

Metanephrines, i.e. metanephrine (M), normetanephrine (NM), and 3-methoxytyramine (MT), are the primary metabolites of the catecholamines. Similar to the catecholamines, the determination of the metanephrines is used to detect or rule out tumors of the sympathoadrenal system. For this purpose, this test kit of RECIPE features particular user friendliness within sample preparation. For a safe and convenient check-up of the pH-value prior to sample extraction, a special diluting solution with colour indicator is available. The distinct colouring of the indicator assures that the analyte extraction is performed under appropriate pH conditions (pH > 6).

Also available: Test kits for automated sample preparation (see pages 28 - 29).

## Biogenic Amines

# Metanephrines in Urine

### Test Data

Linearity:	8 - 10000 µg/l
Recovery:	60 %
LOD / LLOQ:	5 µg/l / 8 µg/l
Precision	
Intraassay:	1.7 % (NM), 3.0 % (M), 2.5 % (MT)
Interassay:	1.8 % (NM), 2.9 % (M), 1.9 % (MT)

### HPLC Parameters

Isocratic Pump:	flow rate: 1.0 ml/min
Injection vol. / int.:	20 µl / 17 min
EC-Detector:	pot.: 650 mV, sen.: 50 nA
HPLC-Thermostat:	30 °C

### Sample Preparation

#### Hydrolysis:

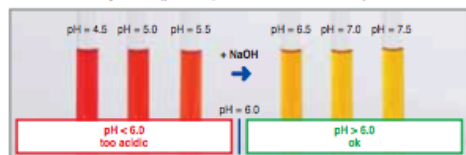
1 ml urine	20 µl Internal Standard IS
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- adjust pH to 0.5 - 1.0
- incubate (30 min, 90 - 100 °C)

#### pH adjustment:

Add 4 ml Diluting Solution D (contains colour indicator)
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- check, if the sample is yellow (pH > 6) → if necessary, add 1 M NaOH dropwise



#### Extraction:

Apply the whole sample on the sample preparation column
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- wash (HPLC water and Washing Solution W)

#### Elution:

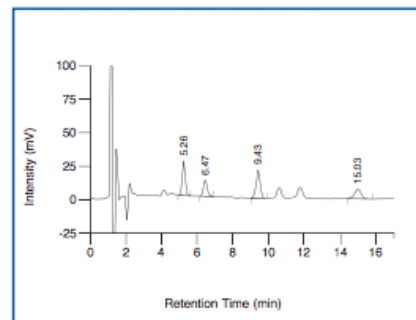
Elute with 5 ml Eluting Reagent E (receiver vial: 1 ml Stabilising Reagent S)
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#### HPLC Analysis:

- collect the eluate

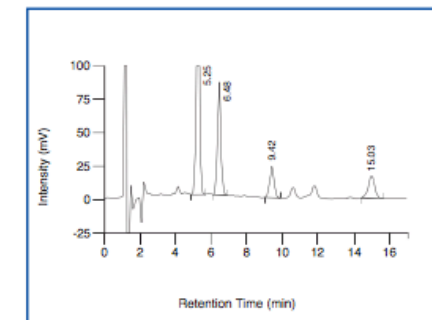
Inject 20 µl
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ClinChek® Urine Control, Level I



Normetanephrine: 5.26 min, Metanephrine: 6.47 min, IS: 9.43 min, 3-Methoxytyramine: 15.03 min

ClinChek® Urine Control, Level II



Normetanephrine: 5.25 min, Metanephrine: 6.48 min, IS: 9.42 min, 3-Methoxytyramine: 15.03 min

### Ordering Information

Order No.	Description	Quantity
4000	ClinRep® Complete Kit for Metanephrines in Urine for 100 assays	1 pce.
<b>Kit components (order no. 4000):</b>		
4010	Mobile Phase	1000 ml
4011	Standard Solution	10 ml
4012	Internal Standard IS	3 ml
4013	Urine Calibrator, lyophil.	5 x 8 ml
4020	Sample Preparation Columns	2 x 4020 (2 x 50 pcs.)
4022	Diluting Solution D	400 ml
4023	Washing Solution W	400 ml
4024	Eluting Reagent E	2 x 4024 (2 x 250 ml)
4025	Stabilising Reagent S	100 ml
	Manual	1 pce.
	Quick Reference	1 pce.
<b>Start Accessories:</b>		
4030	Analytical Column with test chromatogram	1 pce.
<b>Accessories:</b>		
FK4000	Column Rack (for 20 columns)	1 pce.
FK6300	Reagent tube (100 x 16 mm) with screw cap and o-ring, PP, autoclavable up to 121 °C	50 pcs.
<b>ClinChek® Controls:</b>		
8820	Urine Control, lyophil., Level I	10 x 8 ml
8821	Urine Control, lyophil., Level II	10 x 8 ml
8822	Urine Control, lyophil., Level I, II	2 x 5 x 8 ml

→ Safe and convenient pH-adjustment

→ Robust chromatography

→ Low cost per test

