

# CAH

Steroid profiling by LC-MS/MS



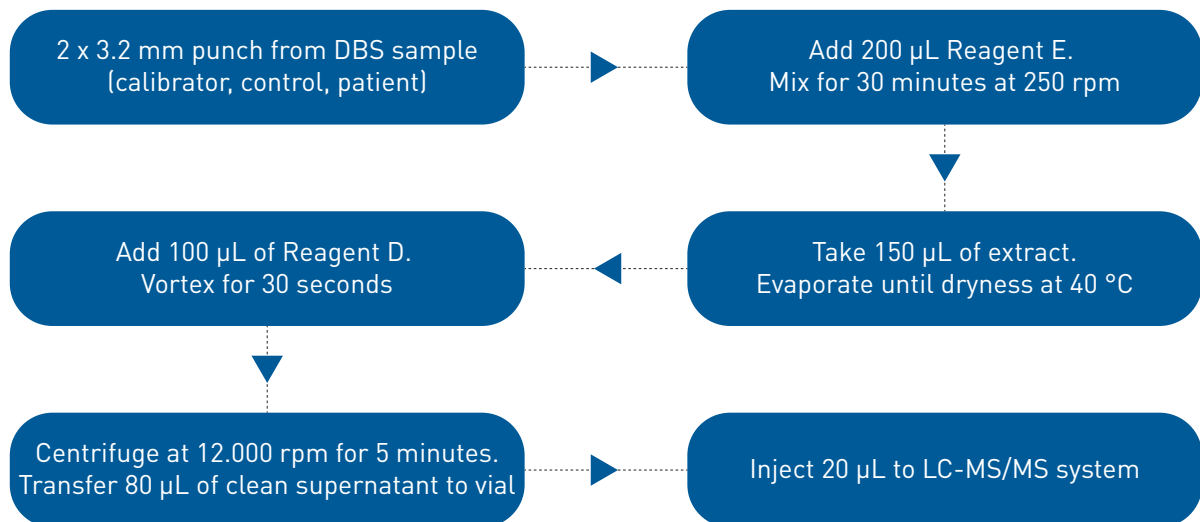
Second-tier test  
Congenital Adrenal Hyperplasia in newborns

## Introduction

Congenital adrenal hyperplasia (CAH) refers to a group of autosomal recessive disorders that impair steroid biosynthesis. CAH represents a continuous phenotypic spectrum with over 90% of all cases caused by 21-hydroxylase deficiency. CAH is the most common cause of genital ambiguity in the newborn and is present in about 1 in 15,000 live births worldwide.

CAH kit allows for the simultaneous specific determination of 17-OHP and other steroids related to CAH such as androstenedione, cortisol, 11-deoxycortisol, and 21-deoxycortisol in dried blood samples using LC-MS/MS. Application of this technology to the determination of the above mentioned specific steroids in newborn blood spots significantly enhances the correct identification of patients with CAH and reduces the number of false-positive screening results when implemented as a second-tier analysis performed prior to reporting of initial newborn screen results.

## Sample Preparation



## Performance Data

### Linearity

Between LLOQ and highest value measured

Analyte	Linearity Range
17-OHP	0.4-120 ng/mL
Cortisol	1.3-500 ng/mL
Androstenedione	0.4-120 ng/mL
11-deoxycortisol	0.5-100 ng/mL
21-deoxycortisol	0.7-150 ng/mL

### Recovery

Calculated by using certified reference materials

Analyte	Recovery Rate
17-OHP	%92
Cortisol	%101
Androstenedione	%105
11-deoxycortisol	%105
21-deoxycortisol	%102

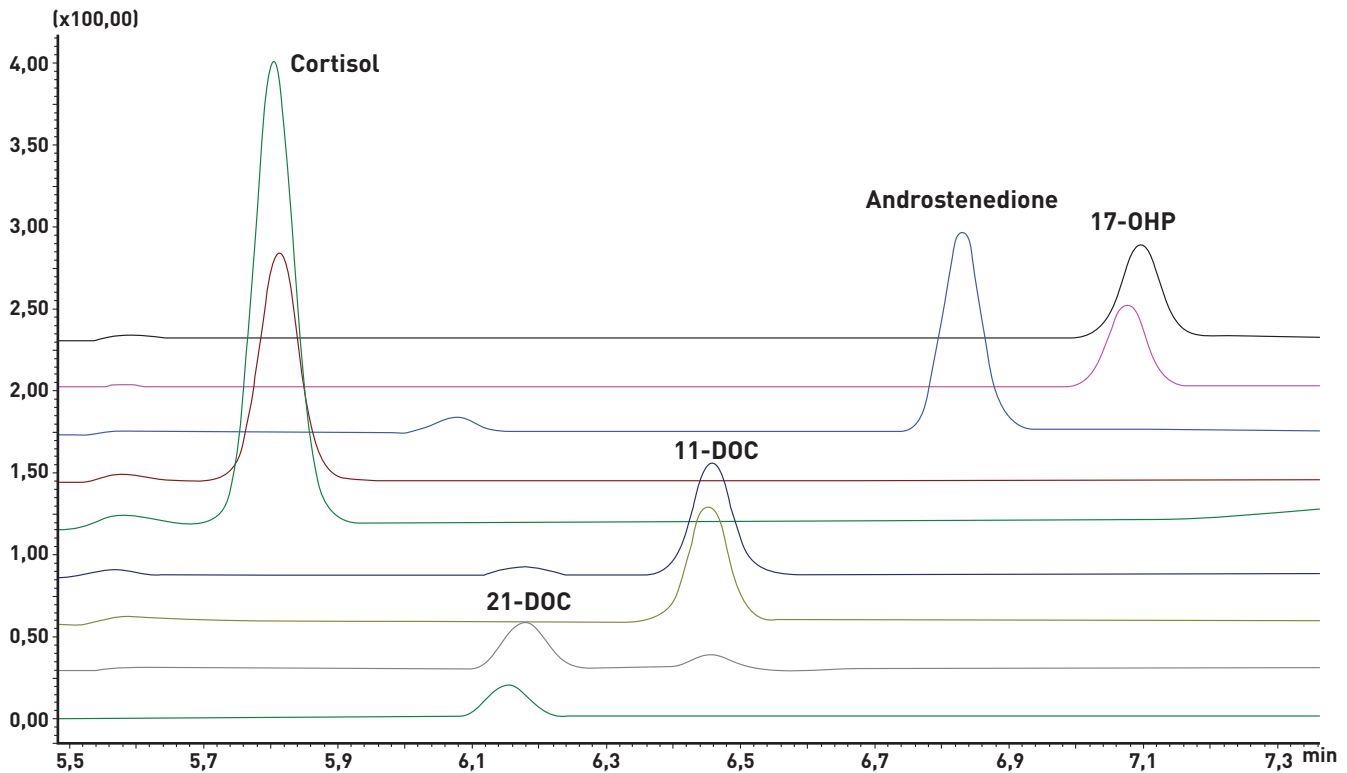
## Reproducibility

Analyte	*Intra-assay precision (%CV)	**Inter-assay precision (%CV)
17-OHP	% 5.6	% 8.7
Cortisol	% 3.2	% 7.1
Androstenedione	% 6.2	% 7.8
11-deoxycortisol	% 4.8	% 8.1
21-deoxycortisol	% 6.5	% 9.7

## LC-MS/MS Parameters

System	Requires LC-MS/MS with sufficient sensitivity
Ionization	ESI positive
Flow	0.4 mL/min, gradient
Column Oven	40 °C
Injection Volume	20 µL
Run Time	12 minutes

## Sample Chromatogram



## Ordering Information

Product Code	Product Name	Tests
BR130022	CAH Kit	100 Tests
BR130023	CAH Kit	500 Tests
BR130023C1	CAH Kit Analytical Column	



[sales@labsystemsdx.com](mailto:sales@labsystemsdx.com) | [www.labsystemsdx.com](http://www.labsystemsdx.com)