

Abstract**MICROFLUIDIC DEVICES HAVING ISOLATION PENS AND METHODS OF TESTING BIOLOGICAL MICRO-OBJECTS WITH SAME**

A microfluidic device can comprise at least one swept region that is fluidically connected to unswept regions. The fluidic connections between the swept region and the unswept regions can enable diffusion but substantially no flow of media between the swept region and the unswept regions. The capability of biological micro-objects to produce an analyte of interest can be assayed in such a microfluidic device. Biological micro-objects in sample material loaded into a microfluidic device can be selected for particular characteristics and disposed into unswept regions. The sample material can then be flowed out of the swept region and an assay material flowed into the swept region. Flows of medium in the swept region do not substantially affect the biological micro-objects in the unswept regions, but any analyte of interest produced by a biological microobject can diffuse from an unswept region into the swept region, where the analyte can react with the assay material to produce a localized detectable reaction. Any such detected reactions can be analyzed to determine which, if any, of the biological micro-objects are producers of the analyte of interest.

Figure 1