

# MagRo - MK2 The one-of-its-kind solution

**Providing flexible solutions for magnetic particle based purification and separation tasks** 







## High throughput nucleic acid and protein purifications with MagRo<sup>™</sup>- MK2

Compact Versatile Easy-to-use

96 samples simultaneously

#### **Designed for integration**

Open design enables easy integration with third party liquid handlers, robotic arms and other laboratory equipment. The workstation supports the use of shakers, heaters, cooling blocks or washers, directly connected to the system. You can choose plate decks to suit alternative plate orientations, and in every position there is easy access for a robot arm. For further flexibility in integration, the MagRo - MK2 unit is symmetrical. The instrument can be installed to operate from left to right, or right to left.

tocols			
opTips	ACOULD PADADADAD		
w	Destination Sample		
beat It	Plate type Nunc 0.5	50	
#1	Num Z levels: 1		
tocol contents	Magnets down at:		
Tips (TipBox) lect (Sample, 1, 2, 15, 3)	Top of plate	<ul> <li>First Z lev</li> <li>Second Z</li> </ul>	
lect (Sample, 2, 2, 30, 3, 10, 30, 4) spend (Wash1, 0, 10, 30, 5)	First Z level		
Hect (Wash1, 0, 5, 15, 0) spend (Wash2, 2, 10, 30, 5, 30, 30, 5) Hect (Wash2, 0, 5, 30, 5) spend (Elution, 1, 3, 30, 2) Hect (Elution, 0, 2, 15, 0) opTips (TipBox)	Z level (mm)		
	Time	30 sec	
	Stir amplitude (mm/10)		
prips (ripbox)	Second Z level		
	Z level (mm)	10	
	Time	30 sec	
	Stir amplitude (mm/10)		
	Apply	Cancel	
Run			

The Windows®-based touch-screen enabled control software has - at the fingertip - all the functions needed to edit/create a protocol and run it. Protocols are standard text files based on an intuitive command language and easy to understand.



The main screen shows available protocols, protocol contents and the deck layout. Just press Run and you're done!

#### **Compact size**

The MagRo - MK2 requires a small bench top area but can still provide 8 plate positions with 4 positions for accessory equipment such as a plate shaker unit. The top of the line model uses the 96 magnet AQP tool, which processes all wells in a 96-well sample plate simultaneously. Strip tools for 8 wells or 12 wells are also available. The unique open design of the MagRo - MK2 allows customization of the workstation. The plate capacity can easily be reduced or increased. The magnet tool and plate deck can be customized to support applications run in e.g. sample tubes. An optional Perspex cover for the workstation is available.

#### New frontiers in magnetic particle processing

MagRo - MK2 offers more choices for magnetic particles sample preparation than ever before. The purification can be performed in deep well plates and the purified product can be eluted into a few tens of microlitres in standard 96-well plates. Magnetic particles can be recycled to the sample plate in the case of, for example, viscous samples. Very large samples or viscous samples can be divided over multiple plates, and then recombined in the wash plate. Consequently the purified product from the split will end up in same wells in the elution plate. Thus sample size can be extended beyond the capacity of a deep well plate.

#### Ready to use applications and full programming freedom

MagRo - MK2 comes with a set of ready to use applications but also has full programming freedom for your own applications. As a leading provider of magnetic particle technology BN Products & Services supplies a wide range of reagents ranging from off-theshelf purification kits to customized magnetic particle reagents. Ready protocols for the QuickPick<sup>™</sup> kits are supplied for MagRo - MK2. The workstation's easy-to-use Windows® based protocol editor also enables users to set up protocols according to their own application needs.



The MagRo<sup>™</sup> - MK2 may be equipped with a tool comprising 8, 12 or 96 proprietary high efficiency magnets



MagRo<sup>™</sup>- MK2 represents the next

generation of open magnetic

particle workstations. Designed

around BN Products & Services'

proprietary QuicPick® magnetic

bioseparation technology, it is both

compact and fast. The MagRo -

MK2 workstation is ideal as a stand

alone system for nucleic acid,

protein purifications as well as cell

isolations, and many other key

applications in proteomics and

genomics using magnetic

particles. At the same time, the

workstation has an open

architecture allowing easy integration into existing robotic

configurations. As such it

represents a unbeatable solution

for high throughput laboratories

because the MagRo eliminates the

bottleneck often caused by the

sample preparation phase. The

workstation is fully compatible

with both standard and deep 96-

well sample plates.

### The MagRo<sup>™</sup>-MK2 workstation is ideally suited for applications such as:

Gene expression studies: Transfection, RNAi, siRNA studies Library screening ADMET

#### Proteomics applications:

Pull down assays, fractionations, MALDI & ESI-MS front end solutions

#### **Cell isolations:**

High throughput cell sorting, positive or negative fraction of 96 cell samples simultaneously

#### High throughput sample preparations:

Nucleic acid and protein purifications from cells and tissues

#### High throughput magnetic solid phase applications: Immuno and receptor assays Affinity screening

#### Multiplexing:

Novel assay concepts for high density array and suspension bead array automation





#### **SPECIFICATIONS**

Length:	540 mm
Width:	554 mm
Height:	720 mm
Weight:	20 kg

#### WORKSTATION WORKING AREA

The plate deck is designed for plates and accessories with a 96-well sample plate footprint. The capacity of the deck can be configured for 8 96-well sample plates and 2 positions for optional accessories, e.g. plate shaker. The plate deck has fixed position for the tip loading station and tip waste box.

#### MAGNETIC PARTICLE PROCESSING

MagRo - MK2 can be equipped with a whole plate 96 magnet tool or a strip tool for 8 or 12 wells. Strong diametrically magnetized magnets provide a large collection surfaces and ensure effective collection of magnetic particles. The QuicPick tips fits tightly to the magnets to minimize the dead volume introduced by the tool and for efficient collection whilst protecting the magnet.

#### **CUSTOM TOOLS**

The design of the MagRo - MK2 allow customization of the workstation. The magnet tool and plate deck can be customized to support e.g. applications run in tubes.

#### **INTEGRATION**

MagRo - MK2 is designed to support integration into laboratory automation. The open design and extended reach provide a wide range of alternatives. The software supports event-based control.

#### COMPATIBILITY

MagRo MK2 is compatible with all magnetic particle chemistries.

#### **ORDER INFORMATION**

M2014-096-8 • MagRo MK2 with 96 magnets and 8 plate positions M2014-008-4 • MagRo MK2 with 8 magnets and 4 plate positions

#### **OPTIONAL HEATING/COOLING PLATE DECK**

For applications which demand that the working temperature is either higher or lower than room temperature, a Heating/Cooling plate deck is available. The Heating/Cooling plate deck temperature is controlled by circulating hot/cold liquids through the plate deck to achieve and keep the wanted temperature. As the Heating/Cooling plate deck is made of a massive aluminum block it maintain the an transfers the temperature evenly to the sample plates. Custom made heat transfer adapters can be provided.

#### **WORKSTATION COVER**

The workstation can be equipped with the MagRo - MK 2 Cover. The cover protects the workstation when extra sensitive assays are run.

#### ACCESSORIES

MagRo - MK2 allows the use of accessories such as: Plate shakers, cooling blocks and, bar code readers.

#### SOFTWARE PLATFORM

Windows XP, Vista, 7 or 8 compatible MagRo - MK2 GUI for workstation control and application management, accessed using touch screen or mouse *l*keyboard.

### RELATED PRODUCTS AVAILABLE FROM BN PRODUCTS & SERVICES

QuicPick tips (untreated or Dnase/Rnase-free, 96 tips pre-packed in boxes or in bulk)

#### **ALSO AVAILABLE**

QuickPick<sup>™</sup> kits for nucleic acid purification QuickPick kits for protein purification Various magnetic particle reagents for cell separation

#### Certification: IEC-CB. CE

The instrument fulfills the requirements of:

EC 61010-1:1990 + A1(1992) + A2(1995)
UL 61010A-1: 2002 R4.02th:

Conformance to EU directives:

89/336/EEC (as amended by 92/31/EEC and 93/68/EEC)
 73/32/EEC (as amended by 93/68/EEC)

Your local distributor:



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