

Application guide - PCR setup solution

# Sophisticated automated PCR setup solution on the Xiril robotic workstation



Xiril X75-1-2

### High flexibility combined with ease of use

Polymerase chain reaction assays play a key role in the modern research and diagnostic laboratories. Its sensitivity requires precise and reproducible pipetting of small volumes of samples and expensive reagents. Thanks to Xiril automated PCR setup solution we provide you a highly accurate, reliable and cost-effective solution.

Many advantages are apparent when using the Xiril PCR setup solution, for example time-consuming and error-prone manual pipetting can be omitted and the risk of cross-contamination is minimized. A further advantage of our workstation is its unsurpassed flexibility to run virtually any PCR type thanks to the Lirix software wizard. This high-performance tool allows a fast setup of even complex assays where samples, controls and standards are defined for each PCR and can be tested with up to 10 different master mixes. Finally the identification and tracking of bar-coded samples ensures the data integrity throughout the whole laboratory workflow.

# Convince your self of the reliability of our PCR setup solution, order your free demo-version!

## **Key Features**

- Ready and easy to use system
- Precise and reliable pipetting of DNA template and master mix
- High sample throughput (up to 96 incl. controls) and increased hands off time
- Flexibility to newly redefine pipetting scheme for each assay
- Sample identification
- Free demo-version available (solution for 2 master mixes)



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# High potential of the Xiril PCR setup solution

Table 1: Advantages of the Xiril PCR setup soltuion.

Possibilities	Description	
Sample number	The sample number is defined at the beginning of every run	
Standard combination	Ability to add as many standards as required	
Controls combination	Each master mix and/or inhibition mix can be tested with any control	
Master mixes	Up to 10 different master mixes can be used for the same sample	
Flexibility in the setup	Every sample can be tested with every master mix in the needed multiplicative	
Flexibility in the pipetting scheme	Pipetting scheme can be redefine for each assay or can be definitively set	
Dispense mode	Single and multi dispense mode of master mix possible	
Master mixes preparation	Mater mixes can either be prepared before use or during the process	
Temperature control	Active or passive cooling of the PCR microplate is possible	
Sample identification	Samples in microplates or tubes can be identified by barcode reading	
Flexibility in the choice of PCR tubes	Skirted, semi-skirted, non skirted and tubes strips are suitable for the Xiril decktrays	

### Automated processing requirements for the Xiril robotic workstation

The Xiril robotic workstations are easily configured to meet different demands for capacity, throughput and pipetting scheme. Three deck sizes (75 cm, 100 cm and 150 cm footprint) and the option of one to eight pipettes provide the flexibility to readily meet your requirements. One workstation for the PCR setup solution is the X75-1-2.

# A. DECK SETUP OF THE XIRIL ROBOTIC WORKSTATION 75 WITH ONE ROBOTIC ARM AND TWO PIPETTES (X75-1-2)

The PCR setup deck layout on a Xiril 75-1-2 robotic workstation can be easily reconfigured to user's needs with the flexibility to position hardware and labware freely on the instrument deck. Please refer to the figure below for the recommended deck layout.

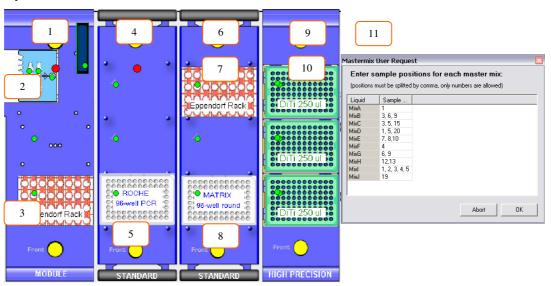


Figure 1: Deck layout for PCR Setup on the Xiril 75-1-2 robotic workstation

1: Module Decktray, 2: Tip waste station and liquid waste, 3: Rack for 1.5 ml Eppendorf tubes, 4: Standard Decktray, 5: 96-well PCR microplate, 6: Standard Decktray, 7: Rack for 1.5 ml Eppendorf tubes, 8: 96-well microplate, 9: High Precision Decktray, 10: 250 µl Rainin filter tips, 11: Sample input window.



### B. MATERIAL SUPPLIED WITH THE XIRIL ROBOTIC WORKSTATION X75-1-2

The following is a list of Xiril parts (see table 2) required for the automation of the PCR setup on the Xiril 75-1-2 robotic workstation.

#### Table 2: List of the required Xiril parts

Part number	Part Description	Quantity
900 001	Xiril 75 incl. in-built PC, one robotic arm, two pipettes for 2-250 $\mu\text{I}$	1
950 006	High Precision Decktray (3 racks positions)	1
950 004	Standard Decktray (3 rack positions)	2
950 060	Module Decktray left (incl. tip waste)	1
950 052	Liquid waste reservoir	1
950 012	Adapter for Rainin disposable tip rack	3
950 032	Rack for 32 microfuge tubes, 1.5-2.0 ml (polyamide; microplate footprint; autoclavable)	2
990 005	Software add on for Lirix 2.2.29 (or higher)	1

### C. OPTIONAL MATERIAL

Thanks to our modular structure, additional material can be purchased, allowing you to fulfil special requirements such as microplate cooling and shaking, sample barcode reading or plate moving. Several examples of available material are listed in the following table 3.

#### Table 3: Additional material

Part number	Part Description
	X100 or 150 one robotic arm incl. four to eight pipettes 2-250 $\mu l$
	Neon 100 or 150 one robotic arm incl. four to eight pipettes for 2-250 $\mu l$
950 007	High Precision Decktray (4 racks positions)
950 005	Standard Decktray (4 rack positions)
920 012	Plate-TempX 1 position (heating/ cooling device for one microplate)
920 005	Plate-ShakeX (microplate shaker)
920 017	Tube-ScanX for 50 tubes for X75 (incl. camera, decktray and racks)
920 020	Tube-ScanX for 96 tubes for 100-series or 150-series (incl. camera, decktray and racks)
920 008	Plate-GripX (plate handling tool)
950 054	Rack for 32 microfuge tubes, 1.5-2.0 ml (aluminium; microplate footprint; autoclavable)
950 018	Customized reagent racks