

Steroids

A quantitative determination of steroids is a valuable tool in a clinical practice in diagnostic of the steroid-related diseases. This method shows the simultaneous analysis of wide panel of steroids by sensitive LC-MS/MS method.

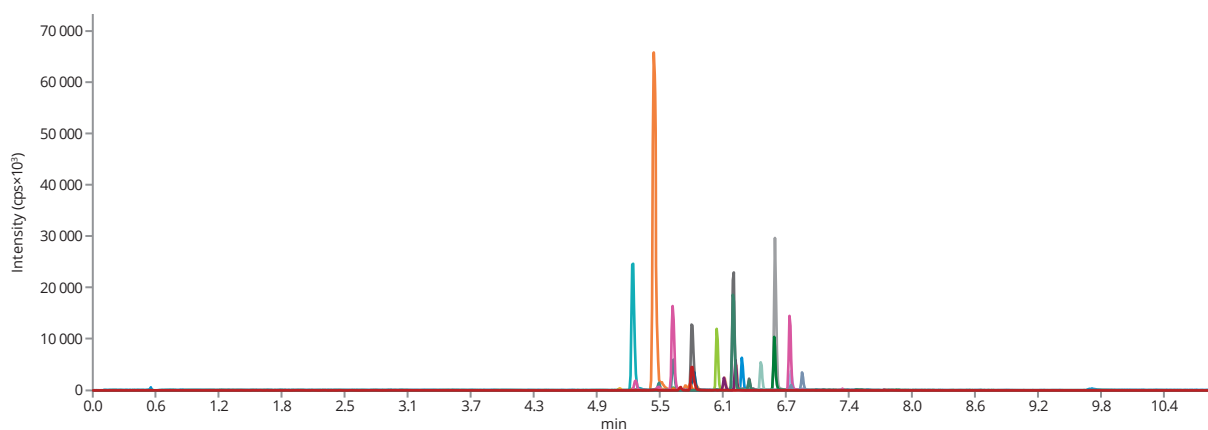
Column	ARION® C18 Plus, 2.2 µm		
Dimensions	100 mm × 3.0 mm		
Part number	ARI-5720-EI30		
Mobile phase	A: methanol + 0.1% formic acid B: water + 0.1% formic acid		
Gradient elution	Time	A (%)	B (%)
	0	60	40
	3	60	40
	6	2	98
	8.4	0	100
	8.6	0	100
	8.63	60	40
	11	60	40
Flow rate	600 µL/min		
Temperature	40 °C		
Detection	MS/MS		
Injection volume	20 µL		
Analytes	1. Cortisol, CAS number 73565-87-4 2. Cortisone, CAS number 53-06-5 3. Dehydroepiandrosterone, CAS number 53-43-0 4. Testosterone, CAS number 58-22-0 5. Corticosterone, CAS number 50-22-6 6. 11β-hydroxyandrostenedione, CAS number 382-44-5 7. 11-deoxycortisol, CAS number 152-58-9 8. 17-hydroxypregnenolone, CAS number 387-79-1 9. Androstenedione, CAS number 63-05-8 10. Progesterone, CAS number 57-83-0 11. 17-hydroxyprogesterone, CAS number 68-96-2		



Steroids

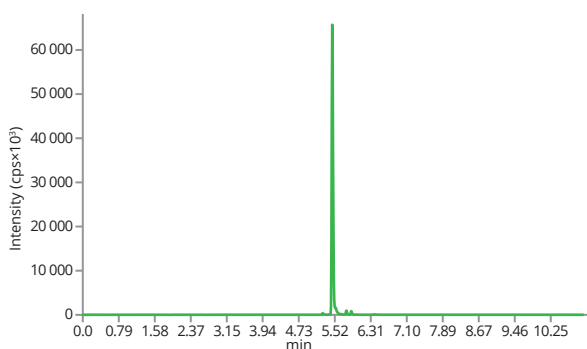
Analytes

12. Pregnenolone, CAS number 145-13-1
13. 7-ketodehydroepiandrosterone, CAS number 566-19-8
14. 11-ketotestosterone, CAS number 564-35-2
15. Dihydrotestosterone, CAS number 521-18-6
16. 7 α -hydroxydehydroepiandrosterone, CAS number 53-00-9
17. 11-deoxycorticosterone, CAS number 152-58-9
18. 5 α -dihydroprogesterone, CAS number 566-65-4
19. 7 β -hydroxydehydroepiandrosterone, CAS number 2487-48-1
20. 11 β -hydroxytestosterone, CAS number 1816-85-9
21. Epitestosterone, CAS number 481-30-1
22. 21-deoxycortisol, CAS number 641-77-0

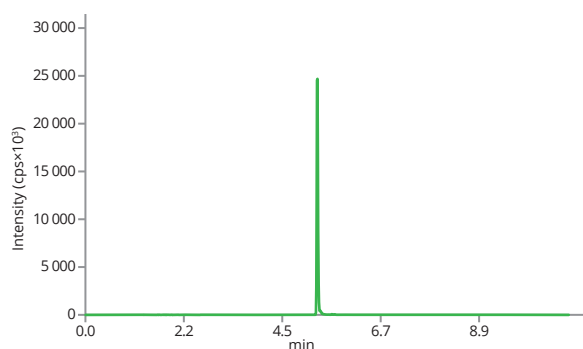


Mixture of steroids on ARION® column

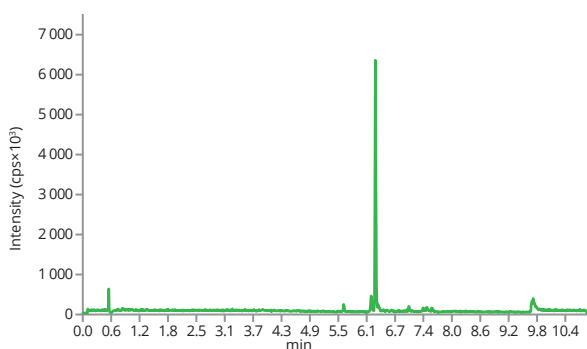
Steroids



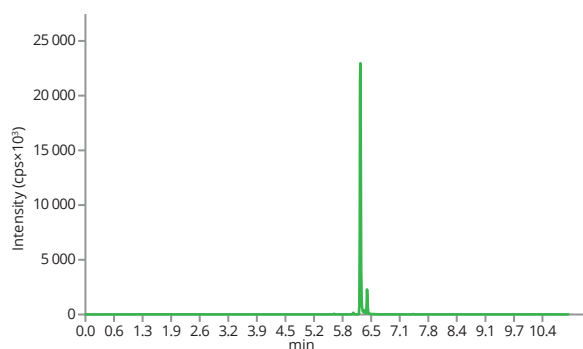
Cortisol RT: 5.47 (+)
Quantifier 363.09 > 121.13 [31.0 V],
Qualifier 363.09 > 91.05 [79.0 V]



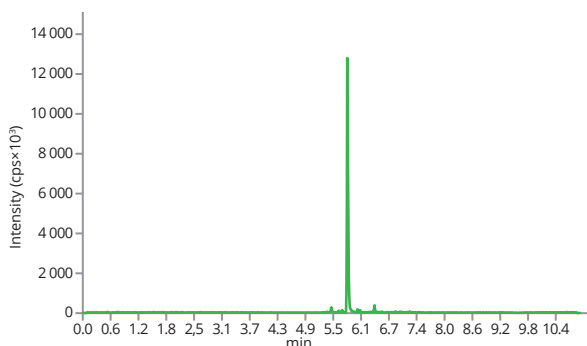
Cortisone RT: 5.26 (+)
Quantifier 361.07 > 163.24 [31.0 V],
Qualifier 361.07 > 185.12 [33.0 V]



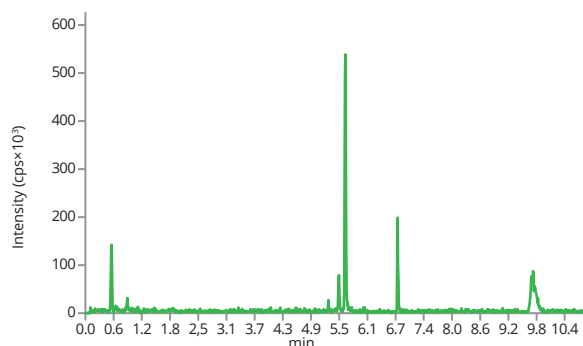
Dehydroepiandrosterone RT: 6.33 (+)
Quantifier 271.20 > 253.00 [31.0 V],
Qualifier 271.20 > 213.00 [20.0 V]



Testosterone RT: 6.24 (+)
Quantifier 289.10 > 97.03 [27.0 V],
Qualifier 289.10 > 109.08 [31.0 V]

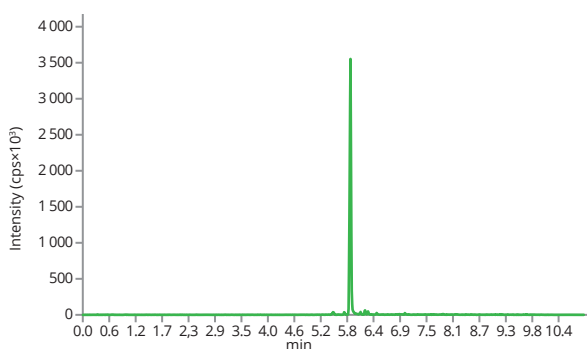


Corticosterone RT: 5.84 (+)
Quantifier 347.09 > 329.14 [21.0 V],
Qualifier 347.09 > 121.13 [33.0 V]

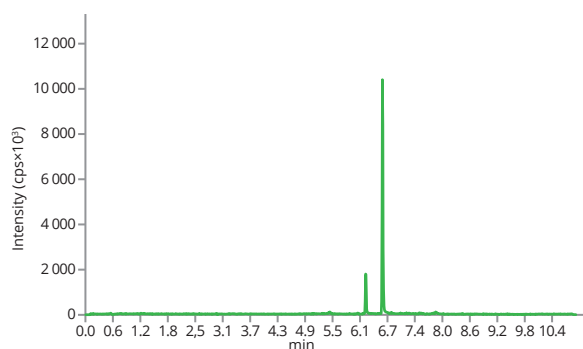


11β-hydroxyandrostenedione RT: 5.66 (+)
Quantifier 303.00 > 171.11 [19.0 V],
Qualifier 303.00 > 259.07 [7.0 V]

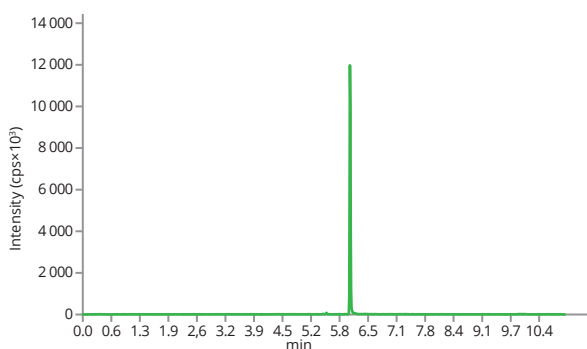
Steroids



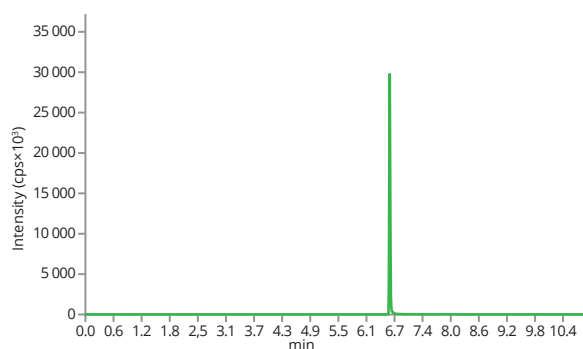
11-deoxycortisol RT: 5.86 (+)
Quantifier 347.10 > 97.03 [29.0 V],
Qualifier 347.10 > 109.31 [33.0 V]



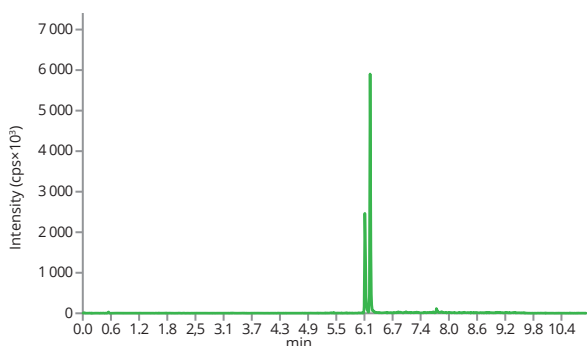
17-hydroxypregnenolone RT: 6.27 (+)
Quantifier 315.10 > 297.10 [20.0 V],
Qualifier 315.06 > 297.30 [15.0 V]



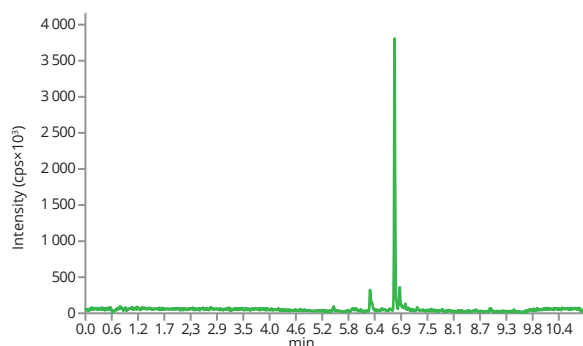
Androstenedione RT: 6.08 (+)
Quantifier 287.10 > 97.04 [27.0 V],
Qualifier 287.10 > 109.04 [29.0 V]



Progesterone RT: 6.65 (+)
Quantifier 315.12 > 97.07 [27.0 V],
Qualifier 315.12 > 109.08 [29.0 V]

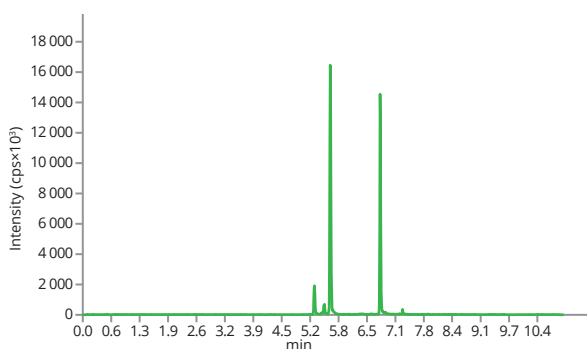


17-hydroxyprogesterone RT: 6.26 (+)
Quantifier 331.19 > 109.03 [30.0 V],
Qualifier 331.19 > 313.23 [21.0 V]

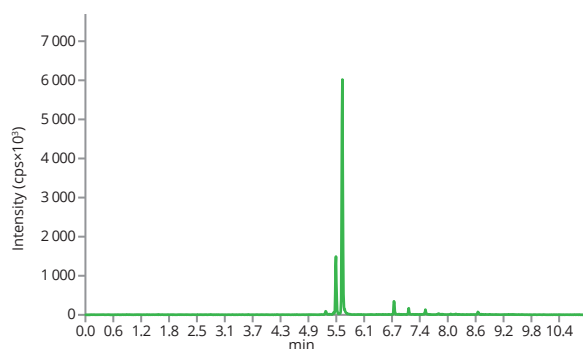


Pregnenolone RT: 6.8 (+)
Quantifier 299.10 > 281.00 [21.0 V],
Qualifier 317.05 > 299.23 [15.0 V]

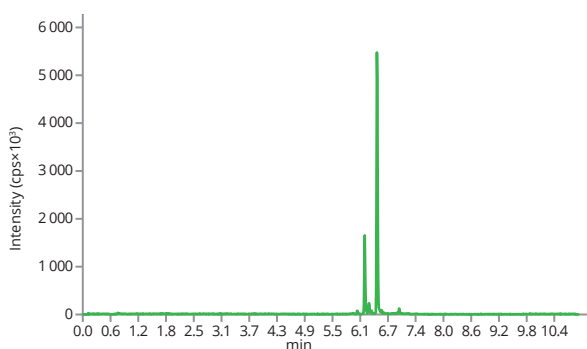
Steroids



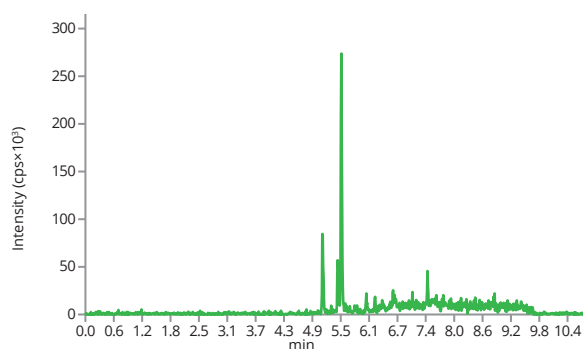
7-ketodehydroepiandrosterone RT: 5.29 (+)
Quantifier 303.07 > 285.29 [23.0 V],
Qualifier 303.07 > 171.16 [15.0 V]



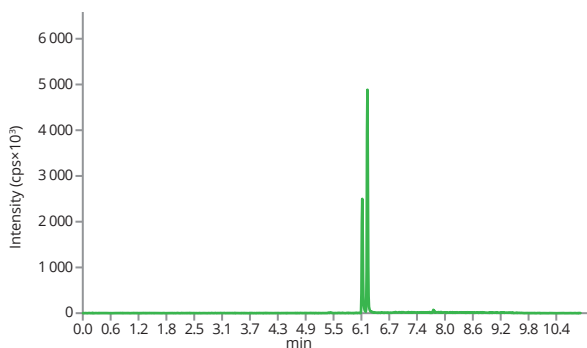
11-ketotestosterone RT: 5.51 (+)
Quantifier 303.08 > 121.10 [33.0 V],
Qualifier 303.08 > 259.21 [31.0 V]



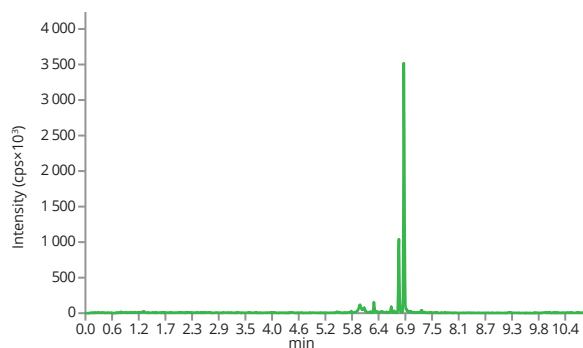
Dihydrotestosterone RT: 6.51 (+)
Quantifier 291.23 > 255.19 [21.0 V],
Qualifier 291.23 > 159.23 [31.0 V]



7 α -hydroxydehydroepiandrosterone RT: 5.54 (+)
Quantifier 269.13 > 115.00 [91.0 V],
Qualifier 269.13 > 91.32 [63.0 V]

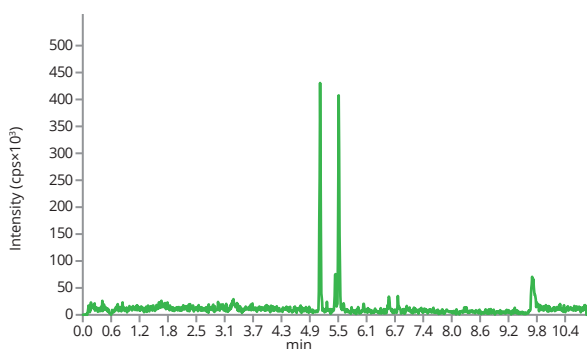


11-deoxycorticosterone RT: 6.16 (+)
Quantifier 331.07 > 97.02 [27.0 V],
Qualifier 331.07 > 109.11 [31.0 V]

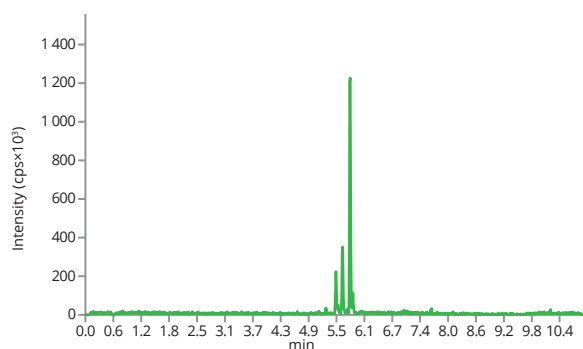


5 α -dihydroprogesterone RT: 6.9 (+)
Quantifier 317.19 > 281.25 [19.0 V],
Qualifier 317.19 > 299.20 [17.0 V]

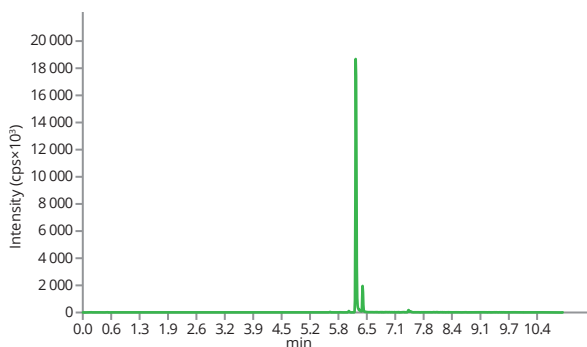
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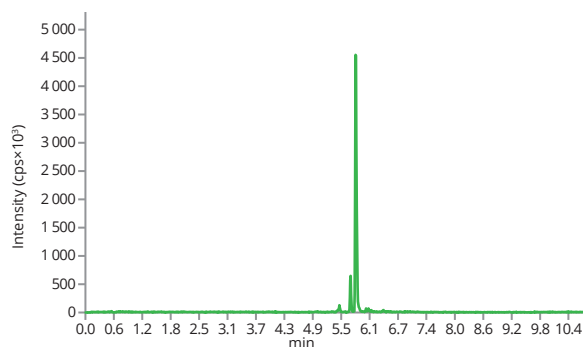
7 β -hydroxydehydroepiandrosterone RT: 5.13 (+)
Quantifier 269.12 > 211.09 [23.0 V],
Qualifier 269.12 > 170.97 [47.0 V]



11 β -hydroxytestosterone RT: 5.82 (+)
Quantifier 305.1 > 269.19 [23.0 V],
Qualifier 305.1 > 121.16 [29.0 V]



Epitestosterone RT: 6.4 (+)
Quantifier 289.04 > 109.15 [29.0 V],
Qualifier 347.06 > 121.07 [31.0 V]



21-deoxycortisol RT: 5.72 (+)
Quantifier 347.06 > 311.20 [23.0 V],
Qualifier 347.06 > 121.07 [31.0 V]

This application was developed by
the Institute of Endocrinology, Prague.

