



innovotech
a new direction in fighting infection

Biofilm Solutions

The National Institute of Health estimates that greater than 80% of clinical infections are caused by biofilms. This includes heart, bone, middle ear, wound and dental infections, as well as foreign body infections (infections associated with implanted medical devices such as artificial joints, stents, pacemakers, catheters, and dental implants). These problems extend to agriculture, causing seed and plant infections, and industry, where biofilms cause pipeline corrosion and "biofouling". Of note, most current antibiotics, disinfectants and biocides are not approved for biofilm use.

**Reproducible, Reliable,
and Cost Effective**

Biofilm Research Solutions

Innovotech's MBEC Assay[®] system promotes microorganism growth as biofilms on 96 identical pegs protruding down from a plastic lid. By placing the biofilm-coated pegs into the wells of a microtiter plate, an array of antimicrobial compounds with varying concentrations can easily be assessed. This allows for rapid testing of compounds including antibiotics, disinfectants, biocides, and biofilm formation inhibitors. Many different bacterial and fungal species have been grown using this assay, including *Escherichia coli*, *Pseudomonas aeruginosa*, *Staphylococcus spp.*, *Streptococcus spp.*, *Mycobacterium spp.*, *Candida spp.*, *Burkholderia spp.*, and many more. To date, the MBEC Assay[®] system has been featured in hundreds of peer-reviewed publications.

We Don't Just Sell It, We Use It!

At Innovotech, we have developed hundreds of custom protocols and testing procedures based on the MBEC Assay[®] system. Our technical team stands ready to serve and assist you with your research needs.

Innovotech Inc.
Suite L131, 2011 - 94 Street
Edmonton, AB Canada T6N 1H1
Ph: (780) 448-0585
Fax: (780) 424-0941
E-mail: info@innovotech.ca
Website: www.innovotech.ca

Minimal Equipment Requirements
Minimal Technical Requirements
Multiple Formats and Repeats
Internal Controls
Multiple Organism Capability

***"The MBEC Assay[®] System is the
Petri Dish of Biofilm Research"***



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Flexible Solutions for Your Research Needs

Innovotech's MBEC Assay[®] systems allow for rapid high-throughput screening and antimicrobial R&D for a variety of systems and applications. The MBEC Assay[®] system has been sold in North America as well as internationally to many pharmaceutical, biotech and academic labs.

A Rapid Biofilm Research Tool That Works For Your Business

Various Bases for MBEC Assay[®] Systems

The MBEC Assay[®] System is offered with two different types of base - the **96-well base** and the **trough base**. The 96-well base, which serves 98% of our customers' needs, has a separate well for each peg. This setup allows you to test different strains, or growth media using a single device. The trough base has open longitudinal rows where inoculated media flows from end to end on a rocker shaker, which only allows for one strain per plate. The trough base is mainly used for plant pathogen strains that require larger fluid volumes flowing against the pegs.

Various Coatings of MBEC Assay[®] Lids

The MBEC Assay[®] lid consists of a plastic lid with 96 pegs. Innovotech's team has developed innovative ways to coat the MBEC Assay[®] pegs with different materials to simulate various surface conditions on which microorganisms attach and grow. For example, in agricultural applications, many plant pathogens have been grown on cellulose-coated MBEC Assay[®] lids. For dental applications, hydroxyapatite-coated MBEC Assay[®] lids are recommended. Hydroxyapatite-coated MBEC Assay[®] lids are also recommended for strains that form weak biofilms, as the coated surface aids biofilm formation. Titanium dioxide has been reported as an antibacterial substance due to its photocatalytic effect. Titanium dioxide coated MBEC assay[®] plates provides a great platform to test titanium dioxide's effect on biofilm formation. Other custom coatings are available upon request.

www.innovotech.ca
info@innovotech.ca
1-888-670-5445

