



*Home for Cells and Beyond*

## PGmatrix™ QUICK START\* for 3D cell culture

**For Example: 3D Cell Culture Procedure for a 24-well plate at the ratio of 1:1 (PGmatrix:Cell suspension) that will yield 0.5% (w/v) PGmatrix hydrogel concentration.**

(Preparation: Bring the PGmatrix kit and cell solution to room temperature or 37 °C)

- **Step 1** Prepare cell suspension (960 µL), add serum or other growth factors as needed to your cell suspension (pipet well without introducing air bubbles\*\*)
- **Step 2** Add PGworks (40µl) to the cell suspension from Step 1 (pipet well without introducing air bubbles) (Graphic illustration Step 2)
- **Step 3** Mix PGmatrix solution (1000µL) with the cell suspension from Step 2 at 1:1 ratio (pipet well without introducing air bubbles) (Graphic illustration Step 3)
- **Step 4** Transfer the mixture of step 3 to a 24-well plate (500 µL/well, 4 wells total)
- **Step 5** Place the 24-well plate in a 37 °C incubator for 30 min or up to 60 min for gelation
- **Step 6** After gelation, add 1000 µL of the cell medium gently on top of the gel to prevent the matrix from drying and to feed the cells, (**HINT:** add the medium along the well wall to avoid disturbing the gel, change top medium every other day to provide fresh nutrition and prevent drying for long term culture)
- **Step 7** Place the 24-well plate back to the incubator for cell growth

\*The mixing ratio given above is 1:1 at 0.5% PGmatrix concentration. **Most** cells grow well in gel concentration of 0.1-0.5%, in those cases, ratio of PGmatrix vs cell suspension can be 1:2, 1:3, 1:4, 1:5 or 1:9. PGworks is always 2% of the total volume of PGmatrix + cell suspension together. For more detailed information, such as other ratios, cell feeding, cell isolation or immuno-staining, please read the complete User Guides.

\*\*NOTE: To avoid introducing air bubbles, keep pipetting within the solution or mixture)

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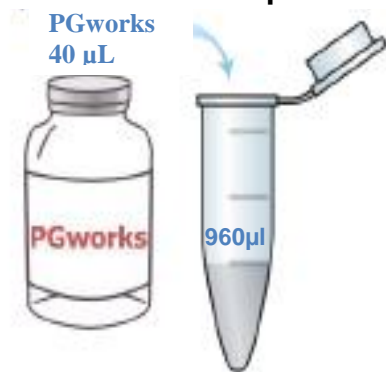
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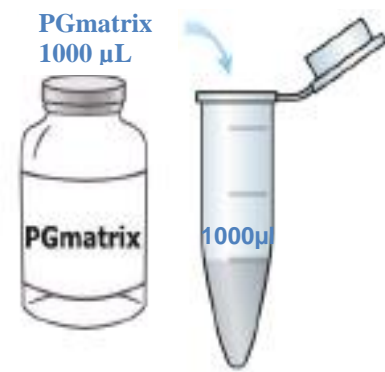
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## Cell Encapsulation illustration of the Example given in the QUICK START (Pipet without introducing air bubble)

### STEP 2: Add PGworks to cell suspension



### STEP 3: Add PGmatrix solution to mixture



**0.5% gel concentration for a 2000 µl volume:** 960 µL Cell suspension +40 µL PGworks + 1000 µL PGmatrix solution