

Automated DNA/RNA Isolation

Automated Nucleic Acid Isolation from 0.5 - 4 ml of Blood and Buffy Coat Sample



The fast and reasonably priced isolation of high-quality nucleic acids from whole blood samples presents a key bottleneck for today's sensitive research downstream applications like Next Generation Sequencing, MLPA, Chip Based Assays, Genotyping and many more. High recovery rates, nucleic acid quantity, high yields, purity and degradation directly impact the ability to generate high quality data for your genetics research.

PerkinElmer's chemagic™ research instrumentation and kits offer perfect solutions for this challenge by providing

- Ready to use DNA/RNA – up to 50 µg DNA/ml blood
- Fast processing times – 24 samples in 50 min.
- Long DNA fragments – up to 200 kb suitable for NGS
- Long term stable nucleic acids

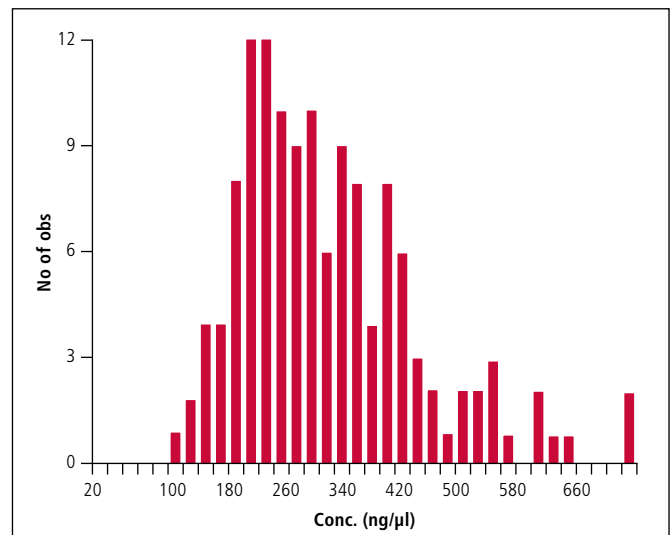


Fig. 1: DNA concentration of 133 extractions from 4 ml whole blood, elution vol. 500 µl. Mean conc.: 314 ng/µl, mean yield: 157 µg

Standard kit performance:

OD 260/280 ratio ≈ 1.8 - 2.0, OD 260/230 ratio > 2.0

Average DNA conc. 20 - 50 µg/ml blood

Order Information and Kit Performance

Product Number	Product Name	Sample Size	Processing Time [min]	Typical Yield [µl]	Standard Elution Vol. [µl]	Typical Conc. [ng/µl]
CMG-1097	chemagic DNA Blood Kit Special	2 - 5 ml	50	20 - 80	300 - 500	50 - 250
CMG-1074	chemagic DNA Blood Kit Special	4 ml	60	80 - 320	300 - 500	250 - 1000
CMG-1080	chemagic DNA Buffy Coat Kit Special	0.5 ml, obtained from 5 ml blood	80	90 - 130	300 - 500	225 - 235

Other solutions available for

- Lower and higher sample volume ranges
- Serum/plasma, saliva, swabs, feces
- Total RNA isolation

Your Tool for Automated Nucleic Acid Isolation for Medium Volume Blood Samples

Based on PerkinElmer patented magnetic bead technology the **chemagic™ 360 instrument** represents the ideal solution for nucleic acid isolation from **0.5 - 4 ml whole blood** samples, in research market segments including but not limited to Human Genetics and Biobanking.

Experience the revolutionary compact benchtop design of our new developed chemagic 360 instrument. Based on the well established chemagen Technology, the system offers a reliable nucleic acid isolation solution for your high throughput sample processing needs. Equipped with the intuitive **chemagic QA Software** and the **chemagic Dispenser 360 unit** the systems allows LIMS-compatible bar code reading/sample tracking and automated buffer filling for all volume applications. Due to its modular set up, the chemagic 360 instrument can be integrated with standard liquid handling units.



chemagic™ 360 instrument

Key features

- Sample volumes from 200 µl - 4 ml
- High throughput, 1 - 24 samples/run
- Bar code reading/sample tracking
- LIMS compatible log files
- Integrates with liquid handling platforms

For Research Use Only. Not for use in Diagnostic Procedures.
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Order Information

Product Number	Product Name
2024-0020	chemagic 360 instrument
CMG-376	chemagic 360, 24 Rod Head Set

Magnetic Separation

The magnetic separation is based on the use of metal rods that are lowered into a process solution (A). To collect beads from the solution, the rods are magnetized. Pellets form at the tips of the rods, and the rods are withdrawn from the solution with the pelleted beads attached. Resuspension into the next process solution, for example, wash or elution buffer, is achieved by switching off the magnetism while rotating the rods (B). This normally difficult step is thus performed quickly and thoroughly, resulting in isolation products with high yields and purities.

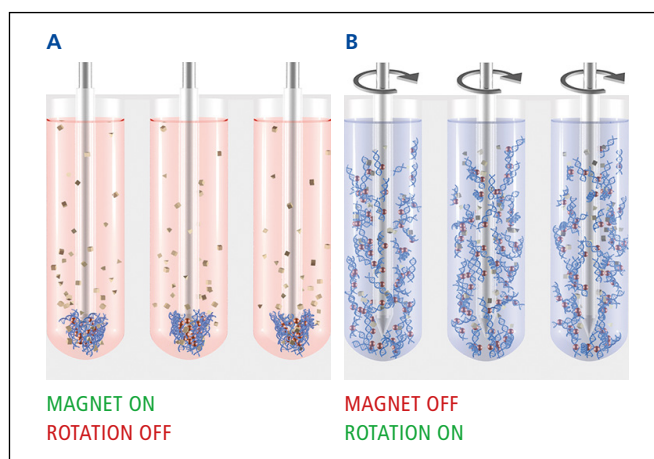


Fig. 2: Magnetic separation technology.