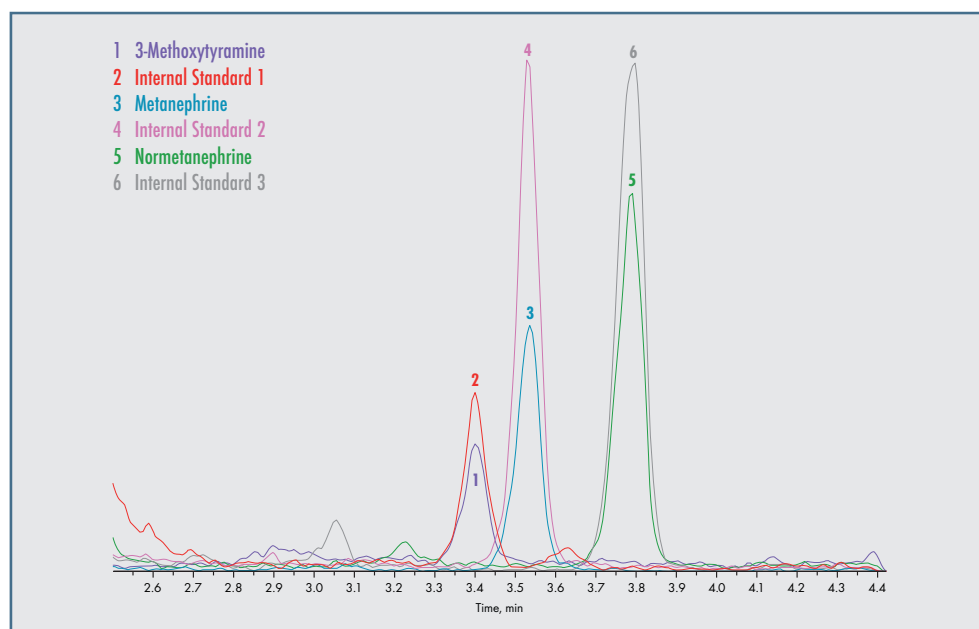


MassChrom® Free Metanephrines in Plasma with Sample Clean Up Columns Reagent kit for LC-MS/MS Analysis

- > 6PLUS1® Multilevel Calibrator Set and **MassCheck®** controls based on human plasma
- > Simple sample prep in just a few steps
- > Chromatographic separation of analytes – no co-elution
- > Isotopically labelled internal standards for all analytes



Pheochromocytomas and other neural crest tumours (e.g. paragangliomas and neuroblastomas) secrete metanephrine, normetanephrine and 3-methoxytyramine. These plasma free metanephrines are more stable and secreted more evenly than catecholamines (epinephrine, norepinephrine, and dopamine). Some studies show that the analysis of plasma free metanephrines has the highest sensitivity and specificity in pheochromocytoma diagnostics compared to plasma free catecholamines and metanephrines in urine.

This kit allows the quantitative determination of metanephrine, normetanephrine and 3-methoxytyramine in plasma by LC-MS/MS. It encompasses all required components and allows a simple and fast sample preparation: solid phase extraction (SPE) without equilibration/conditioning steps, analyte enrichment without evaporation step, only one elution step. The analytes are chromatographically separated to avoid co-elution and to minimise risks of interferences. The use of stable isotope-labelled internal standards for every single analyte ensures reproducible and reliable quantification. The 6PLUS1® Multilevel Plasma Calibrator Set and **MassCheck®** controls ensure high precision of results. They are obtained from human plasma to minimize matrix-induced differences.

Alternatively, there is also a method available using 96 SPE Well Plates (81000).

SPECIFICATIONS

Limit of quantification
 Metanephrine: 15 ng/l
 Normetanephrine: 7 ng/l
 3-Methoxytyramine: 11 ng/l

Linearity
 Metanephrine: up to 5650 ng/l
 Normetanephrine: up to 8500 ng/l
 3-Methoxytyramine: up to 5800 ng/l

Recovery: 89-100 %
 Intraassay: CV = 2.7-6.9 %
 Interassay: CV = 3.3-8.6 %
 Analysis time: 5 min

PRE-ANALYTIC TREATMENT

Specimens: plasma

SAMPLE PREPARATION

- > Pipette 500 µl Dilution Buffer and 25 µl Internal Standard Mix into each Sample Clean Up Column.
- > Add 500 µl of the sample/calibrator/**MassCheck®** control, centrifuge, discard effluent.
- > Add 0.9 ml Wash Buffer 1, centrifuge, discard effluent.
- > Add 2 x 0.9 ml Wash Buffer 2, centrifuge, discard effluent.
- > Add 250 µl Elution Buffer and centrifuge.
- > Inject up to 25 µl.

LC-MS/MS PARAMETERS

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

ORDERING INFORMATION

| Order no. | Product |
|-----------|--|
| 81000/C | MassChrom® Free Metanephrines in Plasma with Sample Clean Up Columns For 2 x 96 determinations |

Components available separately:

| | |
|-------|-----------------------------------|
| 81001 | Mobile Phase A, 750 ml |
| 81002 | Mobile Phase B, 450 ml |
| 81003 | Dilution Buffer, 50 ml |
| 81004 | Internal Standard Mix, 2 x 2.5 ml |
| 81005 | Wash Buffer 1, 90 ml |
| 81006 | Wash Buffer 2, 90 ml |
| 81007 | Elution Buffer, 25 ml |
| 81009 | Rinsing Solution, 500 ml |
| 81055 | Sample Clean Up Columns, 96 pcs. |

Startup Accessories:

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|-------|--|
| 81100 | Analytical column, equilibrated, with test chromatogram, 1 pc. |
| 81015 | Tuning Mix (Analytes and Internal Standards), 1 ml |
| 81010 | System Check Solution, 1 ml |
| 33007 | Tubes for sample preparation, 50 pcs. |
| 15070 | Stainless steel prefilter housing, 1 pc. |
| 15071 | Stainless steel prefilter, 0.5 µm, 5 pcs. |
| J0602 | Autosampler vials, screw neck, 15 µl inner cone, clear glass, 1.1 ml, 100 pcs. |
| J0410 | PP Screw-on caps, silicone/pierceable PTFE septa, 1.0 mm, 100 pcs. |

Chromsystems Multilevel Calibrators and MassCheck® Controls for Free Metanephrines in Plasma (lyoph.):

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|-------|--|
| 81039 | 6PLUS1® Multilevel Plasma Calibrator Set Free Metanephrines, 7 x 3 ml |
| 0384 | MassCheck® Free Metanephrines Plasma Control, Level I, 5 x 3 ml |
| 0385 | MassCheck® Free Metanephrines Plasma Control, Level II, 5 x 3 ml |
| 0386 | MassCheck® Free Metanephrines Plasma Control, Level III, 5 x 3 ml |