

Multi-physics

Automated

Reconfigurable

Separation

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

Brochure



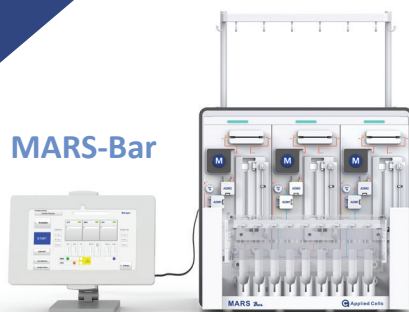
MARS-CS

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-Bar

MARS® Bar

High Capacity Cell Separation

3x Magnetic Separation Modules

- > Fully Automated / Walk Away
- > Bag IN --> Bag/Tube OUT
- > Sample Flow Rate: 3 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

3H⁺

High Purity

High Recovery

High Reproducibility

and now... **High Capacity**

MARS Sample Prep Applications

Centrifuge-free Wash
Sample Concentration
Whole Blood Processing
Sample Debris Removal

WBC Enrichment
Frozen Sample Recovery
RBC Lysis + Debris Removal
Genomic Analysis Sample Prep

MARS Cell Separation Applications

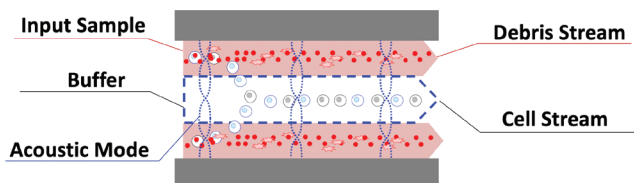
Centrifuge-free Wash
Sample Concentration
Whole Blood Processing
Thawed Sample Recovery

WBC Enrichment
Negative Selection
Positive Selection
Rare Cell Isolation

Immune Cell Isolation
Sample Debris Removal
RBC Lysis + Debris Removal
Genomic Analysis Sample Prep

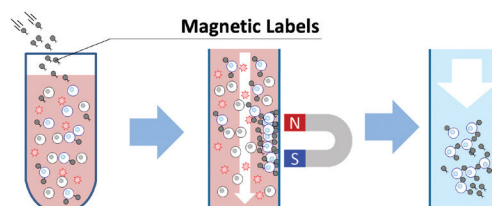
MARS incorporates Applied Cells proprietary **acoustic active-microfluidics** & **immuno-magnetic separation** technologies

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

MARS-Bar - Mag Buffer, DI H₂O, MARS Clean, Waste

Configurations

MARS-Flex - Assay Development (enables waste fraction analysis)

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



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2020**

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