

## MAGFLO™

### Magnetic beads for nucleic acid purification and extraction

From set-up to success

Automated and high throughput magnetic bead applications



**High recovery,  
maximum purity**

Ensuring reliable and  
consistent results every time

**Precision and  
scalability**

Delivering tailored solutions  
for your research

**Effortless  
excellence**

Achieving reproducible  
outcomes with ease

## Streamline the path to pure nucleic acids

The journey from sample to purified nucleic acids is often hindered by low yields, impurities and the need for precise size selection. Magnetic beads overcome these challenges: dynamic particle mobility ensures thorough mixing while improved nucleic acid binding capacity guarantees higher yields by eliminating the cumbersome centrifugation steps.

INTEGRA has therefore broadened its offering for molecular biology to include magnetic bead reagents.



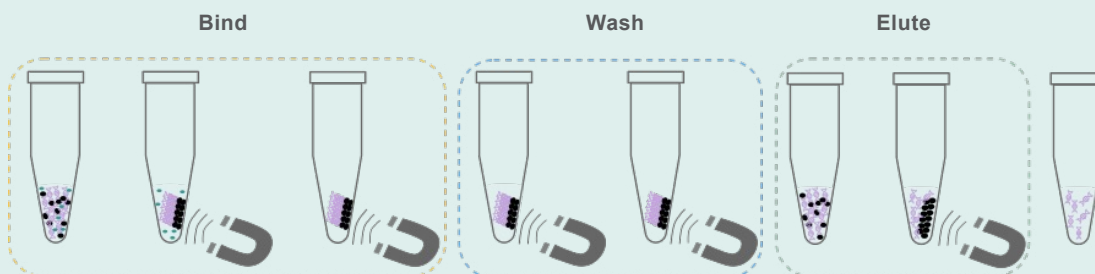
## Introducing MAGFLO magnetic beads for NGS size selection and PCR purification

INTEGRA now offers an end-to-end nucleic acid preparation solution. Our range of liquid handling instruments can be seamlessly integrated with **MAGFLO** magnetic beads and MAG or HEATMAG modules to provide streamlined, hands-free purification and size selection workflow components from a single trusted supplier.



## MAGFLO NGS and MAGFLO PCR

**MAGFLO NGS** magnetic beads for NGS size selection and **MAGFLO PCR** magnetic beads for PCR purification are suitable for molecular biology labs, providing precise and accurate nucleic acid fragment isolation for DNA/RNA samples. The standardized bead-to-sample ratio ensures excellent results even in complex workflows, such as double-sided size selection. Magnetic beads also allow protocol automation, increasing the reproducibility of results.



### Coming soon!

Stay tuned for **MAGFLO DNA and RNA extraction kits**, which will offer optimized solutions for a wide range of samples, including whole blood, tissue and bacterial cultures.

# Our revolutionary all-in-one package

## Seamless magnetic bead integration

**MAGFLO** magnetic beads seamlessly complement the MAG and HEATMAG modules – dynamic magnetic stands designed for efficient bead handling – to ensure reliable and consistent sample processing.

These modules use vertical magnet movements to automate bead collection, eliminating the need for manual plate transfers to reduce the risk of spills.

They are compatible with tubes and various plates to support the scalability of **MAGFLO** magnetic beads in working volume and sample number to meet diverse research needs, ensuring effortless consistency and reproducibility.

## Success simplified with INTEGRA's liquid handling platforms

**MAGFLO** magnetic beads and MAG and HEATMAG modules combined with our advanced pipetting platforms – such as ASSIST PLUS, VIAFLO 96 or VIAFLO 384 – enable semi- or fully automated workflows that eliminate manual errors and optimize productivity and reproducibility.



### ASSIST PLUS pipetting robot

- Perfect for flexible sample number
- Complete hands-free automation
- Versatile platform for any pipetting task
- User-friendly programming



### VIAFLO 96 or VIAFLO 384 handheld electronic pipette

- Perfect for high throughput applications, as you can handle 96 or 384 samples simultaneously
- Semi-automated pipetting
- Versatile platform for any pipetting task



### Ready-to-use protocols for quick setup

To enhance the user experience, these all-in-one solutions come with optimized pipetting protocols at no extra cost for reliable, reproducible results. This ensures minimal set-up time, allowing you to complete magnetic bead workflows swiftly. Plus, the intuitive programming software makes custom changes to sample volumes or batch sizes a breeze.

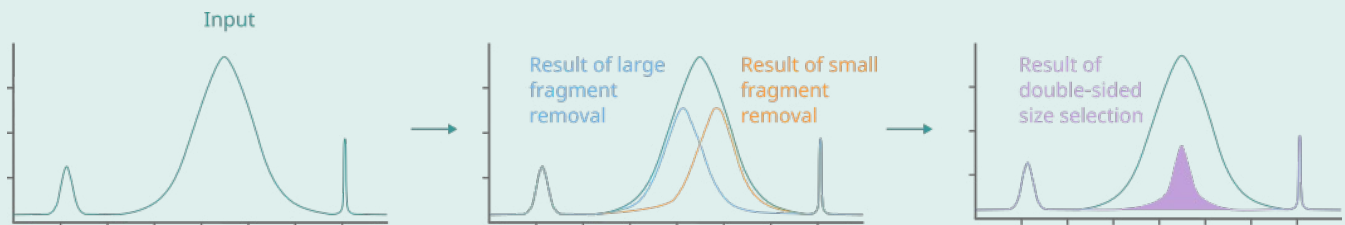
# MAGFLO NGS – magnetic beads for NGS size selection

## Product specifications

Application	Size selection for NGS library prep, PCR purification
Starting material	Fragmented DNA, RNA, cDNA, PCR products
Elution volume	12 µl or above (standard 96 well PCR plate)
Fragment size	100-1000 bp, depending on bead-to-sample ratio used
Typical recovery	≥85 % depending on 1.8x single-sided size selection
Processing mode	Automated or manual
Throughput	1-384 samples
Downstream application	Library preparation for NGS and Sanger sequencing protocols PCR Mutation detection and genotyping Fragment analysis Microarrays Enzymatic reactions Cloning
Selling unit	1, 50 and 500 ml
Storage	2-8 °C
IVD certified	No, research use only
RNase free	Yes



**MAGFLO NGS** magnetic beads provide a reliable solution for the purification of nucleic acid fragments with a consistent distribution around an average size, which is crucial for the library preparation step in NGS workflows. This includes both single- and double-sided size selection methods for DNA or RNA.



**Figure 1.** Single-sided size selection process eliminates large fragments (blue) or small fragments (orange). In a double-sided size selection, a range of DNA and/or RNA fragments is selected around an average size (purple).

## Efficiency meets accuracy: revolutionize your NGS workflow

**MAGFLO NGS** magnetic beads are RNase free, making them suitable for both DNA and RNA workflows. Precise bead-to-sample ratios ensure easy target size selection, effectively isolating nucleic acid fragments of a specific size.

Magnetic beads also allow protocol automation, increasing the reproducibility of library preparation workflows. For ultimate reliability, use INTEGRA's precise pipetting devices for NGS purification protocols.

Ready-to-use scripts enable straightforward modifications to input and output volumes, bead-to-sample ratios and target sizes in just a few clicks.

Additionally, the magnetic beads support consistent workflows and standardized procedures, without the need to change bead ratios.

# Size selection excellence: MAGFLO NGS sets the new gold standard

MAGFLO NGS magnetic beads are interchangeable with gold standard beads, delivering identical single- and double-sided size selection results. This makes MAGFLO NGS magnetic beads a cost-effective alternative for almost any lab.

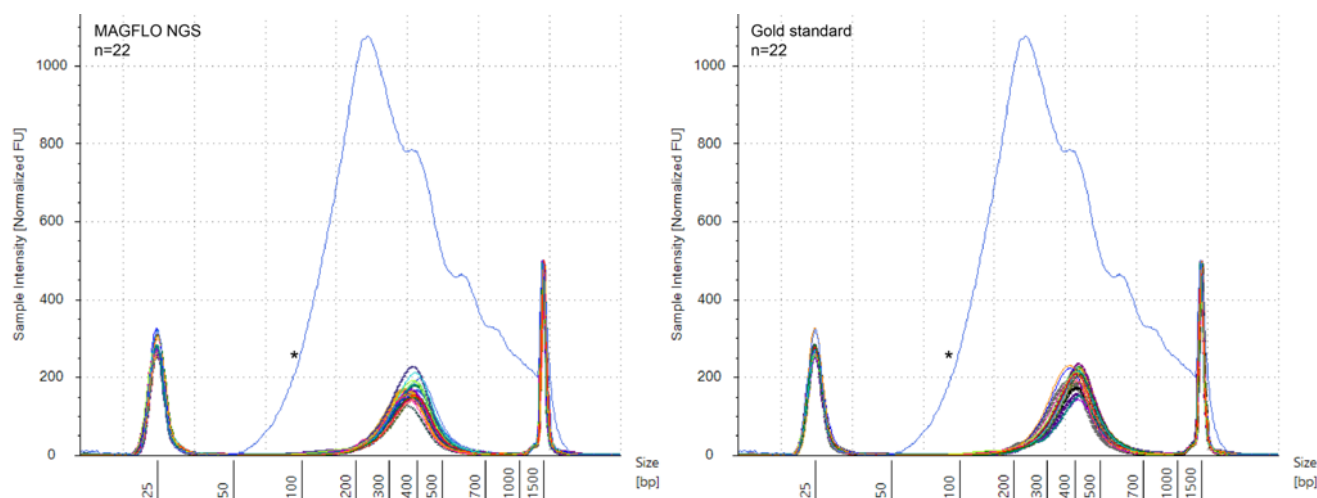


Figure 2. TapeStation results showing the sheared gDNA profile before (\*) and after size selection, performed with either MAGFLO NGS or gold standard beads.



Scan the QR code to view the application note and full data.

## Seamless integration for superior sequencing

### Proven performance in amplicon sequencing workflows

MAGFLO NGS magnetic beads demonstrate consistent results compared to gold standard magnetic beads in complex amplicon sequencing NGS workflows, with no statistical difference between the observed alpha diversity of microbial species for 16S and ITS2.



Scan the QR code to see the data poster.

### RNA-Seq workflow delivers reliable NGS results

RNA sequencing analysis shows similar gene expression profiles between samples processed with MAGFLO NGS and gold standard magnetic beads, highlighting their comparable efficacy and reliability for generating high quality data.



Scan the QR code to see the data poster.

## MAGFLO NGS ordering information

Product	Unit/size	Part no.
MAGFLO NGS magnetic beads for NGS size selection	1 ml	7000
MAGFLO NGS magnetic beads for NGS size selection	50 ml	7002
MAGFLO NGS magnetic beads for NGS size selection	500 ml	7004

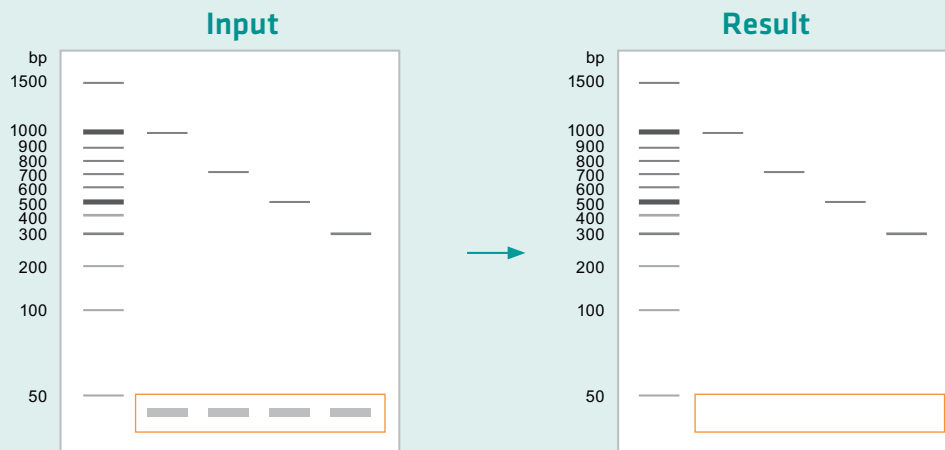
# MAGFLO™ PCR - magnetic beads for PCR purification

## Product specifications

Application	PCR clean-up
Starting material	PCR products, fragmented DNA
Elution volume	12 µl or above (standard 96 well PCR plate)
Fragment size	Min. 100bp and larger
Typical recovery	Above 85 %
Processing mode	Automated or manual
Throughput	1-384 samples
Downstream application	PCR Mutation detection and genotyping Sanger sequencing protocols Fragment analysis Microarrays Enzymatic reactions Cloning
Selling unit	1, 50 and 500 ml
Storage	2-8 °C
IVD certified	No, research use only
RNase free	No



**MAGFLO PCR** magnetic beads are suitable for PCR purification protocols, providing samples ready for direct use in downstream applications.



**Figure 1.** Illustration of the PCR purification principle, with different sized amplicons and primer dimer removal.

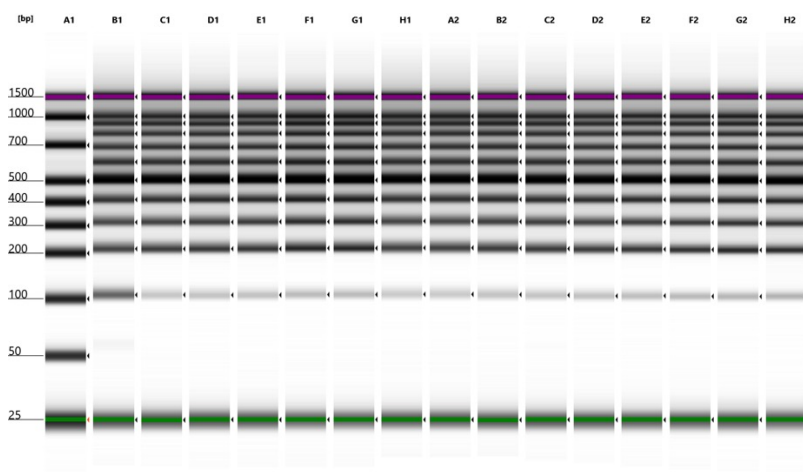
## Streamline your workflows with the power of magnets

**MAGFLO PCR** magnetic beads streamline nucleic acid purification for PCR workflows. A simple, three-step protocol rapidly and efficiently removes unincorporated dNTPs, excess primers, primer dimers, salts and enzymes to deliver a high amplicon recovery rate.

The use of magnetic beads allows automation of the workflow, increasing the reproducibility of results. No centrifugation or filtration is required, ensuring that protocols can be carried out quickly. For ultimate reliability, use INTEGRA's precise pipetting devices for PCR purification protocols.

## Effortless PCR clean-up for enhanced efficiency

**MAGFLO PCR** magnetic beads are ideal for the efficient recovery of amplicons larger than 100 bp, allowing the removal of smaller fragments, such as primer dimers.



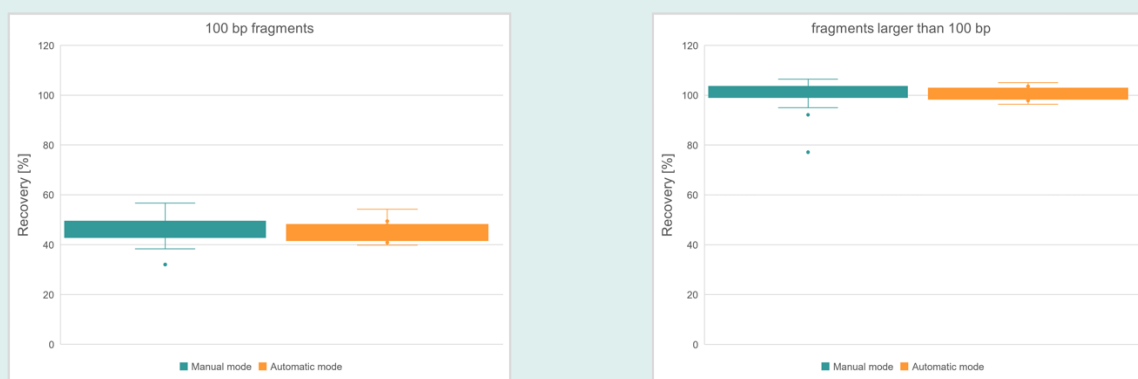
**Figure 2.** Gel picture of selective samples (C1-H2) across a 96 well PCR plate, processed in parallel after purification of an input sample, DNA ladder (B1) using **MAGFLO PCR**. A1: TapeStation ladder.



Scan the QR code to view the application note and full data.

## PCR purification perfected

When used in combination with the VIAFLO 96 handheld pipette, **MAGFLO PCR** allow for precise, high throughput purification protocols.



**Figure 3.** Fragment recovery for 100 bp fragments data across a 96 well plate, processed in parallel for the purification of a DNA ladder using **MAGFLO PCR** remains consistently around 50 % in both manual and automatic modes using a VIAFLO 96 handheld electronic pipette. For fragments larger than 100 bp, the recovery is consistently around 100 % in both modes, indicating optimal performance.

## MAGFLO PCR ordering information

Product	Unit/size	Part no.
MAGFLO PCR magnetic beads for PCR purification	1 ml	7010
MAGFLO PCR magnetic beads for PCR purification	50 ml	7012
MAGFLO PCR magnetic beads for PCR purification	500 ml	7014



Contact us:



**MAGFLO genomic DNA**  
**MAGFLO Pathogen**  
**MAGFLO Plasmid**  
**MAGFLO total RNA**