

MxQuant kit requirements

This document specifies additional lab equipment and chemicals that are required but **not** included with the kit. Before starting with the kit, ensure that all required items are available.

LC-MS system

Agilent	SCIEX	Waters
Mass spectrometer		
6495C Triple Quadrupole LC/MS System	5500+, 6500+, 7500 series (QTRAP or Triple Quad) with TurboV™ ion source	Xevo TQ-XS with ESI source
LC system and autosampler		
<ul style="list-style-type: none"> – Agilent 1290 Infinity I/II UHPLC system with column oven. – 1290 Infinity II inline filters, 0.3 µm (2 pcs., before and after injection valve, Agilent part no. 5067-6189) – 96-well plate autosampler with temperature control (4 °C) – Injection volume: 2 µL 	<ul style="list-style-type: none"> – Standard flow UHPLC system with column oven – 96-well plate autosampler with temperature control (4 °C) – Injection volume range: 1–2 µL – Shimadzu and ExionLC autosamplers capable of accepting 96 well plates: Plate calibration video 	<ul style="list-style-type: none"> – Waters ACQUITY UPLC® system with sample manager, solvent manager, and column oven: <ul style="list-style-type: none"> – Classic (loop-based) – I-Class (FTN) – H-Class (FTN) – Injection volume range: 1–2 µL
NanoLC and microLC are not supported!		
Tubing		
<ul style="list-style-type: none"> – Recommended between injector and analytical column: steel capillary – Recommended between analytical column and mass spectrometer: red PEEK Tubing 1/16" OD x 0.005" ID 		
Condition		
<ul style="list-style-type: none"> – Instrument is well maintained and serviced on a regular basis according to manufacturer's recommendations – MS tuned and calibrated in both positive <u>and</u> negative ion modes – LC-MS system must be free of ion pairing reagents 		

Column components (available as package or individually)

Component	Requirement
Column package	MxP® Quant 1000 kit column (1 pc.) + precolumn (3 pcs.) biocrates part number 22558
Analytical column	MxP® Quant 1000 kit column biocrates part number 22565
Precolumn	MxP® Quant 1000 kit precolumn biocrates part number 22572

Laboratory equipment

Equipment	Requirements (may be available from local distributor)	
	Nitrogen evaporator for 96-well plates	Pressure manifold for 96-well plates
Nitrogen evaporator* or pressure manifold* – Requires nitrogen supply – Must be in a fume hood – No heater required	Examples: – Porvair blowdown evaporator MiniVap® – Techne (FSC496D) – Sample concentrator from BenchTop Lab Systems (96 samples, BT1604) – VLM evaporators – Organomation MICROVAP microplate evaporator – Biotage TurboVap® 96	Examples: – Porvair UltraPPM LITE – Waters positive pressure-96 processor (186006961) – Biotage® PRESSURE+ 96 manifold (PPM-96) – CEREX® system 96 processor (288-0001) – Agilent positive pressure manifold 96 processor (PPM-96) – TECAN Resolvex® M10 96 <div style="background-color: #fff9c4; padding: 5px; border: 1px solid #ccc;">  Adapter required for drying plate biocrates part number 20981 </div>
Centrifuge	Must be able to centrifuge 96-well plates of 5 cm height at 500 x g	Not required when a pressure manifold is used.
Plate heater	For 96-well plate incubation at 35 °C, e.g. Eppendorf shaker with heated lid (ThermoTop®) or oven	
Shaker	Any model with adjustable speed (450–1200 rpm) including a tray for plates and vials. Recommended: Eppendorf MixMate® or ThermoMixer®	
Pipettes	– Repeater, e.g. Eppendorf Multipette® E3 (with 2.5 and 10 mL tips) or similar electronic model – Single channel: volume range 10 µL–1000 µL	
Vortexer	Any model	
Balance	Accuracy < 1 mg	
Solvent bottles	50–1000 mL	

* See document “Technical guide-Nitrogen evaporators and pressure manifolds” for details.

Solvents and chemicals

Solvents and chemicals	Purity
Methanol, water, acetonitrile, isopropanol	LC-MS grade
Formic acid	LC-MS grade (e.g. Honeywell Fluka™ 56302-50 mL) Fresh! New bottle or opened within past 6 months
Phenyl isothiocyanate (PITC)	99%, for protein sequencing (e.g. Sigma-Aldrich 317861) Fresh! New bottle or opened within past 6 months
Pyridine	>99% (e.g. Acros Organics 131780500, 50 mL) Fresh! New bottle or opened within past 6 months
Triethylamine	>99% (e.g. Sigma-Aldrich 90335-100 mL) Fresh! New, unopened bottle
Ammonium acetate	LC-MS grade
Phosphate buffered saline (PBS)	p.a. grade (e.g. Sigma-Aldrich P4417)

Software

Agilent	SCIEX	Waters
MS software		
MassHunter version 10.1 or later	Analyst® version 1.7.3 or later SCIEX OS version 3.4 or later	MassLynx® version 4.2 or later
biocrates WebIDQ workflow manager		

Subscriptions available through biocrates webshop or local distributor:

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| – WebIDQ basic subscription (4 GB storage space) | biocrates part number 22336.1 |
| – WebIDQ core subscription (8 GB storage space) | biocrates part number 21629.3 |
| – WebIDQ core+ subscription (50 GB storage space) | biocrates part number 21926.3 |
| – WebIDQ on-premises subscription | biocrates part number 21636.3 |

For detailed system requirements please visit:

<https://shop.biocrates.com/faq/What-are-the-system-requirements-for-WebIDQ>