

Multi-physics

Automated

Reconfigurable

Separation

MARS® automates sample prep and cell separation workflows with high consistency

H³

High Recovery

High Purity

High Throughput

MARS Sample Prep Applications

Centrifuge-free Wash

Sample Concentration

Whole Blood Processing

Sample Debris Removal

WBC Enrichment

Frozen Sample Recovery

Genomic Analysis Sample Prep

MARS Cell Separation Applications

Centrifuge-free Wash

Sample Concentration

Whole Blood Processing

Thawed Sample Recovery

WBC Enrichment

Negative Selection

Positive Selection

Rare Cell Isolation

Immune Cell Isolation

Sample Debris Removal

RBC Lysis + Debris Removal

Genomic Analysis Sample Prep

MARS-CS



MARS Cell Separation Sample Prep & Cell Separation

2x Wash / Concentration Modules
1x Magnetic Separation Module

- > Fully Automated / Walk Away
- > Process up to 10 mL whole blood/run
- > Sample Flow Rate: 1 mL/min

MARS-SP



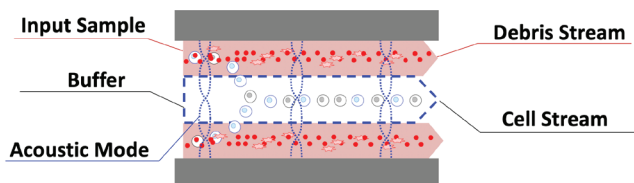
MARS Sample Prep Parallel Sample Processing

3x Wash / Concentration Modules

- > Process up to 3 samples in parallel
- > Fast & Easy Prep of Complex Samples
- > Sample Flow Rate: 1 mL/min

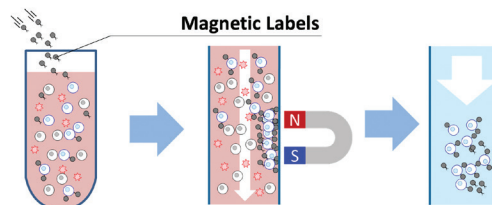
MARS incorporates Applied Cells proprietary **acoustic active-microfluidics** & **immuno-magnetic separation** technologies

Acoustic Cell Manipulation



Acoustic force separates particles based on the difference in physical parameters (size, etc.) with high speed within the MARS **CPC (cell processing chip)**.

In-Flow Immuno-Magnetic Separation



MARS **in-flow immuno-magnetic cell separation** targets specific cell surface markers for any sample type without the use of a matrix, minimizing cell trapping.



Weight

28 kg (62 lbs)

Power

110V or 220V, single phase

Dimensions (L x W x H)

520 mm x 400 mm x 510 mm (20.5 inch x 16 inch x 20 inch)

Internal Tanks

MARS-CS - Mag Buffer, Wash Buffer, DI H₂O, MARS Clean, Waste

MARS-SP - Wash Buffer, MARS Clean, DI H₂O, Waste-1, Waste-2

Configurations

MARS Flex - Assay Development (enables waste fraction analysis)

MARS Auto - Fully Automated / Walk Away (Sample IN » Sample OUT)



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