

MAGicBead™ cfDNA Isolation Kit Automation Specs (D4086)

Magnetic Bead Mover and Liquid Handler Specifications

Zymo Research catalog number D4086 (MAGicBead™ cfDNA Isolation) for cfDNA extraction from plasma and other biofluids. As per the product manual this kit can process 200ul-10mL of plasma, the same is true on all open automation platforms. Keep in mind varying limitations exist concerning sample input volume, when choosing an automation platform.

MAGicBead™ cfDNA Isolation (D4086) is compatible with all open platform liquid handlers and magnetic bead transfer automated systems/instruments.

The total execution time of the protocol on automated platforms will change according to the technical capabilities of the equipment used. It is very important to emphasize that the chemistry of D4086 is not affected by the instrument but efficiency of total cfDNA recovery of sample may be due to sample input limitations. Contact automation@zymoresearch.com for scripts. Scripts are available for 0.2, 0.5, 1, 4 and 8mL inputs. If necessary, we recommend diluting your input sample with PBS to reach these input volumes. For further customization of scripts please reach out to our automation team.

Estimated Execution Times for Specific Instruments

| Instrument | Sample Volume (mL) | Sample Number | Setup time (minutes) | Execution Time of Purification (minutes) |
|---------------------------------------|--------------------|---------------|-----------------------------|--|
| KingFisher Flex™ and Apex™ | 0.2 | 96 | Performed off Deck Manually | 20 |
| | 0.5 | | Performed off Deck Manually | 20 |
| | 1 | | Performed off Deck Manually | 25 |
| | 4 | 24 | Performed off Deck Manually | 35 |
| | 8 | | Performed off Deck Manually | 45 |
| Opentrons® OT-2 | 0.2 | 24 | 2 | 70 |
| | 0.5 | | 3 | 70 |
| | 1 | | 6 | 85 |
| Tecan Fluent® 480 | 0.2 | 96 | 7 | 15 |
| | 0.5 | | 7 | 15 |
| | 1 | | 15 | 20 |
| | 4 | | 45 | 45 |
| | 8 | | 90 | 90 |
| Tecan Fluent® 780/1080 | 0.2 | 96 | 4 | 15 |
| | 0.5 | | 4 | 15 |
| | 1 | | 8 | 20 |
| | 4 | | 30 | 45 |
| | 8 | | 60 | 90 |
| Hamilton Microlab® STAR™ and STARlet™ | 0.2 | 96 | 4 | 15 |
| | 0.5 | | 4 | 15 |
| | 1 | | 8 | 20 |
| | 4 | | 30 | 45 |
| | 8 | | 60 | 90 |