

# omnia LH 75 48.1

# omnia LH 75 48.4

Omnia LH 75, in the 48.1 and 48.4 models, is the workstation of the Omnia family for nucleic acid extraction and purification and PCR setup, which can process 48 samples per run in a short time.

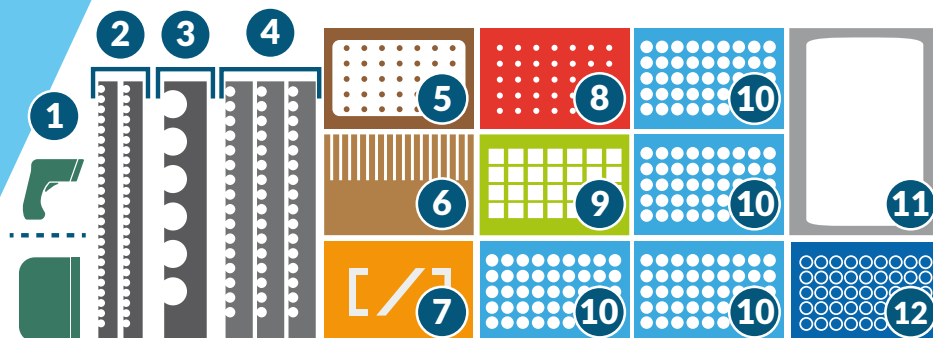


## TECHNICAL SPECIFICATIONS

- **Pipetting channels:** 1 (48.1 model) or 4 independent (48.4 model) pipetting channels (with disposable tips), pipetting volume range 1 µl to 1000 µl, precision CV ≤ 0.2% at full stroke, liquid level detection
- **Magnetic tool:** 48 parallel magnets, suitable for all magnetic beads
- **Integrated devices:** thermoshaker (RT to 95° C, 100 rpm to 2000 rpm), heating/cooling unit (4° to 70° C), custom adapters
- **Traceability:** 2 barcode scanners (integrated and external), internal database, plate mapping, output files for the most common thermal cyclers
- **User-friendly Framework software:** internal control system and remote monitoring through HMI software and a built-in touchscreen
- **Safety and decontamination tools:** easy-to-clean deck, UV-lamp (254 nm), removable waste bin, filter tips, disposable components
- **Open platform:** customisable layout to suit the specific protocol, compatibility with pre-filled plates
- **Size (W x D x H):** 916 x 789 x 848 mm
- **Certification:** CE-IVD

## SBS-COMPLIANT DECK LAYOUT

1. Barcode scanners (integrated and external)
2. Rack for eluate stocking (x 2)
3. Reagent input rack
4. Sample input rack (x 3)
5. Heating/cooling unit
6. Thermoshaker
7. Customisable position
8. PCR setup position
9. Washing plate
10. Tips
11. Waste bin
12. Covers for magnets



## OPERATING SPECIFICATIONS

NA extraction and purification protocols; PCR, RT-PCR, qPCR setup

|                                |  |
|--------------------------------|--|
| Input sample types             | <ul style="list-style-type: none"> <li>Blood, serum, plasma, saliva, urine, and other body fluids; stool; swabs; fresh/frozen/FFPE tissue; plant and agri-food samples</li> <li>Previously extracted DNA or RNA (for PCR setup)</li> </ul> |
| Extraction method              | Magnetic beads   |
| Reagents                       | <ul style="list-style-type: none"> <li>Several commercial kits</li> <li>Pre-filled plates for specific protocols</li> </ul>  |
| Processing capacity            | Up to 48 samples   |
| Operating volumes              | <ul style="list-style-type: none"> <li>Minimisation of dead volumes according to consumables</li> <li>Customisation of starting volume and elution volume</li> </ul>   |
| Compatibility with consumables | With different plates or strips according to thermal cyclers   |
| Connectivity                   | <ul style="list-style-type: none"> <li>Bidirectional interface with the hospital laboratory information system</li> <li>Connection to the most common thermal cyclers for Real-Time PCR plate design</li> </ul>                            |
| Assay flexibility              | Other liquid handling protocols (e.g. aliquoting, serial dilution)   |

## PERFORMANCE

Reproducibility and precision

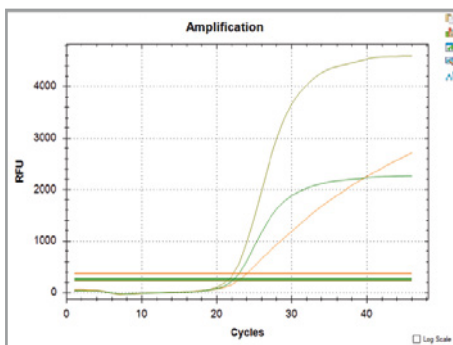


Fig. 1  
Qualitative Real-Time PCR.  
Amplification of SARS-CoV-2 RNA genes and internal control (S gene, RdRP gene, IPC).

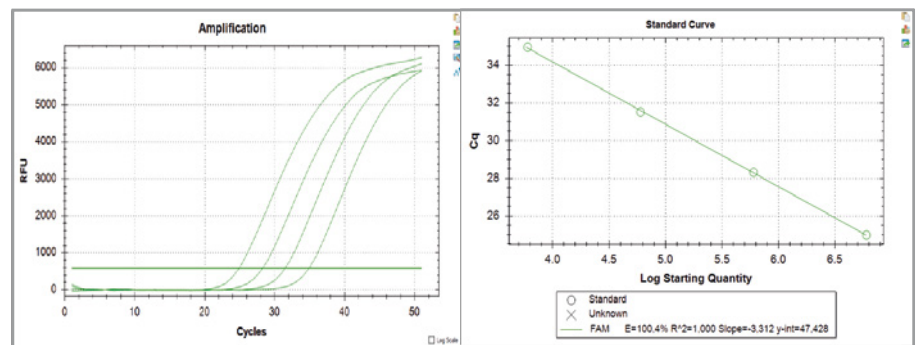








Fig. 2  
Quantitative Real-Time PCR.  
Serial dilutions for standard curve preparation (CMV DNA).

## AUTOMATED PROTOCOLS

|   |  |   |
|---|--|---|
| <b>Blood genetic diseases</b><br> <ul style="list-style-type: none"> <li>Coagulation</li> <li>Hemochromatosis</li> <li>Hemoglobinopathies</li> <li>Thalassemias</li> </ul> | <b>Genetic diseases</b><br> <ul style="list-style-type: none"> <li>Cystic fibrosis</li> <li>Chromosomal anomalies</li> <li>Drug resistance</li> </ul> | <b>Oncological diseases</b><br> <ul style="list-style-type: none"> <li>Lung cancer</li> <li>Colorectal cancer</li> <li>Pancreatic cancer</li> <li>Follicular cancer</li> <li>Melanoma</li> </ul> |
| <b>Microbiology</b><br> <ul style="list-style-type: none"> <li>CMV</li> <li>HCV</li> <li>HBV</li> <li>Chlamydia trachomatis</li> <li>SARS-CoV-2</li> </ul>                 | <b>Intolerances</b><br> <ul style="list-style-type: none"> <li>Lactose</li> <li>Gluten</li> </ul>   | <b>Others</b><br> <ul style="list-style-type: none"> <li>Cardiomyopathies</li> <li>Metabolic diseases</li> <li>Immunological compatibility</li> </ul>  |