FLUIGENT
SMART MICROFLUIDICS™
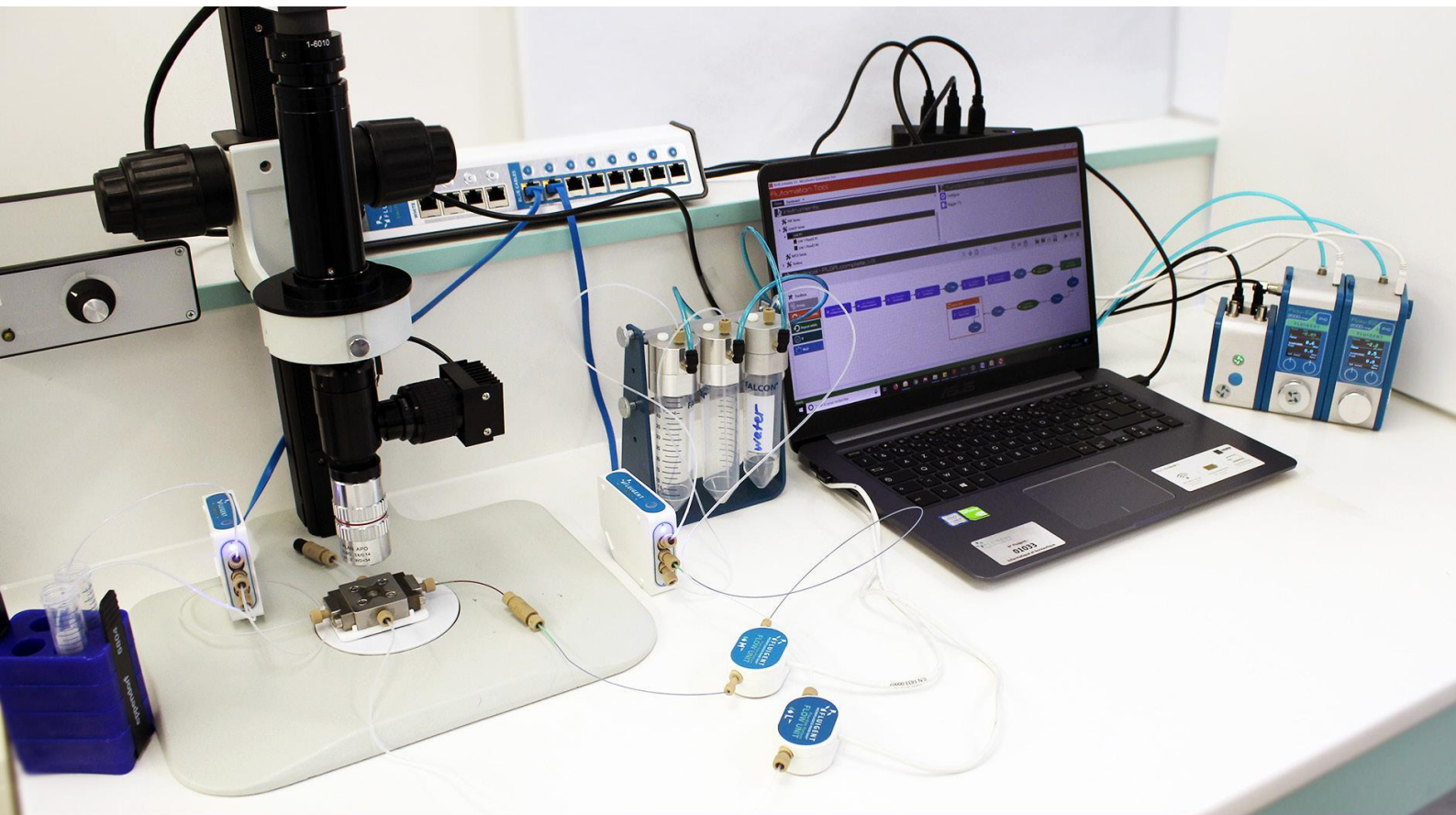
Secoya
FLUIDIFY PHARMA

PLGA MICROPARTICLE PRODUCTION STATION

Standard pack, P/N: 1DPPL01

Automation pack, P/N: O-SE-PLGAAP-PCK

Full pack, P/N: 1DPPL03

The **Fluigent PLGA particle station** is a **robust** and a **high-quality** system for produ-cing outstanding **monodispersed PLGA particles** with **flexibility in changing particle sizes** production in hundreds of milliseconds without interrupting the production. Its performance is coming from the combination of Fluigent's LineUP microfluidic pumps and the RayDrop device, a breakthrough technology for high-quality particle production.

DESCRIPTION

When PLGA are used as API (active pharmaceutical ingredient) carrier, the size of the particle is critical because it affects drug release characteristics. It is critical to produce highly monodispersed particle for drug release reproducibility. The most common production process of PLGA particles is solvent based and can involve hazardous solutions. Ethyl acetate has been elected as a less ha-zardous solvent than other conventional ones (Dichloro methane for instance).

Specifically designed for **ethyl acetate solvent-based** particle forma-tion, it shows highly reproducible results in term of **particle size distribution (CV <2%)**. This station is particularly suitable for researchers who want to test **different API encapsulation conditions** with **highly reproducible results.**

STATION OPTIONS

|	Standard pack	Automation pack	Full pack
Flow EZ™: High precision pump	✔	✔	✔
FLOW UNIT : High precision flow sensors	✔	✔	✔
RayDrop device	✔	✔	✔
A-i-O control Software	✔	✔	✔
P-CAP reservoirs	✔	✔	✔
Tubing, connector and fitting kits	✔	✔	✔
2-SWITCH™ valves		✔	✔
Automated device priming		✔	✔
MAT Software		✔	✔
Highspeed digital microscope			✔

PRODUCT DATASHEET

DETAILED CONTENT

Standard pack
Reference: 1DPPL01

Content
2 * Flow EZ™ (2000mbar)
1 * Link
2 * FLOW UNIT (M and L)
3 * P-CAP (2 * 15mL and 1 * 50mL
1 * RayDrop
1 * Support RayDrop
A-i-O Software
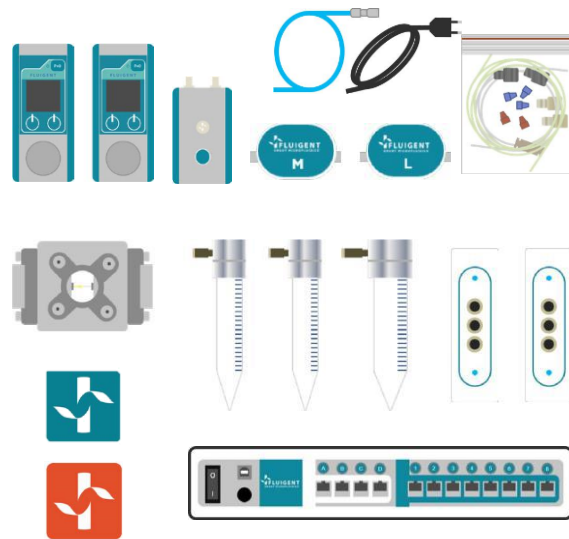Standard connector and tubing
kit Flow EZ™ supply kit
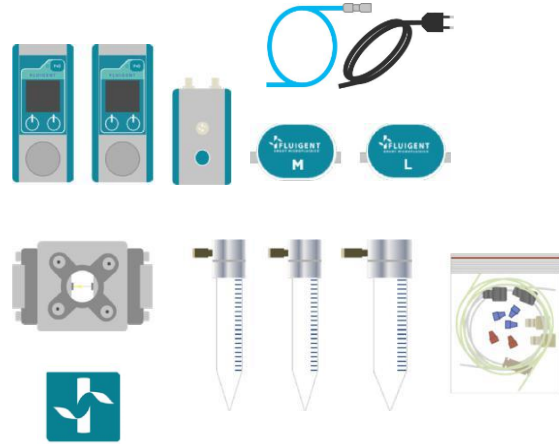
Set-up overview
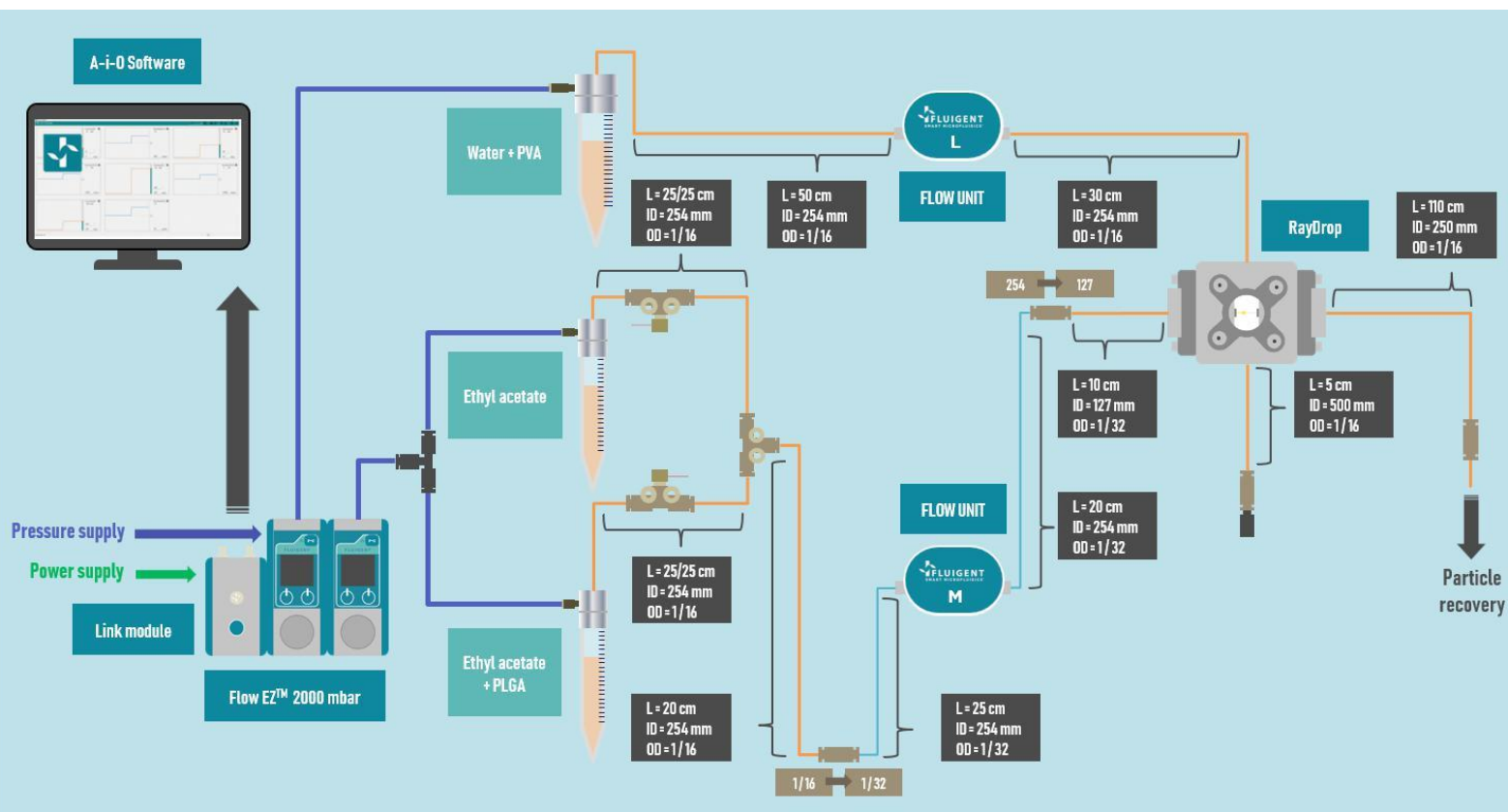
Automation pack
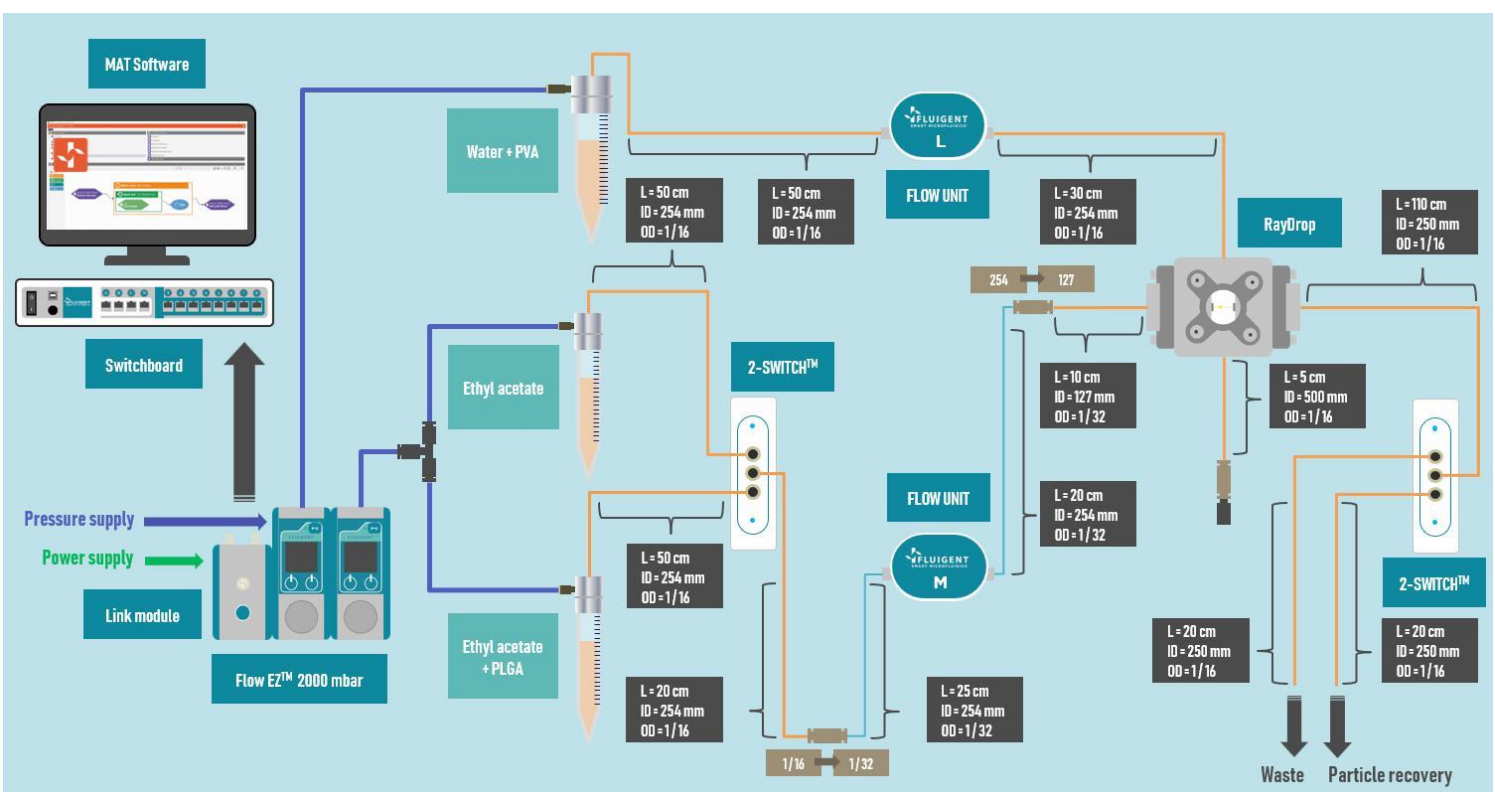Reference: 1DPPL02

Content
2 * Flow EZ™ (2000mbar)
1 * Link
2 * FLOW UNIT (M and L)
3 * P-CAP (2 * 15mL and 1 * 50mL
2 * 2-SWITCH™
1 * Switchboard
1 * RayDrop
1 * Support RayDrop
A-i-O Software
MAT Software
Automation connector and tubing
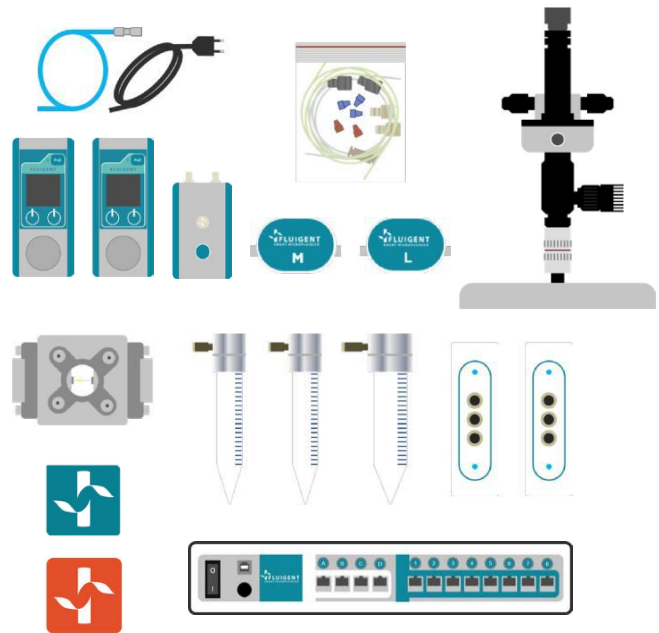kit Flow EZ™ supply kit

Set-up overview

Full pack
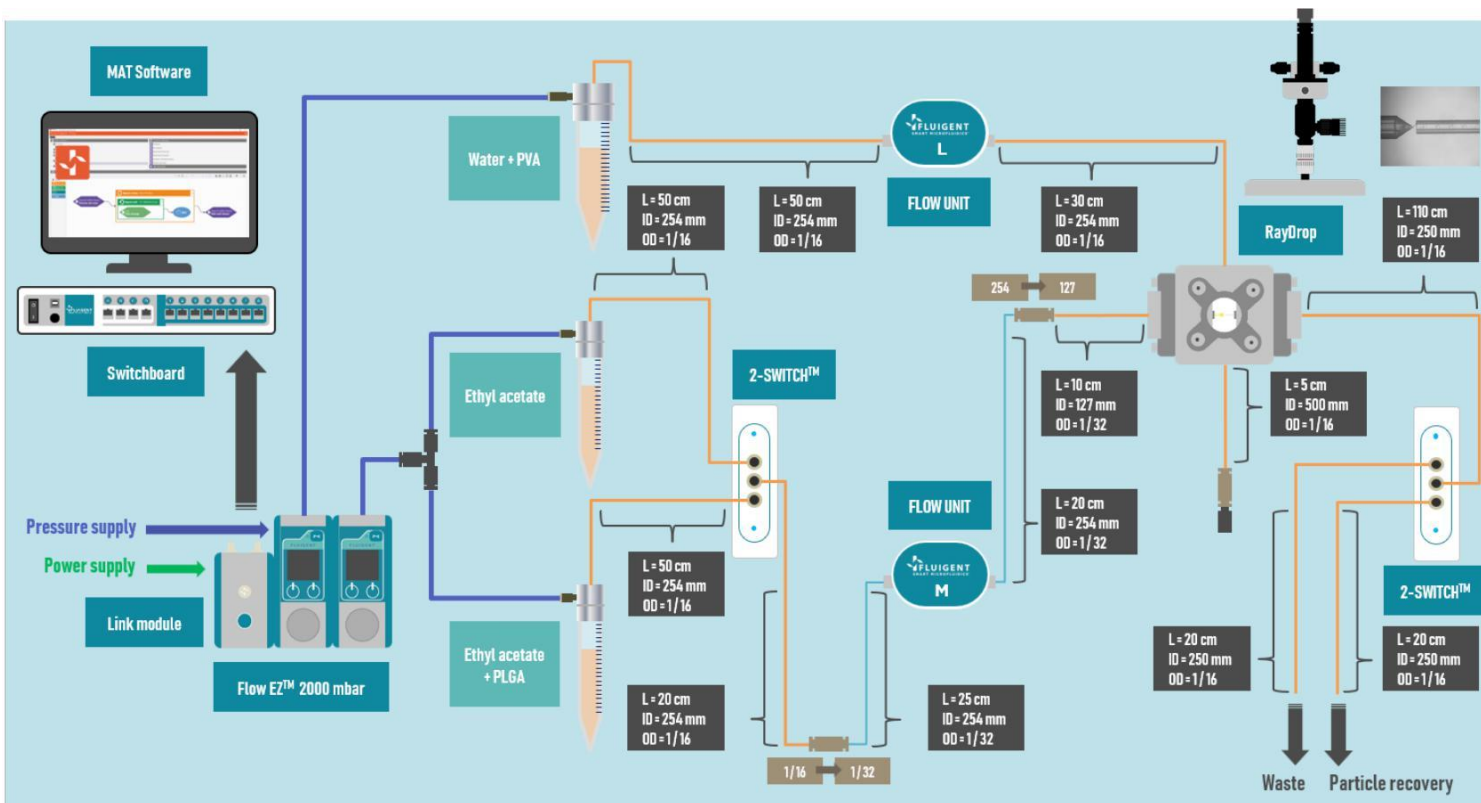Reference: 1DPPL03

Content
2 * Flow EZ™ (2000mbar)
1 * Link
2 * FLOW UNIT (M and L)
3 * P-CAP (2 * 15mL and 1 * 50mL
2 * 2-SWITCH™
1 * Switchboard
1 * RayDrop
1 * Support RayDrop
1 * Digital high-speed microscope
A-i-O Software
MAT Software
Full connector and tubing kit
Flow EZ™ supply kit

Set-up overview

SETTING-UP THE STATION

Please refer to the **Good Practise Guide**

PRODUCT DATASHEET

TECHNICAL SPECIFICATIONS

Particle production	
Dispersed phase	PLGA lactide:glycolide (75:25), mol wt 66,000-107,000
PLGA concentration used	2%, 5% and 10%
Continuous phase	Ethyl acetate
Droplet size range	60µm to 120µm
Particle size range*	20µm to 50µm
Production rate*	Up to 60mg/h
Production frequency	Up to 1000Hz
Monodispersity	2%

Flow control	
Pumps**	Fluigent Flow EZ™ (2000mbar)
Flow sensors**	Fluigent FLOW UNIT (M and L)
Automated valves**	Fluigent 2-SWITCH™

Imaging	
Microscope	Fluigent Digital high-speed microscope

Software	
Live control	Fluigent A-iO
Automated control	Fluigent MAT
Imaging	Pixelink Capture Software

*Depending on PLGA concentration (download **PLGA application note**)

For detailed specification: download **LineUP User Manuel, **ESS User Manuel**.