remove the hydrogel)

1. Warm the VitroGel Cell Recovery Solution to 37 °C.
2. Take the cells out of the incubator and remove the medium covering the top of the hydrogel. Wash the hydrogel two times with DPBS.
3. Add 1 mL warm VitroGel Cell Recovery Solution to the well and use a spatula to detach the hydrogel from well plate.
4. Add 5 mL warm VitroGel Cell Recovery Solution to a 15 mL conical tube and transfer the hydrogel to the tube.  
Optional: Rinse the well with 1 mL warm VitroGel Cell Recovery Solution and combine the solution to the centrifuge tube.
5. Rock the conical tube for 20 times and then put the tube back to the water bath for 2-3 minutes. Repeat this cycle for 3-5 times.  
(Optimize the rocking time and repeats according to the gel strength and cell type).
6. Centrifuge at 100 x g for 3-5 minutes at room temperature to collect the cell pellet.  
(Optimize the speed and time of centrifuge according to different cell types).  
OPTIONAL: If there is still some hydrogel on top of the cell pellet, resuspend the cell with 5 mL warm cell recovery solution and repeat steps 5 and 6 one more time.

### IMPORTANT NOTES:

- **KEEP THE SOLUTION WARM:** It is important to keep the cell recovery solution and the mixture warm at 37 °C during the whole process. The warm temperature is essential to accelerate molecular exchanges to release the ionic molecules from the solid hydrogel, which can transform into a soft hydrogel.
- **APPLY MECHANICAL FORCE:** The mechanical force such as rocking the tube or using a serological pipette to mix the hydrogel with the cell recovery solution helps to transform the hydrogel into the liquid state.
- **DILUTION:** Adding the cell recovery solution at the volume of 10X or higher than the hydrogel maintains the dissolved hydrogel in a liquid state.
- **CENTRIFUGE AT ROOM TEMPERATURE**

## RELATED PRODUCTS

- All versions of VitroGel - [www.thewellbio.com/hydrogels](http://www.thewellbio.com/hydrogels)