

## SMartIDQ alpha 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

SCIEX
Mass spectrometer
Triple Quad 5500+ with Turbo V ion source
LC and autosampler
<ul style="list-style-type: none"> <li>– Standard flow HPLC or UHPLC system with column oven.</li> <li>– <b>NanoLC and microLC are not supported!</b></li> <li>– 96-well plate autosampler with temperature control (10 °C)</li> <li>– Injection volume: 5 µL</li> <li>– Special sample rack for deep-well plates required for the following autosamplers:               <ul style="list-style-type: none"> <li>– Shimadzu: part no. 228-37546-92 (Deep-well MTP Rack, DWP-96)</li> <li>– UltiMate 3000: Thermo part no. 6820.4083 (30 – 36 mm height)</li> </ul> </li> </ul>
Tubing
<ul style="list-style-type: none"> <li>– Recommended between injector and column system: steel capillary</li> <li>– Recommended between column system and mass spectrometer: red PEEK Tubing 1/16" OD x 0.005" ID</li> </ul>

### LC-MS instrument status

Condition
<ul style="list-style-type: none"> <li>– <b>Serviced, calibrated and tuned instruments</b> according to manufacturer’s recommendations on a regular basis</li> <li>– LC-MS system must be <b>free of ion-pair reagent</b></li> </ul>

## Analytical column

HPLC and UHPLC	
Analytical column	<b>SMartIDQ alpha kit column system:</b> biocrates part number 21117.3 (UHPLC), 21117.4 (HPLC) (HPLC/UHPLC column + pre-column mixer + connector, factory assembled)

## Laboratory equipment

Laboratory equipment (may also be available from your local kit distributor)		
	Nitrogen evaporator for 96-well plates	Pressure manifold for 96-well plates
Nitrogen evaporator* <u>or</u> pressure manifold* – Requires nitrogen supply – Must be in a fume hood – No heater required	<b>Examples:</b> – Porvair blowdown evaporator MiniVap® – Techne (FSC496D) – Sample concentrator from BenchTop Lab Systems (96 samples, BT1604) – VLM evaporators – Organomation MICROVAP microplate evaporator – Biotage TurboVap® 96	<b>Examples:</b> – 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
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.
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 Multipipette® 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.

## Urine extension (if applicable)

Only for users analyzing urine samples

biocrates part number 21933.1

## Solvents and chemicals

Solvents and chemicals	Purity
Ethanol, methanol, water, acetonitrile, isopropanol	LC-MS grade (ethanol: HPLC grade sufficient)
Formic acid	LC-MS grade (e.g. Honeywell Fluka™ 56302-50ML) <b>Fresh! New bottle or opened within past 6 months</b>
Phenyl isothiocyanate (PITC)	99%, for protein sequencing (e.g. Sigma-Aldrich 317861) <b>Fresh! New bottle or opened within past 6 months</b>
Pyridine - or - Triethylamine (Urine only)	Purity >99% (recommended Acros Organics 131780500, 50mL) <b>Fresh! New bottle or opened within past 6 months</b>
Ammonium acetate	Purity ≥99.5% (e.g. Sigma-Aldrich 90335-100ML)
Phosphate buffered saline (PBS)	LC-MS grade
	p.a. grade (e.g. Sigma-Aldrich P4417)

## Software

SCIEX

MS software

- Analyst® (version 1.7 or later)
- SCIEX OS (version 3 or later)

biocrates WebIDQ workflow manager

Please get one of the three subscription versions through our webshop or your local distributor:

- WebIDQ cloud subscription (10 GB storage space) – biocrates part number 21629
- WebIDQ cloud+ subscription (50 GB storage space) – biocrates part number 21926
- WebIDQ on-premises subscription – biocrates part number 21636

For detailed system requirements please visit:

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