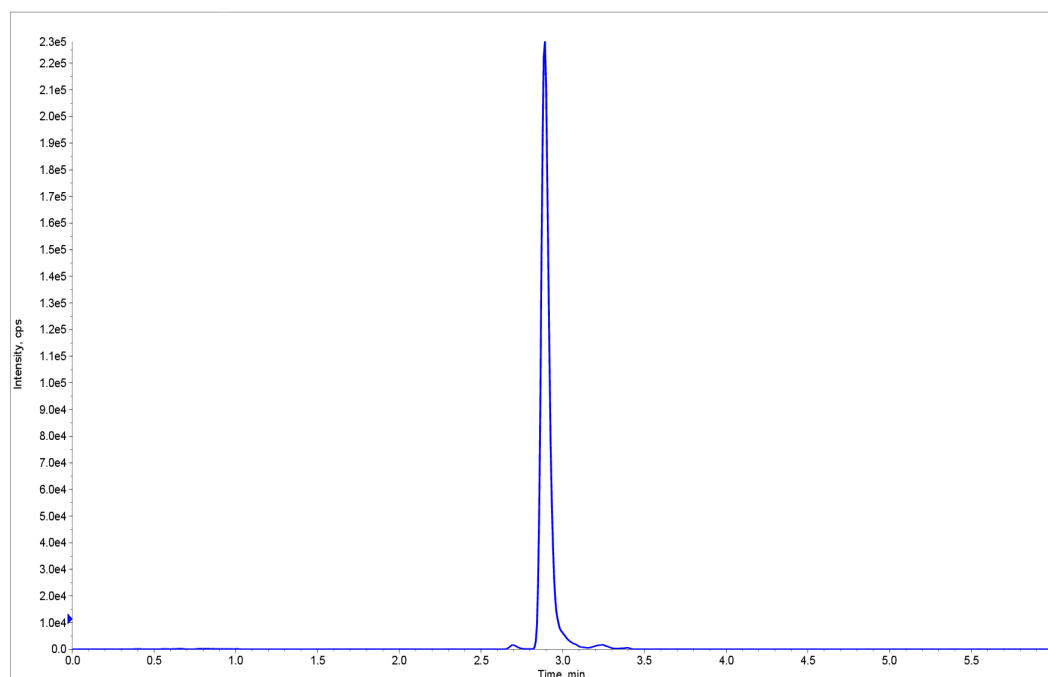


FLOMASS[®] ALDOSTERONE IN SERUM

Aldosterone is the main mineralocorticoid hormone and is produced by the glomerular zone of the adrenal cortex. As the majority of steroid hormones, Aldosterone has origin from cholesterol. Its principal function is electrolytic control. It promotes retention of sodium, chlorides and water and facilitates the elimination of potassium. It is the most active steroid hormone, 25-30 times more than deoxycorticosterone.

Its mechanism of action is based on increasing the reabsorption of sodium ions and secretion of potassium ions from distal tubule and collecting duct system. A typical example of adrenal glands malfunction is Addison's disease where high level of water and sodium chloride can be excreted through urine. Patient's weakness is the main symptom. Without the correct dose of hormone, a severe dehydration can result in death. A complex-level interaction network regulates the production of aldosterone. Renin-angiotensin system and potassium are major regulators.



HPLC-MS/MS system conditions

Ionization: ESI/APCI negative mode

MS/MS: specific MRM

Injection volume: 20 µL (variable according to instrumental sensitivity)

Running time: 6 min

Column heater: 45 °C

Sample preparation

- Prepare a mix with 150 μ L of Sol 1 Dilution + 5 μ L of Internal standard sufficient for the number of samples to be analyzed
- Resuspend 250 μ L of sample in a vial
- Add 150 μ L of Mix Solution obtained in previous step of the procedure and vortex 10 sec
- Transfer the dilute samples in an extraction column SLE
- In order to absorb the liquid in the matrix of the column a slight vacuum may be applied
- Close the vacuum when the sample is completely absorbed by the filter. Wait for 5 min
- Add 900 μ L of Sol 2 extraction to the column, apply the vacuum and completely elute from the column*
- Repeat the operations of the previous point*
- Evaporate until dry with nitrogen flow rate (about 1.2 mL of eluate)
- Resuspend with 30 μ L of Mobile Phase B and vortex
- Add 30 μ L of Mobile Phase A and vortex
- Transfer it in vials and analyze with HLC-MS/MS technique

* **WARNINGS:** it is recommended to put the eluate in glass tubes

Performance

ANALYTE	LINEARITY (pg/mL)	LLOD (pg/mL)	LLOQ (pg/mL)	CV% INTRA	CV% INTER
Aldosterone	10.27-15000	3.08	10.27	3.0 – 4.9	4.4 – 5.0

Ordering guide

EUM10100	FloMass® Serum Aldosterone	100 assays
EUM10041	7-Levels Calibrators, lyophil.	2 x 7 x 1.1 mL
EUM10051	3-Levels Controls, lyophil.	2 x 3 x 2.2 mL
EUM00C01	Chromatographic Column	1 pc
EUM00A06	Precolumn for steroids	4 pcs