

# Catecholamines

## General:

Catecholamines are produced in brain, adrenal medulla, in extrarenal chromatic tissue as well as in sympathetic nerve endings (norsuprarenalin). The determination of adrenaline and noradrenaline as well as their reduction products (vanillyl mandelic acid, metanephrines, homovanillic acid) is important for the diagnostics of tumors of the sympatho-suprarenal system.

The following tests are available:

- **Adrenaline (Epinephrine) in plasma**

Indication: suspicion of phaeochromocytoma, neuroblastoma, ganglioneuroma, arterial hypertension

Material: 1 ml EDTA-plasma, **Frozen**

Preanalytics: EDTA- or heparin-plasma, frozen!

TAT: 7-10 days\*

Method: HPLC

Units: ng/l

Ref.- range: <90

Note: determination in urine is more specific than in plasma

- **Noradrenaline (Norepinephrine) in plasma**

Material: 2 ml EDTA-plasma, **Frozen**

Preanalytics: EDTA- or heparin-plasma, frozen!

TAT: 7-10 days\*

Method: HPLC

Units: ng/l

Ref.- range: <500

Note: determination in urine is more specific than in plasma

- **Dopamine in plasma**

Material: 2 ml EDTA-plasma

Preanalytics: EDTA- or heparin-plasma, frozen!

TAT: 7-10 days\*

Method: HPLC

Units: ng/l

Ref.- range: <85

Note: determination in urine is more specific than in plasma

- **Adrenaline (Epinephrine), in urine**

Indication: suspicion of phaeochromocytoma, neuroblastoma, ganglioneuroma, arterial hypertension

Material: 10 ml 24-hour-urine

Preanalytics: please indicate total volume, add 10 ml of concentrated HCl into the 24 hour-collecting container prior to collection.

TAT: 7-10 days\*

Units: µg/24h

Method: HPLC

Ref.- range: <20

Note: Determination in urine is more specific than in plasma.

The following medication should be stopped 8 days before and during urine collection: α-methyldopa, clonidine, guanethidine, reserpine, β-blocker, quinidine-containing preparations, ampicillin, erythromycin and tetracycline. The following food products should be avoided 2 days before and during urine collection: coffee, black tea, bananas and cheese.

**• Noradrenaline (Norepinephrine) in urine**

Indication: suspicion of phaeochromocytoma, neuroblastoma, ganglioneuroma, arterial hypertension

Material: 10 ml 24-hour-urine

Preanalytics: please indicate total volume, add 10 ml of concentrated HCl into the 24 hour-collecting container prior to collection.

Units: µg/24h

TAT: 7-10 days\*

Method: HPLC

Ref.- range: <15.0 - 79.0

**• Dopamine in urine**

General:

Dopamine has alpha- and beta-sympathomimetic characteristics. It increases the kidney blood circulation, urine secretion and CMO (cardiac minute output). Beside vanillyl mandelic acid (VMA), metanephrine, homovanillic acid (HVA), epinephrine and norepinephrine it belongs to the catecholamines and is biotransformed to homovanillic acid. The determination is important for diagnostics of tumors of the adrenal system. Function tests (e.g. clonidine test) are additionally recommended.

Indication: suspicion of neuroblastoma, pheochromocytoma or ganglioneuroma, arterial hypertension clarification

Material: 10 ml 24-hour-urine

Preanalytics: please indicate total volume, add 10 ml of concentrated HCl into the 24 hour-collecting container prior to collection.

Units: µg/24h

TAT: 7-10 days\*

Method: HPLC

Ref.- range: see report

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>