

## Steroid Profiling with LC-MS/MS

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Dedicated CE-IVD Assays  
for the Gold Standard

CE-IVD  
certified

**MassChrom<sup>®</sup>**

**Steroids in Serum/Plasma**  
**Cortisol, Cortisone in Saliva**

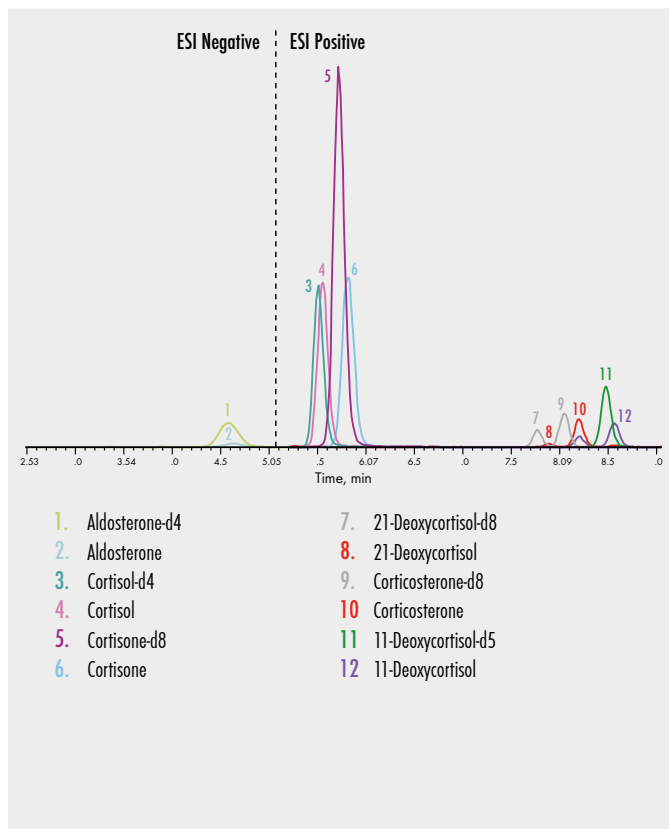
MassChrom® Steroids in Serum/Plasma

# Complete Solution for Steroid Profiling

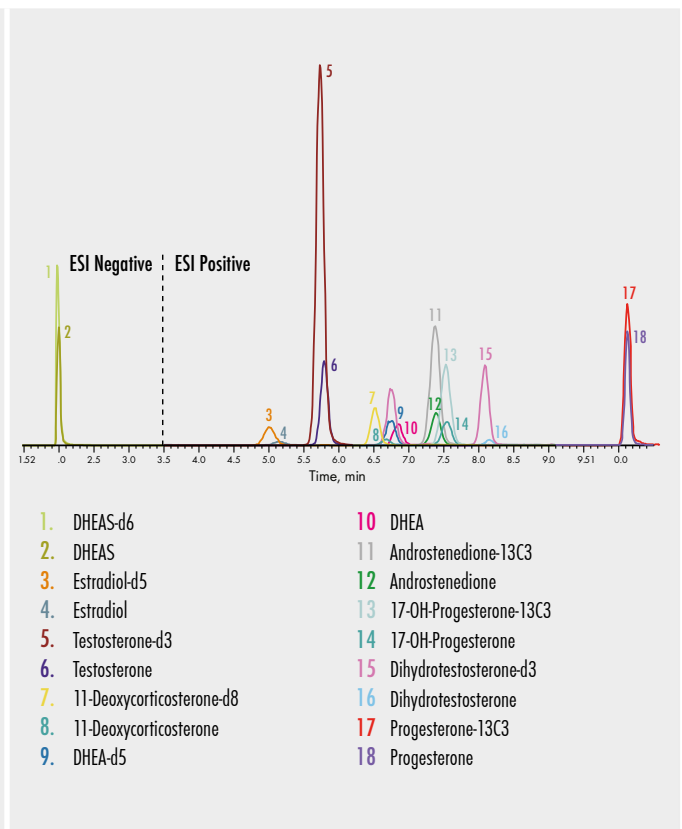
- ▶ 15 steroids – 2 panels – 1 analytical column
- ▶ One sample preparation for all parameters
- ▶ Clinically most relevant steroids covered
- ▶ Each parameter safeguarded by its own internal standard

All our assays for steroid profiling allow the quantitative determination of 15 steroids in serum/plasma by LC-MS/MS and include the clinically most important parameters. Sample preparation is the same for both steroid panels using an optimised and efficient SPE sample clean-up procedure with 96 SPE well plate

or using sample clean-up columns. The use of stable isotope-labelled internal standards for every single analyte ensures reproducible and reliable quantification of the steroids. These methods do not require a high-end LC-MS/MS system to be carried out.



Specifications Steroid Panel 1	
Limit of quantification:	down to 14 ng/l
Linearity:	covering reference range of each steroid
Recovery:	86–115 %
Intraassay:	CV = 1–6 %
Interassay:	CV = 3–11 %
Analysis time:	10.0 min



Specifications Steroid Panel 2	
Limit of quantification:	down to 5 ng/l
Linearity:	covering reference range of each steroid
Recovery:	76–118 %
Intraassay:	CV = 1–13 %
Interassay:	CV = 4–13 %
Analysis time:	11.7 min

## Sample Preparation



### Well Plates (72072/96 + 480)

- ▶ Put 96 SPE well plate onto waste plate.
- ▶ Pipette Equilibration Reagent 1 into each well of the 96 SPE well plate, centrifuge and repeat with Equilibration Reagent 2.
- ▶ Pipette sample/calibrator/**MassCheck**<sup>®</sup> control, Internal Standard Mix and Extraction Buffer into each well, mix briefly (vortex) and centrifuge.
- ▶ Add Wash Buffer and centrifuge.
- ▶ Place plate onto the collection plate.
- ▶ Add Elution Buffer and centrifuge.
- ▶ Evaporate eluates in the collection plate (nitrogen or compressed air) to dryness.
- ▶ Add Reconstitution Buffer.
- ▶ Shake collection plate, seal with adhesive seal and inject eluate.



### Sample Clean-Up Columns (72072/C)

- ▶ Put sample clean-up columns into tubes for sample preparation.
- ▶ Pipette Equilibration Reagent 1 into each sample clean-up column, centrifuge and repeat with Equilibration Reagent 2.
- ▶ Pipette sample/calibrator/**MassCheck**<sup>®</sup> control, Internal Standard Mix and Extraction Buffer into each sample clean-up column, mix briefly (vortex) and centrifuge.
- ▶ Add Wash Buffer and centrifuge.
- ▶ Put autosampler vials into tubes for sample preparation, then put sample clean-up columns on top.
- ▶ Add Elution Buffer and centrifuge.
- ▶ Evaporate eluates in the autosampler vials (nitrogen or compressed air) to dryness.
- ▶ Add Reconstitution Buffer.
- ▶ Close autosampler vials, mix briefly (vortex) and inject eluate.



## Parameters

Aldosterone	Dehydroepiandrosterone (DHEA)
Androstenedione	Dehydroepiandrosterone sulfate (DHEAS)
Cortisol	Estradiol
11-Deoxycortisol	Progesterone
21-Deoxycortisol	17-OH-Progesterone
Cortisone	Testosterone
Corticosterone	Dihydrotestosterone (DHT)
11-Deoxycorticosterone	



MassChrom® Cortisol, Cortisone in Saliva

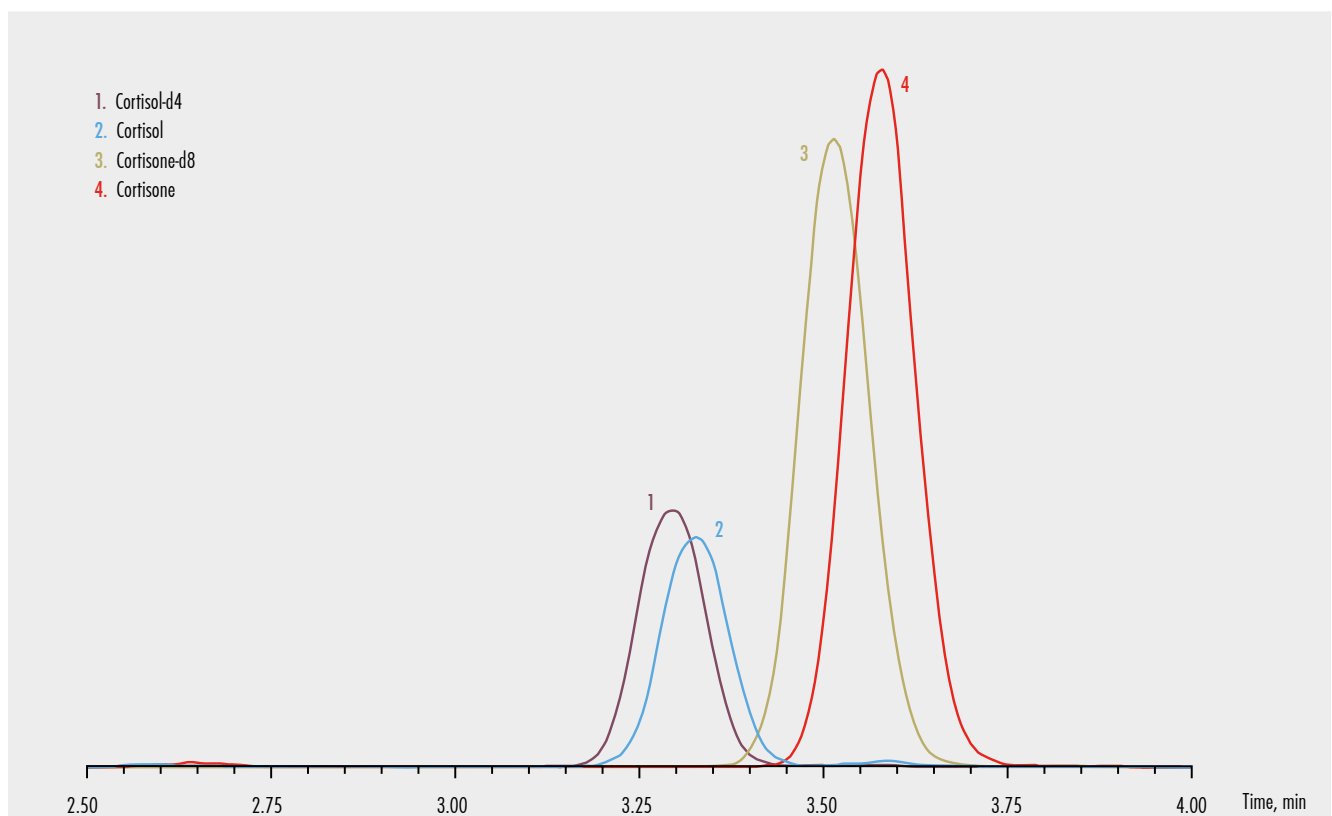
# Specific Solution for Cortisol & Cortisone

- ▶ Simple and non-invasive sample collection
- ▶ Easy sample preparation
- ▶ Complete solution from sample to result
- ▶ Reliable, robust and proven CE-IVD method



The **MassChrom®** kit Cortisol, Cortisone in Saliva allows the quantitative determination of cortisol and cortisone in patient saliva samples by LC-MS/MS. It encompasses all required components for an efficient and fast sample preparation by filtration with clean-

up tubes. The use of stable isotope-labelled internal standards for both analytes ensures reproducible and reliable quantification. The 6PLUS1® Multilevel Calibrator Set and **MassCheck®** controls ensure high precision of results.



Specifications		LC-MS/MS Parameters	
Limit of quantification	0.3 µg/l	Injection volume	≤ 30 µl
Linearity	up to 120 µg/l (Cortisol) up to 180 µg/l (Cortisone)	Ionisation	ESI positive
Recovery	96-105 %	MS/MS-Mode	MRM
Intraassay	CV = 2-5 %	Gradient	binary
Interassay	CV = 2-7 %	Column temperature	ambient (≈ 25 °C)
Analysis time	4.6 min		

# Ordering Information

## MassChrom® Steroids in Serum/Plasma

Order no.	Product
72072/96	<b>MassChrom®</b> Steroids in Serum/Plasma with 96 SPE Well Plate, for 96 determinations
72072/480	<b>MassChrom®</b> Steroids in Serum/Plasma with 96 SPE Well Plate, for 480 determinations
72072/C	<b>MassChrom®</b> Steroids in Serum/Plasma with Sample Clean-Up Columns, for 96 determinations

### Startup Accessories

72110	Analytical Column, equilibrated, with test chromatogram, 1 pc.
72019	Tuning Mix <b>MassChrom®</b> Steroid Panel 1, Analytes and Internal Standards, 1 ml
72020	Tuning Mix <b>MassChrom®</b> Steroid Panel 2, Analytes and Internal Standards, 1 ml
72088	System Check Solution <b>MassChrom®</b> Steroid Panel 1, 1 ml
72099	System Check Solution <b>MassChrom®</b> Steroid Panel 2, 1 ml
15070	Stainless Steel Prefilter Housing, 1 pc.
15071	Stainless Steel Prefilters, 0.5 µm, 5 pcs.

### Chromsystems Multilevel Calibrators and MassCheck® Controls (lyoph.)

72038	6PLUS1® Multilevel Serum Calibrator Set <b>MassChrom®</b> Steroid Panel 1, 7 x 3 ml
72039	6PLUS1® Multilevel Serum Calibrator Set <b>MassChrom®</b> Steroid Panel 2, 7 x 3 ml
0341	<b>MassCheck®</b> Steroid Panel 1 Serum Control, Level I, 5 x 3 ml
0342	<b>MassCheck®</b> Steroid Panel 1 Serum Control, Level II, 5 x 3 ml
0343	<b>MassCheck®</b> Steroid Panel 1 Serum Control, Level III, 5 x 3 ml
0345	<b>MassCheck®</b> Steroid Panel 2 Serum Control, Level I, 5 x 3 ml
0346	<b>MassCheck®</b> Steroid Panel 2 Serum Control, Level II, 5 x 3 ml
0347	<b>MassCheck®</b> Steroid Panel 2 Serum Control, Level III, 5 x 3 ml

## MassChrom® Cortisol, Cortisone in Saliva

Order no.	Product
73000	<b>MassChrom®</b> Cortisol, Cortisone in Saliva, for 400 determinations

### Startup Accessories

73100	Analytical Column, equilibrated, with test chromatogram, 1 pc.
73015	Tuning Mix, Analytes and Internal Standards, 1 ml
72088	System Check Solution <b>MassChrom®</b> Steroid Panel 1, 1 ml
15070	Stainless Steel Prefilter Housing, 1 pc.
15071	Stainless Steel Prefilters, 0.5 µm, 5 pcs.

### Chromsystems Multilevel Calibrator and MassCheck® Controls for Cortisol, Cortisone in Saliva

73039	6PLUS1® Multilevel Saliva Calibrator Set Cortisol, Cortisone, 7 x 1 ml
0349	<b>MassCheck®</b> Cortisol, Cortisone Saliva Control, Level I, 5 x 1 ml
0350	<b>MassCheck®</b> Cortisol, Cortisone Saliva Control, Level II, 5 x 1 ml

These products are not available in all countries. Please contact your local Chromsystems sales representative for availability in your region.