



Col4Cell[®] 10 mL

Catalog Number: IR-106

Overview

The Col4Cell kit is specifically developed and optimized for bioprinting of 3D structures. The Col4Cell kit includes optimally formulated gelatin-based hydrogel complex contained in syringes for easy dispensing. The kit also includes Gel-linker, which reinforces mechanical stability. A transparent hydrogel forms when contents are properly mixed and exposed to UV light.

Items	Volume	Number
Col4Cell	4 mL	2 ea
Gel-linker	2 mL	1 ea

The recommended preparation provided in the user instruction below yields mechanically stable 3D structures that can be maintained for days in the culture environment. However, preparation can be modified by users to suit their needs. Although Col4Cell was developed as a bioink for 3D printing, Col4Cell kit can be used for many other studies that require 3D culture and structure formation, including cell biology, biochemistry, pharmacology, physiology, biomaterials sciences, bioengineering, and drug testing and development.

Storage & Handling

Col4Cell complex can be stored at ambient room temperature. However, 2-10°C is recommended for a long-term storage. Do not freeze. Gel-linker can be stored at ambient room temperature. Gel-linker is photosensitive, and light exposure should be avoided.

Sterility

All Handling should be done in sterile condition to avoid contamination. Col4Cell is sterilized by membrane filtration.

Instructions for Use

1. Warm the Col4Cell[®] syringe at 37°C for approximately 30 minutes or until it becomes liquefied. If crystal is present in the Gel-linker, warm and vortex the vial until fully dissolved.
2. Dispense the volume to be used in a sterile container, i.e., test tube. To form bioink, add Gel-linker to the Col4Cell[®] in a 1:4 volume ratio (1 mL Gel-linker to 4 mL Col4Cell) and mix well.
3. If cells need to be added, cell pellet should be resuspended in the bioink. Mix well using a pipette to ensure even distribution of cells. Avoid bubble formation.

4. Transfer the bioink to a suitable syringe or dispensing container for use. **Please maintain at 4°C until the bioink solidifies prior to use.**
5. When the bioink hardens, start dispensing the bioink for experiments. Please maintain the temperature at room temperature or cooler.
6. Expose the dispensed bioink to UV light (wavelength 365 nm) until the bioink reaches the desired stiffness. Gelation usually occurs within 1-6 min (distance and exposure time can be adjusted to achieve target gelation).
※ **Use of phenol red-free medium is strongly recommended.**
7. Any remaining bioink should be sealed and stored at 2-10°C for future use.

Note

1. Gelation time and gel stiffness can be adjusted by varying the concentration of Col4Cell[®] complex or Gel-linker. Please contact InnoRegen Technical Support for additional information.
2. Each kit component has been manufactured under aseptic conditions and tested for bacteria and fungus. Please employ aseptic practices to maintain the sterility of Col4Cell throughout the preparation and 3D printing operation.

Caution

This product is for research use only. Not approved for use in diagnostic or therapeutic procedures.

For support visit www.innoregen.com or E-mail info@innoregen.com