Directions for Use
PureCol® EZ Gel

PURIFIED BOVINE TYPE I ATELO-COLLAGEN SOLUTION IN
DMEM/F-12 MEDIUM, 5 MG/ML (0.5%)
Catalog Number **5074**

Product Description

Advanced BioMatrix offers PureCol® EZ Gel collagen solution which is highly purified atelo-collagen at approximately 5 mg/mL, pH neutral, and is sterile filtered. PureCol® EZ Gel is about 97% Type I collagen with the remainder being comprised of Type III collagen.

PureCol® EZ Gel is a ready-to-use collagen solution that forms a firm gel by simply warming to 37°C in an incubator. The product consists of purified bovine collagen at a concentration of approximately 5 mg/ml (0.5%), DMEM/F-12 medium and a mixture of L-glutamine and dipeptide (L-alanine-L-glutamine) to provide a long-lasting L-glutamine source for cell culture

PureCol® EZ Gel is designed to improve gel consistency by providing a pre-formulated solution of media and collagen that have been adjusted to a neutral pH. This product avoids the inconsistencies in the preparation of the gel that can arise through variables of reagent addition, pH adjustment and handling conditions.

3D gels allow for the study of the effects of the mechanical properties of the ECM, such as density and rigidity, on cell development, migration, and morphology. Unlike 2D systems, 3D environments allow cell extensions to simultaneously interact with integrins on all cell surfaces, resulting in the activation of specific signaling pathways. Gel stiffness or rigidity also affects cell migration differently in 3D versus 2D environments. Furthermore, integrin-independent mechanical interactions resulting from the entanglement of matrix fibrils with cell extensions are possible in 3D systems, but not in 2D systems where the cells are attached to a flat surface.

Precautions and Disclaimer

This product is for R&D use only and is not intended for human or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

3-D Gel Preparation Procedure

1. Remove PureCol® EZ Gel from 2–10°C storage. To prevent gelation, maintain temperature of product at 2–10°C.

2. Introduce PureCol® EZ Gel into cell culture system. Cells can be added to the PureCol® EZ Gel solution.

3. To form gel, warm to 37°C. The beginning of gelation will occur within 40 minutes but allow approximately 90 to minutes for firm gel formation.

Characteristics and Testing

Parameter, Testing, and Method	Specification
Form	Solution
Package Size	35 mL
Storage Temperature	2-10 °C
Expiration Date	Listed on product label and Certificate of Analysis
Concentration (Biuret Protein Determination)	˜5 mg/ml (0.5%)
pH	Approx. pH 6.9 to 7.4
Osmolality	300 - 360 mOsmo/Kg H_2O
Gel Time (Tube Test)	≤ 40 minutes
Kinetic Gel Time	≤ 40 minutes
Kinetic Gel Stiffness	Characteristic
Purity of Collagen (SDS PAGE Electrophoresis - Silver Staining)	≥99%
Electrophoretic Pattern (SDS PAGE Electrophoresis - Coomassie Staining)	≥ 85% collagen contained with α, β and γ, < 15% collagen contained within bands traveling faster than alpha
Sterility	No growth
Endotoxin (LAL)	≤1.0 EU/mL

Cell Attachment Assay	Pass
Collagen Source	Bovine Hide - Pepsin Extracted
Medium Supplement	DMEM/F-12 Medium
L-glutamine Source	Mixture of L-glutamine and dipeptide (L-alanine-L-glutamine)