VAN ANDEL INSTITUTE

Business Development / Technology Transfer

# Applications

- Quickly imprint the desired array onto any slide
- Compatible with most DNA-, RNA-, and proteinbased high-throughput assays

# Benefits

- Produces high quality partitions
- Partition designs are easily customizable
- Slides can be scanned without the need to remove the partitions
- Barriers are effective on any slide surface and for almost any solvent
- Partitions resist breakdown even after multiple washes

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#### Microscope Slide Partitioner

The Microscope Slide Partitioner provides a convenient solution for customizing partition arrays and slides designs for high-throughput assays.

#### Background

A heightened focus on personalized medicine, and genomic- and proteomic-based research has led to an increased need for high-throughput systems for use with technologies such as DNA and protein microarrays. These technologies can be used to assess many sample profiles for a range of diagnostic indicators, including gene expression, metabolite concentration, microRNA level, epigenetics, and sequence variation. In personalized medicine, small amounts of a patient's sample can be tested for individual-specific diagnostic or prognostic purposes. Laboratories capable of running several tests in parallel on the same slide will benefit in terms of time savings and waste reduction.

# Technology

The Microscope Slide Partitioner works by imprinting a hydrophobic barrier on an examination slide. Traditional options for creating slide partitions—such as using rubber gaskets or manufactured barriers like Teflon—have numerous disadvantages, including unstable gaskets, adhesives interfering with experiments, and inflexible and expensive manufactured barriers. The Microscope Slide Partitioner was created to be flexible and cost effective, and typically uses wax as the hydrophobic barrier. A variety of standard block arrays are available, but the device also can be customized to suit any need.



**Figure 1:** *Microscope Slide Partitioner.* This instrument includes a vessel, printer block(s) to print customized hydrophobic barriers, a slide holder, and a reversible actuator. Imprinting the array can be completed quickly and effectively. Blocks for creating 2 x 6 and 4 x 12 arrays are visible at the lower-left.

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Through biomedical research and science education Van Andel Institute is committed to improving the health and enhancing the lives of current and future generations.