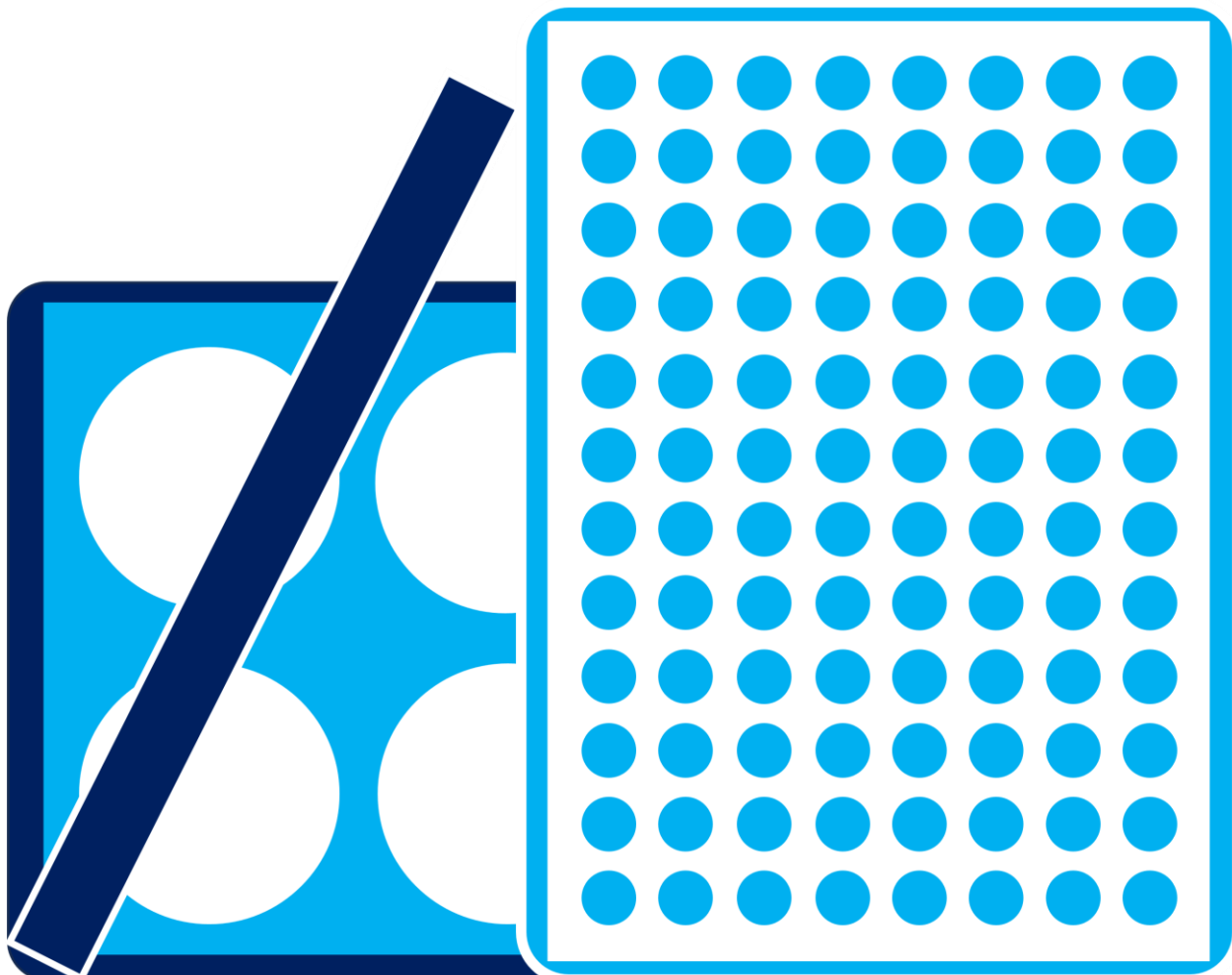


# Frequently Asked Questions (FAQs)

## PeptiGels<sup>®</sup>

### Synthetic Peptide Hydrogels



# PeptiGels®

## Synthetic Peptide Hydrogels

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### FAQs – Material Properties and Handling

- **Are PeptiGels suitable for in vivo studies?**

PeptiGels® are animal-free, fully defined synthetic hydrogels. They are biocompatible, injectable and sprayable making them suitable for both in vitro and in vivo applications.

- **How do you get rid of bubbles in PeptiGels?**

If bubbles are present in your PeptiGels®, they can be removed by gentle centrifugation at 3000 rpm for 1 minute.

- **What is the mechanical strength and charges of PeptiGels?**

PeptiGels® have a range of mechanical stiffness and charges to allow you find the most suitable environment for your cells' needs. We also offer a bespoke design service to create PeptiGels specific to your research needs. We can provide you with specific rheological characterisation data for your sample for a small fee.

- **Can you dilute PeptiGels?**

You can dilute PeptiGels® with HPLC water to help you achieve your desired mechanical strength/s. PeptiGels® are supplied with a range of mechanical strengths.

- **Do you need to work on ice when using PeptiGels?**

You do not need to work on ice while working with PeptiGels® as they are stable at room temperature.

- **How does the gelation process of PeptiGels work?**

PeptiGels® have been designed to gel at room temperature by the addition of cell culture media (contains salts). The ionic salts present in the media screen the charges present on the peptide fibres which causes them to aggregate and induce gelation.

- **What is the shelf-life of PeptiGels?**

PeptiGels® have a shelf-life of 12 months once open. Please note, we also advise that PeptiGels® are stored at 4°C.

- **How easily can you pipette PeptiGels?**

PeptiGels® are low viscosity gels and can be pipetted easily using positive displacement pipettes. Get in touch if you need these as we can supply at cost price.

## FAQs - Cell Culture

- **Can cells migrate in PeptiGels?**

PeptiGels® are nanofibrous porous hydrogels. Cells are able to migrate within the hydrogel making them also suitable for migration-based assays.

- **What is the maximum duration of time for cells cultured in PeptiGels?**

The maximum duration of cells in PeptiGels® culture is dependent on the cell type and experimental set up. Cells have been cultured in PeptiGels® up to 30 days. We have specific protocols to guide you towards cell culture and long stability of the gels. Please see our protocols documents for further details.

- **What cell density do you recommend for PeptiGels?**

PeptiGels® are suitable for a broad range of cell densities from 1–40 million cells/mL in various studies. The cell density needed is usually dependent on your experimental set up and intended outcomes. As a guide for 2D cultures, a cell seeding density comparable to that used on standard tissue culture is recommended. For 3D cultures, the most commonly used cell density is 1-4 million cells/mL.

- **Do you recommend culturing cells on top of PeptiGels or encapsulated within the hydrogel?**

Either one is possible depending on your experimental set up and intended outcomes. We have specific protocols to guide you in setting up cultures to add cells on top of PeptiGels (2-dimensional cell culture) or cells encapsulated within PeptiGels® (3-dimensional cell culture).

- **Are PeptiGels suitable for bioprinting?**

We have developed a range of bioinks suitable for bioprinting. Find out more on our PeptiInk® product page.

- **What applications are suitable for the use of PeptiGels?**

PeptiGels® have been shown to support the growth of cells in 2-dimensions, 3-dimensions, in co-culture systems and into spheroids and organoids. These have been used for tissue and disease modelling, regenerative medicine applications, vehicles for the targeted and controlled delivery of therapeutics and also incorporation within medical devices. A full range of cells have been studied ranging from cardiac to skin to bone and also a full range of animal and human derived stem cells for proliferation and differentiation

- **What cell types are suitable for PeptiGels?**

PeptiGels® have been shown to support and promote the growth of an ever expanding list of cells. Examples include primary cells such as fibroblasts, neuronal cells and endothelial cells, transformed cell lines such as MCF-7 cells and stem cells such as induced pluripotent stem cells and mesenchymal stem cells.

## FAQs - Analytical Studies

- **Are PeptiGels compatible with end-point molecular analysis of proteins and nucleic acids?**

PeptiGels® are compatible with most molecular techniques such as quantitative polymerase chain reaction (q-PCR), western immunoblotting and proteomic analysis. Please see our detailed protocols on sample preparation for these analyses.

- **Are PeptiGels compatible with staining procedures?**

Cells cultured in PeptiGels® can be stained with fluorescent dyes and immunological reagents. Please see detailed protocols on sample preparation for staining procedures.

- **Are PeptiGels compatible with microscopy?**

PeptiGels® are transparent gels, hence compatible with a diverse range of microscopic techniques including optical, fluorescent and confocal microscopes.

Cell Guidance Systems' reagents and services enable control, manipulation and monitoring of the cell, both *in vitro* and *in vivo*

**Growth Factors**

- Recombinant
- Sustained Release

**Exosomes**

- Purification
- Detection
- NTA Service

**Matrix Proteins**

**Small Molecules**

**Cell Counting Reagent**

**Cytogenetics Analysis**



General [info@cellgs.com](mailto:info@cellgs.com)  
Technical Enquiries [tech@cellgs.com](mailto:tech@cellgs.com)  
Orders [order@cellgs.com](mailto:order@cellgs.com)

[www.cellgs.com](http://www.cellgs.com)

**EUROPE**

**Cell Guidance Systems Ltd**  
Maia Building  
Babraham Bioscience Campus  
Cambridge  
CB22 3AT  
United Kingdom  
T +44 (0) 1223 967316  
F +44 (0) 1223 750186

**USA**

**Cell Guidance Systems LLC**  
Helix Center  
1100 Corporate Square Drive  
St. Louis  
MO 63132  
USA  
T 760 450 4304  
F 314 485 5424