BSN Biological Sales Network

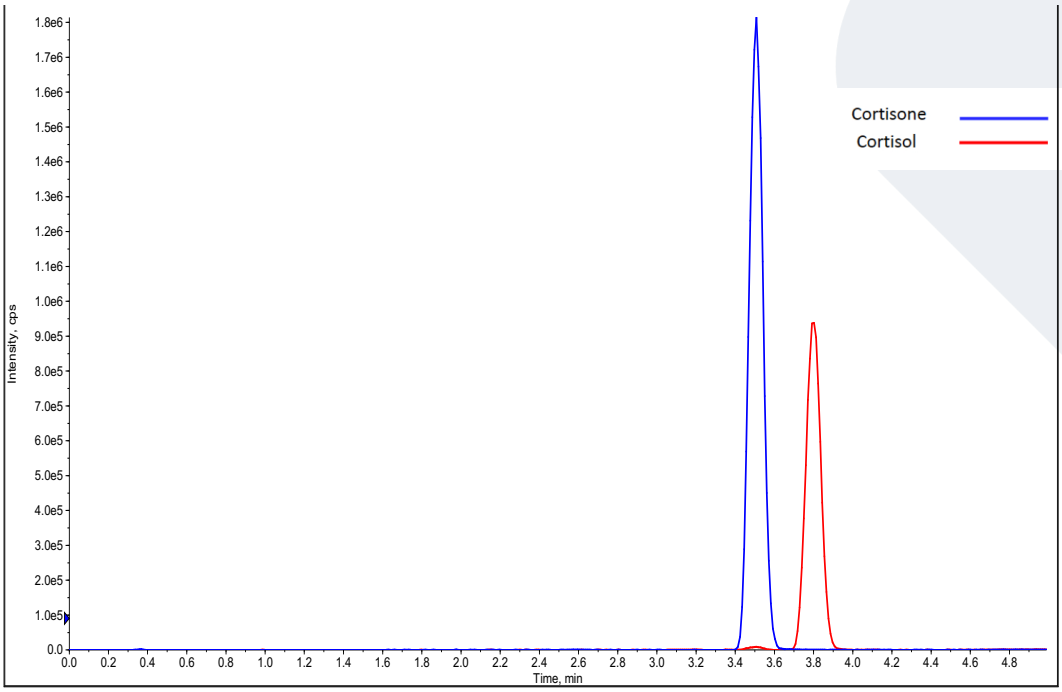
METHOD AT A GLANCE

FLOMASS® URINARY FREE CORTISOL AND CORTISONE

The analysis of free urinary Cortisol (CFU) constitutes the first approach for the screening of endogenous Cushing syndrome (CS) at biochemical laboratory level. CFU measured within 24 hours can be useful also in other clinical conditions characterized by a high level of Cortisol in serum, for example apparent mineralocorticoid excess syndrome (AME).

Cortisol is mainly secreted by adrenal glands, while Cortisone is mainly produced by 11ß-hydroxysteroid dehydrogenase 2 that converts bioactive Cortisol in inactive Cortisone preventing the activation of mineralocorticoid receptor caused by Cortisol.

Cortisol and Cortisone simultaneous determination is very important for the diagnosis of AME, CS but also congenital adrenal hyperplasia and adrenal insufficiency.



HPLC-MS/MS system conditions

Ionization: ESI positive mode
MS/MS: specific MRM
Injection volume: 10 µL (variable according to instrumental sensitivity)
Running time: 6 min
Column heater: 30°C

PROVIDE PERSONAL SOLUTIONS

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Sample preparation

- Prepare Internal Standards Mix Solution as indicated in IFU
- Pipette 200 µL of urine in a 1.5- or 2-mL PP vial
- Add 200 µL of the Mix Solution obtained previously
- Vortex for 20-30 sec
- Wait 5 min and then centrifuge for 5 min at 12000 rpm

Protocol 1 (for medium-high sensitivity instruments)

- Transfer 200 µL of supernatant in a plastic vial with low volume insert and analyze with HPLC-MS/MS technique

Protocol 2 (for low sensitivity instruments)

- Transfer 300 µL of supernatant in a new 1.5- or 2-mL PP vial
- Dry the sample in a heater block (45°C) supplied with nitrogen flow (or use an evaporator under vacuum/centrifuge)
- Resuspend pellet with 30 µL of a mix composed of MPA and MPB (50:50)
- Vortex for 1 min
- Centrifuge for 3 min at 12000 rpm
- Take all the supernatant and pipette it in a plastic vial with low volume insert and analyze with HPLC-MS/MS technique

Performance

ANALYTE	LINEARITY (ng/mL)	LLOD (ng/mL)	LLOQ (ng/mL)	CV% INTRA	CV% INTER
Cortisol	2.4 - 15000	0.8	2.4	1.9 – 9.7	2.2 – 3.5
Cortisone	2.1 - 15000	0.7	2.1	1.1 – 3.8	1.8 – 6.5

Ordering guide

EUM06200	FloMass® Urinary Free Cortisol and Cortisol	200 assays
EUM06041	6-Levels Calibrators, lyophil.	2 x 6 x 1.0 mL
EUM06051	3-Levels Controls, lyophil.	2 x 3 x 2.0 mL
EUM00C06	Analytical Column	1 pc
EUM00A06	Precolumn	4 pcs

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