# Droplet Microfluidics Workstation (Retired, but open to seuggestions)

| Droplet Workstation |
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| **Tool Type:** Microfluidics |
| **Location:** Microfluidics Lab |
| **Description:** Droplet microfluidics workstation |
| **Manufacturer:** Micronit, Fluigent, Zeiss |

## About

The Droplet Microfluidics Workstation comprises a Micronit chip holder, an assortment of Micronit droplet generation chips, syringe pumps, and Fluigent pressure driven flow components and an inverted microscope. Users can configure these tools to generate small liquid droplets.

## Safety Concerns

- Keep hands, hair, and loose clothing away from moving parts
- Prevent liquids from entering electronics
- Use on an even surface

## Operating Procedures

The setup includes the following Fluigent pressure and flow controllers MFCS-EZ #1 for positive pressure

```
Ch1 0-69mb
Ch2 0-345mb
Ch3 0-345mb
```

MFCS-EZ #2 for vacuum

```
Ch1  -69 - 0mb
Ch2  -345 - 0mb
Ch3  -345 - 0mb
```

Flow controller and the following flow meters

```
XS  0-1.5 ul/min
M   0-80 ul/min
XS  0-80 ul/min
XS  0 - 5 ml/min
XS  0 - 5 ml/min
```

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## Detailed Specifications

We have the following Micronit droplet generators and chip holders in stock

- FC-PRO-CH4515, Fluidic Connect Pro w 4515IN Chip holder
- FC-FFDG.2.50_PACK, Focussed flow droplet generator chips
- FC_FFDG.2_PACK, Focussed flow droplet generator chips
- FC_TSDG.2_PACK, 3 T shaped droplet generator chips

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## Reference Documentation

FLOW-RATE PLATFORM SOFT FRONT PANEL Users Manual

FLOW RATE PLATFORM Users Manual

ESS Platform Users Manual

Maesflo Users Manual

Droplet Junction Chips Datasheet

MFCS Microfluidic Flow Control Users Manual

Flow Unit Inventory

Droplet Generator White Paper

Micronit Catalog

Micronit Quick Start

Fluidic Connect Pro Quick Start

Fluidic Connect Pro Handout

Fluidic Pro Catalog

Micronit Stock

Syringe Pump Quick Start

Reynolds and Peclet Number Effect on Flow Mixer

Cellix tips for resolving droplet generation challenges

Darwin Microfluidics review of hydrophyllic and hydrophobic coatings for droplet generation

Darwin Microfluidics recommendations for choosing oils for droplet generation

Darwin Microfluidics chip cleaning recommendations

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