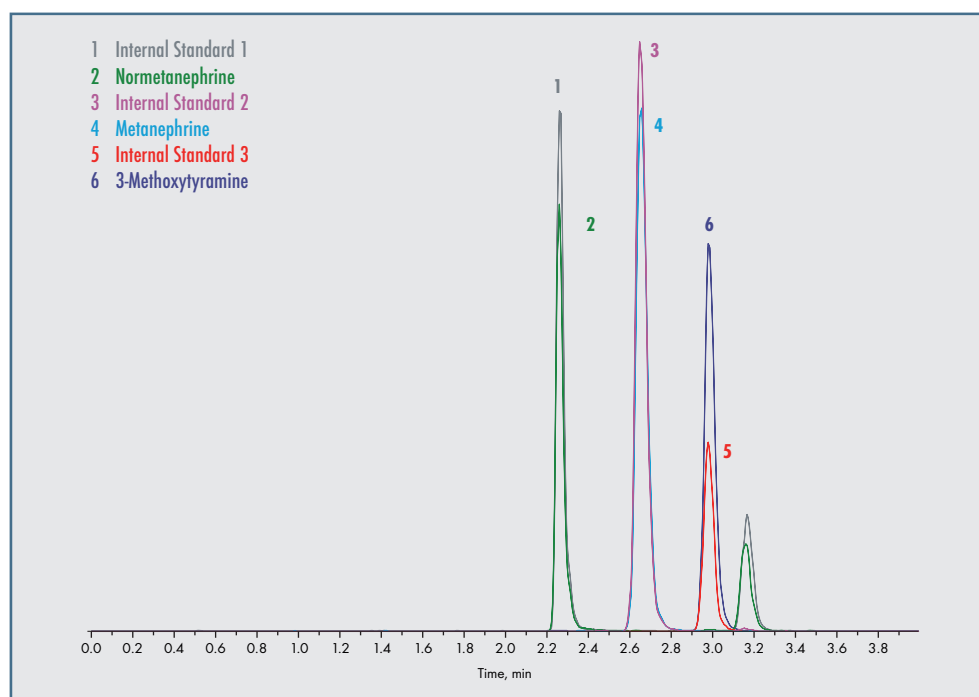


MassChrom® Total Metanephrines (free + conjugated) in Urine with Sample Clean Up Columns Sample Prep Set for LC-MS/MS Analysis

- > Identical Chromatographic Platform for all Sample Prep Sets
- > Isotopically labelled internal standards
- > 6PLUS1® Multilevel Calibrator Set & MassCheck® controls



This Sample Prep Set allows the quantitative determination of total metanephrine, normetanephrine and 3-methoxytyramine in patient urine samples by LC-MS/MS. The conjugated metanephrines are released by hydrolysis and are determined as sum together with the free forms. One typical application of this kit is the analysis of patient samples with a suspicion of catecholamine-secreting tumours.

The Sample Prep Set encompasses all components required for an efficient and fast sample preparation. After hydrolysis of the conjugated metanephrines, the sample is purified by solid phase extraction (SPE) with Sample Clean Up Columns, and the concentration of the total metanephrines is determined. The 6PLUS1® Multilevel Calibrator Set and MassCheck® controls ensure high precision of results.

There is also a method using 96 SPE Well Plate (80700/96) as well as the corresponding fully automated method available for laboratories with a higher sample throughput.

SPECIFICATIONS

Limit of quantification: 4.0–5.5 µg/l
 Linearity:
 Metanephrine, Normetanephrine up to 20 mg/l
 3-Methoxytyramine up to 10 mg/l
 Recovery: 92–107 %
 Intraassay: CV = 2.5–5.6 %
 Interassay: CV = 3.2–4.9 %
 Analysis time: 4.0 min

PRE-ANALYTIC TREATMENT

Specimens: 24 h urine collected in a suitable container with 10 ml of 10–25 % HCl. Spontaneous urine can be also analysed (see instruction manual).
 Stability: protected from light, patient specimens are stable for up to 7 days at +2 to +8 °C. For longer storage periods keep samples frozen below -18 °C.

SAMPLE PREPARATION

- > Pipette 200 µl sample/calibrator/MassCheck® control into a reaction vial.
- > Add 50 µl Internal Standard Mix + 25 µl Hydrolysis Buffer.
- > Close reaction vial, mix briefly.
- > Hydrolyse for 30 min at 95 °C.
- > Cool for at least 10 min at +2 to +8 °C.
- > Pipette 50 µl of the hydrolysate into a Sample Clean Up Column.
- > Add 600 µl Neutralisation Buffer.
- > Centrifuge 5 min at 150 x g, discard effluent.
- > Add 0.9 ml Wash Buffer 1, centrifuge 5 min at 150 x g, discard effluent.
- > Add 2 x 0.9 ml Wash Buffer 2, centrifuge each time 1 min at 150 x g, discard effluent.
- > Centrifuge 1 min at 2000 x g to dryness, discard effluent.
- > Change collection vials. (Use glass vials, see instruction manual).
- > Pipette 500 µl Elution Buffer into each Sample Clean Up Column and centrifuge 2 min at 100 x g.
- > Pipette 500 µl Dilution Buffer into each glass vial.
- > Close glass vials.
- > Vortex, transfer to autosampler.
- > Inject up to 20 µl into the LC-MS/MS system.

LC-MS/MS PARAMETERS

Injection volume: ≤ 20 µl
 Ionisation: ESI positive
 MS/MS-Mode: MRM
 Column temperature: ambient (~ 25 °C)

ORDERING INFORMATION

These products are not available in all countries

Order no.	Product
80000	MassChrom® Biogenic Amines/Metabolites in Urine: Chromatographic Platform Starter Set
	Components available separately:
80001	Mobile Phase A, 1000 ml
80002	Mobile Phase B, 500 ml
80009	Rinsing Solution, 1000 ml
80100	Analytical column (equilibrated with test chromatogram), 1 pc.
80700/C	MassChrom® Biogenic Amines/Metabolites in Urine: Total Metanephrines (free + conjugated) with Sample Clean Up Columns Sample Prep Set for 96 determinations
	Components available separately:
80703	Hydrolysis Buffer, 2.5 ml
80704	Internal Standard Mix, 5 ml
80605	Neutralisation Buffer, 60 ml
80606	Wash Buffer 1, 90 ml
80607	Wash Buffer 2, 90 ml
80608	Elution Buffer, 50 ml
80609	Dilution Buffer, 50 ml
80055	Sample Clean Up Columns MassChrom® Biogenic Amines/Metabolites in Urine, 96 pcs.
33006	Reaction vials, transparent, 100 pcs.
	Startup Accessories:
80615	Tuning Mix (Analytes and Internal Standards), 1 ml
80610	System Check Solution, 1 ml
15070	Stainless steel prefilter housing, 1 pc.
15071	Stainless steel prefilter, 0.5 µm, 5 pcs.
J0601	Autosampler vials, screw neck, amber glass, 1.5 ml, 100 pcs.
J0504	PE Screw-on caps, rubber/PTFE septa, 9 mm, 100 pcs.
33007	Tubes for sample preparation, 50 pcs.
	Chromsystems Multilevel Calibrator and MassCheck® Controls (lyoph.):
80739	6PLUS1® Multilevel Urine Calibrator Set Total Metanephrines, 7 x 2 ml
0376	MassCheck® Total Metanephrines Urine Control Level I, 5 x 2 ml
0377	MassCheck® Total Metanephrines Urine Control Level II, 5 x 2 ml