

Micro Droplet

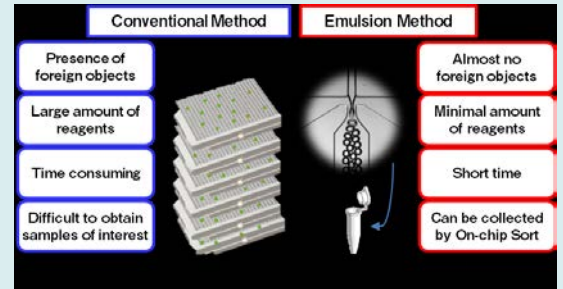
Production Technology using Micro-channel

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1. Background

- In order to scale up and realize a high-throughput, the Emulsion Method (“water-in-oil emulsion droplet technology”) has been widely adopted in sophisticated Digital PCR systems.
- Micro Droplet production by using “Micro-channel” has been recognized as a de facto standard method in this field.

* Polymerase chain reaction (PCR) is an invaluable tool for nucleic acid detection and quantification.



* Advantages of assays using emulsion

2. An Innovative “Simple & Easy” Production Method

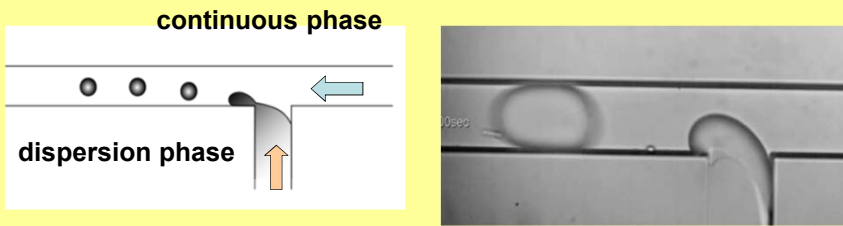


Fig.1 Micro droplets formation in the T intersection

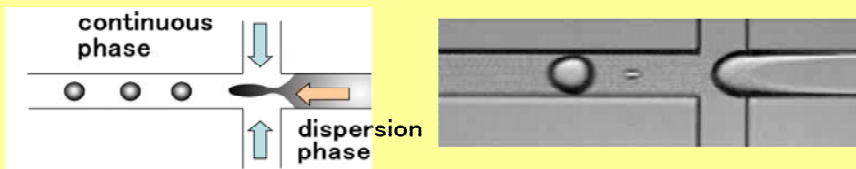


Fig.2 Micro droplets formation in the + intersection

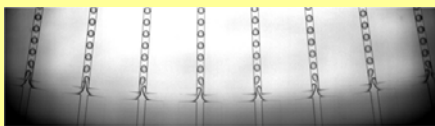


Fig.3 Micro droplets production in parallel arrangement of micro-channels

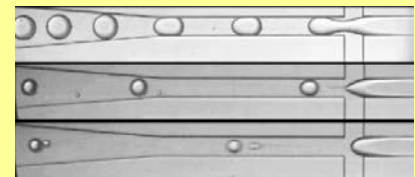


Fig.4 Size control with flow condition



Fig.5 Micro Droplets related systems “use in the market examples”

3. Research Work Continues

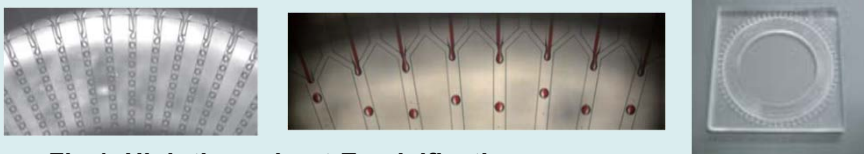


Fig.1 High-throughput Emulsification

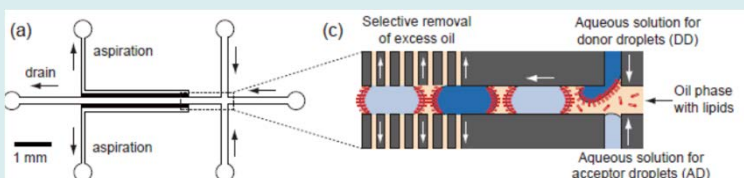


Fig.2 Microfluidic Platform for Membrane Permeability Assays

4. Patent Licensing Available

Patent No.: WO2002/068104 Patent Family already granted in Japan/US/EP etc. (more than 50 patents)

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