

BIODEP

The Revolution in Device & Labware Biocoatings

TheraDep's BioDep™ is a revolution in labware coating that is easy and low cost to implement, and provides uniform, pure coatings. The process uses an aerosol of dissolved biomolecules injected into a cold atmospheric plasma resulting a thin film coating on almost any surface or geometry in a single activation/deposition step with no incubation. BioDep is compatible with a broad range of biomolecules and can be fully automated. .



BROAD BIOMOLECULE, MICROPLATE AND LABWARE CAPABILITY

Broad Range of Biomolecules

- Proteins: collagen, laminin, fibronectin, polylysines
- Peptides
- Amino acids
- Polysaccharides: agar, heparin, hyaluronic acid
- Selective biologics, enzymes, antigens, biotins, antibiotics
- Small molecule drugs
- Complex mixtures

Wide Selection of Surfaces

- Polystyrene (PS)
- Polypropylene (PP)
- Polycarbonate (PC)
- PVC, Polydimethylsiloxane (PDMS)
- Polyethylene terephthalate (PET)
- Polyether ether ketone (PEEK)
- COP, Cyclic olefin copolymer (COC)
- Acrylic
- Ceramic
- Glass

Diverse Array of Applications

- Microplates
- Titration microwell plates
- Petri dishes
- Fabrics, filters and sheets
- Liquid handling tips and probes
- Immunosensor/biosensors
- Lateral flow strips
- Microfluidics and microbeads
- Bio-cartridges
- Microscopy slides

SINGLE STEP, ANY BIOMOLECULE, LOW COST

Pure Biologics Deposited to Any Substrate

- No carriers, linkers, solvents or binders
- Thin, uniform, gas phase deposition
- Exceptional adhesion and shelf life

Replaces Complex Multi-Step Wet Chemistry

- No pre-activation, primer or incubation
- Ambient temp process
- Simple, no post processing, non-hazardous
- No waste of valuable biomaterial or compounds

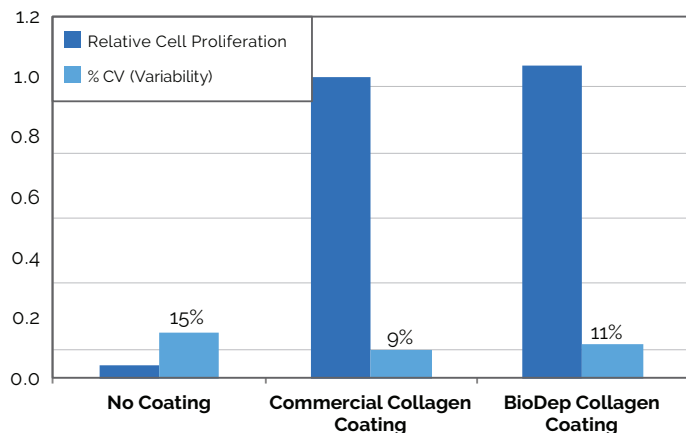
Improved Quality

- Robust, uniform coating even on high density 384 and 1536 well plates.
- Reduced operation and process variability

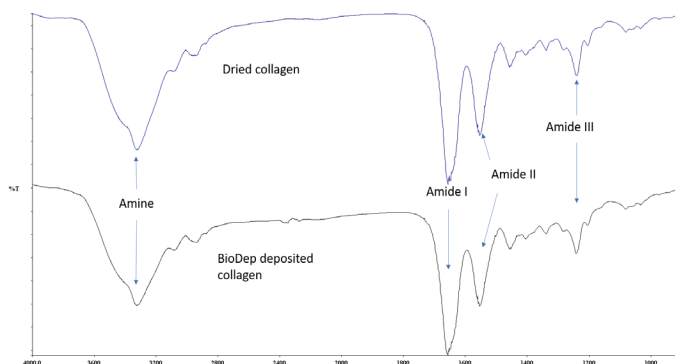
Significantly Lower Cost

- Automated for in-line process — high throughput, compact, aseptic
- Low cost for standard or high-density microplates
- Coating cycle time under two minutes per plate

OPTIMAL CELL CULTURING



Collagen Cell Attachment Performance: BioDep Collagen and other ECM's retain their chemical properties and demonstrate equivalent cell culturing compared to traditional multi-step wet process coatings.



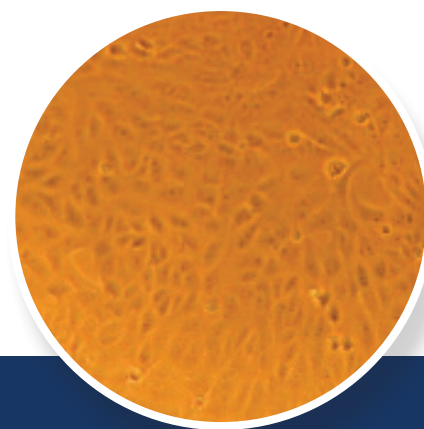
FTIR analysis demonstrating retention of BioDep Collagen chemical structure.

AUTOMATION INTEGRATION

BioDep coatings are provided through licensing to labware and pharmaceutical manufacturers. Our BioDep module can be integrated with standard microplate stackers and handling systems to generate a fully automated coating solution. The module offers reduced footprint, rapid throughput and improved process control

when compared to traditional wet chemical coatings. The system can treat both low and high-density microplates in minutes, allowing for considerable product diversity. These benefits can translate into significant cost savings on standard lab ware and exceptional cost reductions on high density microplates.

**VERO CELLS ATTACH AND PROLIFERATE ON
BIODEP COLLAGEN-COATED MICROPLATES**



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