

## Application Note

MagXtract® 3200, a fully automated nucleic acid extraction and PCR setup system using MACHEREY-NAGEL's NucleoMag® DNA Forensic kit.



CE IVD FDA



### Magnetic Bead

Fast and efficient automated nucleic acid purifications from various bio-specimens.



### PCR Setup

Automatically and precisely dispense eluates, PCR reagents into PCR plate.



### Open Platform

Comprehensive protocols creation and adaption for purification and PCR setup.



### Whirl Mixing

Patented whirl-and-stir mixing approach to maximize the efficiency of purifications.



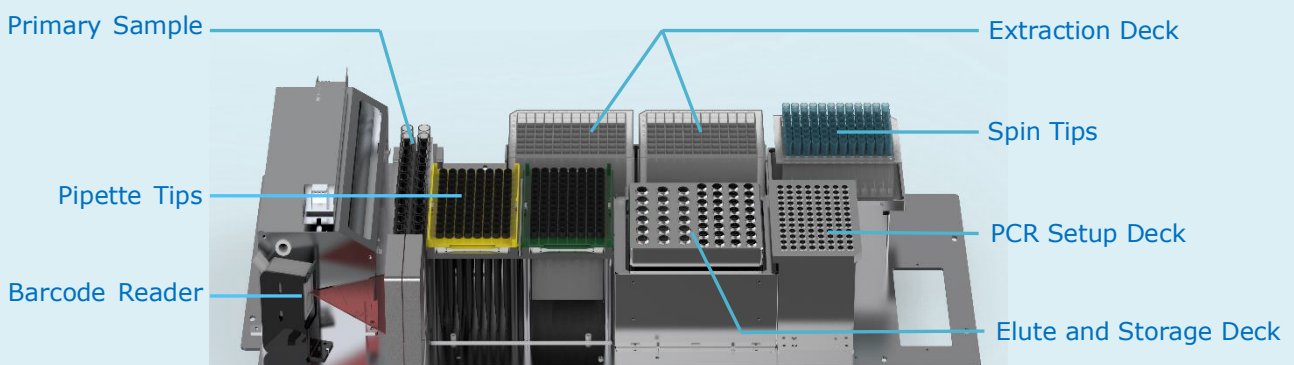
### UV / HEPA

Safeguard against the contamination with UV light and HEPA.



### Cool Station

Cooling control for eluates storage and reagent kits to maintain samples stability.



# NucleoMag® DNA Forensic

Automated extraction of genomic DNA from forensic samples on the **MagXtract 3200**

## Introduction

MACHEREY-NAGEL developed the magnetic bead based NucleoMag® DNA forensic kit allowing the automated purification of genomic DNA from forensic sample. Chroma ATE provides high quality automated instrument, MagXtract 3200, for nucleic acid extraction. Through using NucleoMag® DNA forensic kit combining with MagXtract 3200, forensic investigator will conduct research or examinations in a safe, accurate, and efficient procedure.

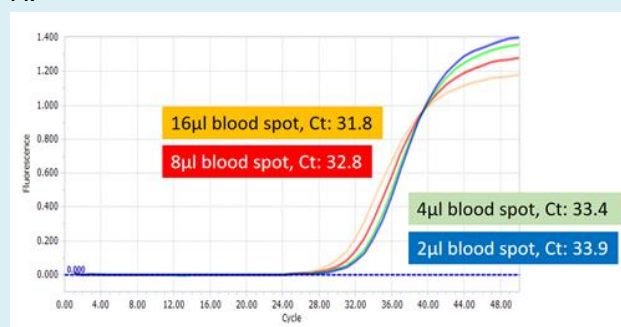
## MagXtract 3200 Specification

<b>Description</b>	<b>Automated nucleic acid extraction and liquid handling system</b>
<b>Capacity</b>	Max. 32, 16-sample per run
<b>Weight</b>	70 kg (± 5kg)
<b>Dimensions</b>	721mm x 530mm x 567mm (W x D x H)

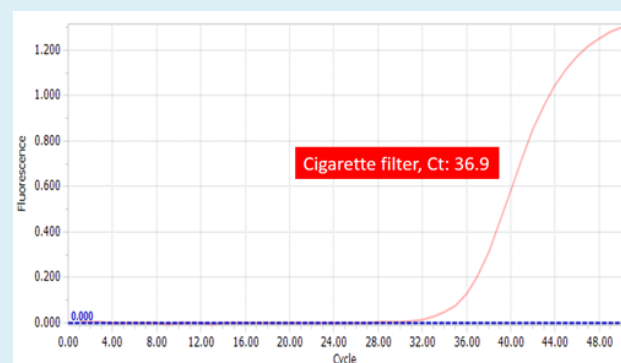
## Excellent Performance

We evaluated the performance of purification of genomic DNA from human blood spots and cigarette filter using the NucleoMag® DNA forensic kit and MagXtract 3200. All the extracted human genomic DNA samples can be detected using qPCR as below figure.

A.



B.



**Figure. Highly sensitive detection of human GAPDH from micro amount samples.** 5µl extracted gDNA is applied in qPCR test and the target gene is human GAPDH. A. Different volume blood spots. Note. Human whole blood sample (ZenBio, =W36982100056100) B. Cigarette filter

## Open System and Automation Solution

MagXtract 3200 allows the authorized user to edit protocols including nucleic acid extraction and PCR preparation. High flexibility application can fit most magnetic based extraction kits and PCR reagent kits.

**Open System** – Based on MACHEREY-NAGEL extraction kit IFU, optimize the detailed factor to make excellent performance.

**Automation Solution** – Replace the manual steps including not only extraction but also PCR preparation.

1. Nucleic acid binding with beads
2. Collecting beads
3. Washing
4. Vaporizing (drying)
5. Eluting
6. Transferring eluate to storage vial
7. Dispensing qPCR premix to each vial
8. Adding template to each vial

It saves about 90% hands-on time!

## MagXtract 3200 GUI

Three operating modes: full run, preparation and extraction.

MagXtract 3200 software provides the protocol-based control to streamline the workflows. The

stepwise GUI and touchscreen control guide the user through the complication of the assay setup, from sample loading to the consumable placement.

For more information please contact

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**Chroma ATE** Technical support: [tech-support.LSI@chroma.com.tw](mailto:tech-support.LSI@chroma.com.tw)

## Order Information

Product	REF
<b>NucleoMag® DNA</b>	744660.1 (96 preps)
<b>Forensic</b>	744660.4 (384 preps)
<b>MagXtract 3200</b>	9-49200002
<b>(CE-IVD)</b>	
<b>Spin tip in box</b>	A94-000135
<b>Filtered tip (50µl)</b>	A94-000130
<b>Filtered tip (1000µl)</b>	A94-000131
<b>96 deep well plate</b>	Please contact Chroma ATE
<b>Customized accessories</b>	
<b>Sample drawer</b>	13 x 75 mm / 16 x 100 mm
<b>Elute and storage deck</b>	We can modify the number of hole to fit your application