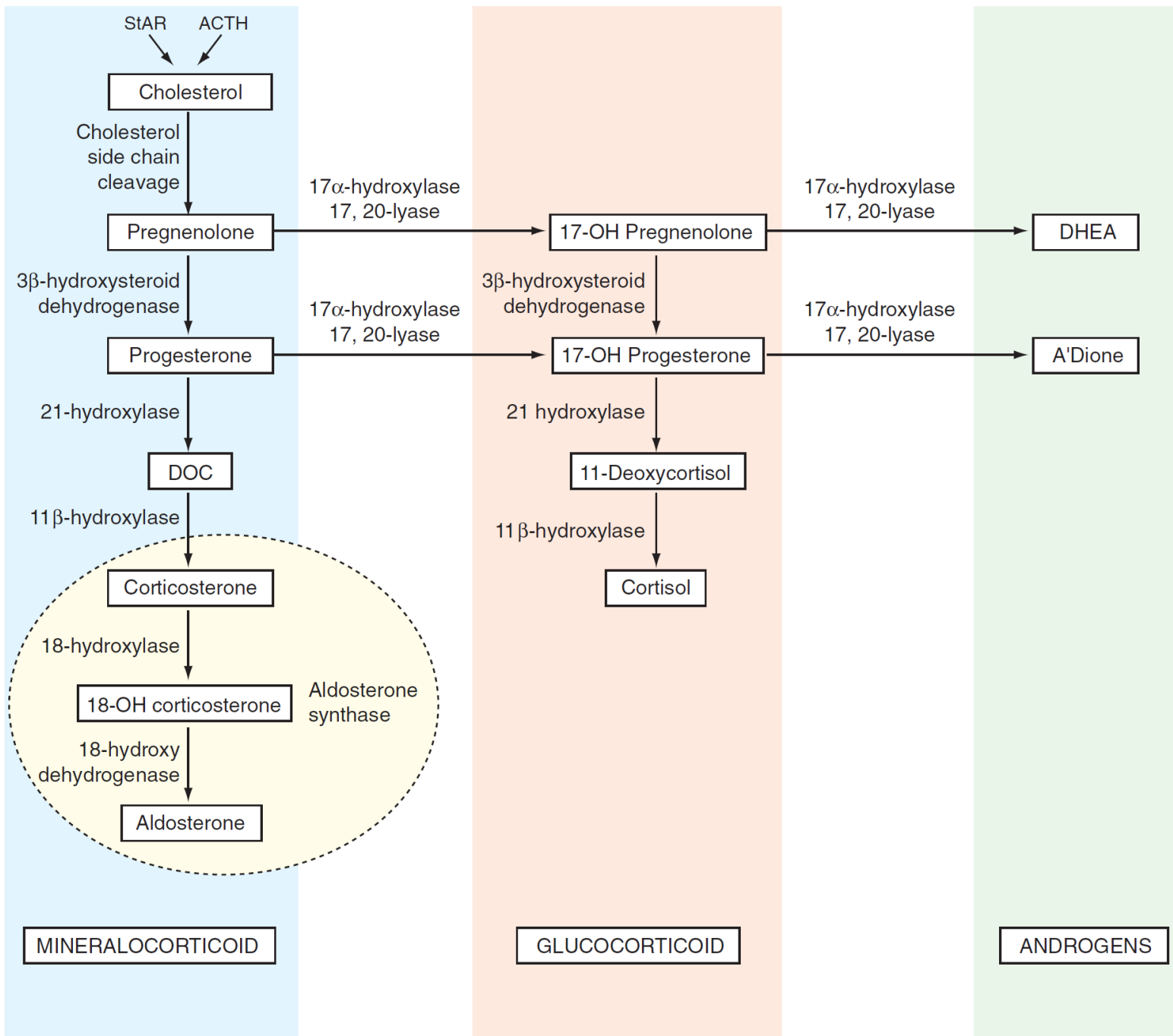
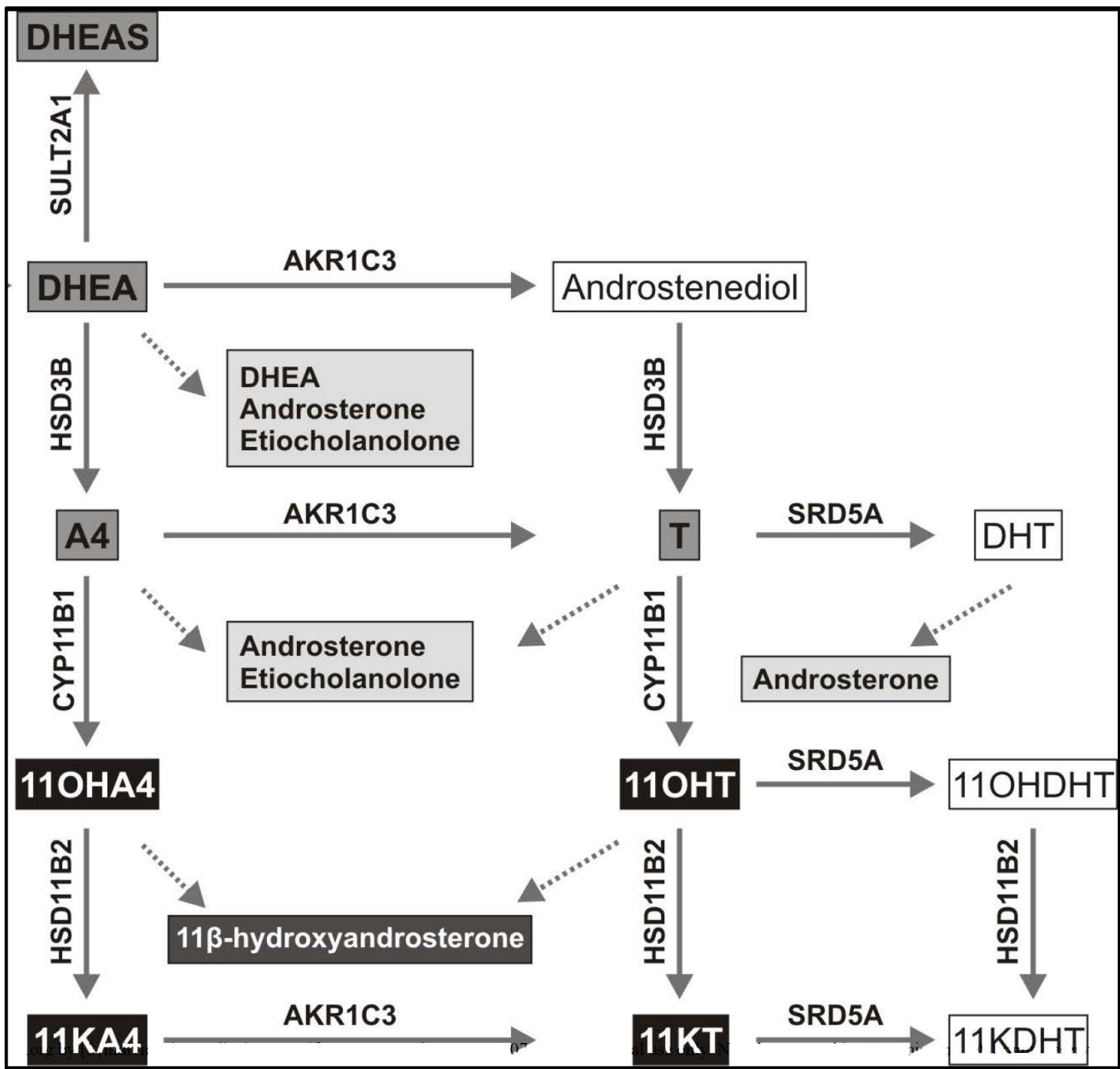


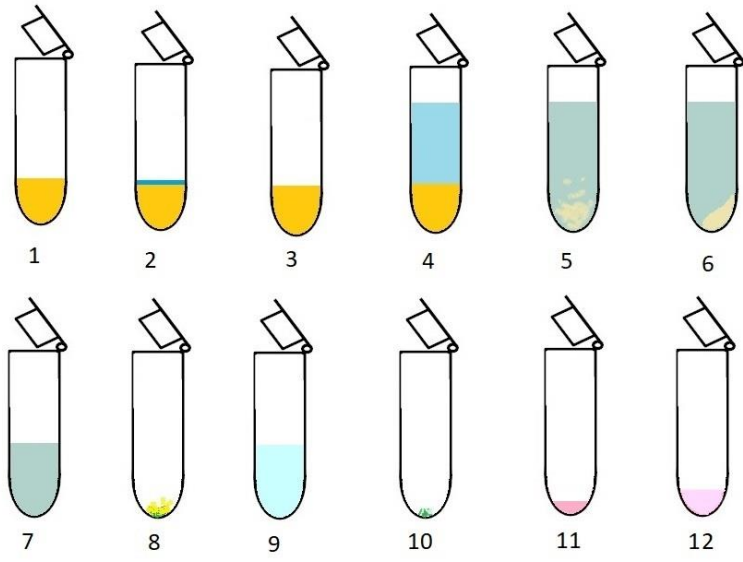
Development of an LC/MSMS Method for Adrenal 11-Oxygenated Androgens

Ali Yaman, Marmara University
BCLF-2019

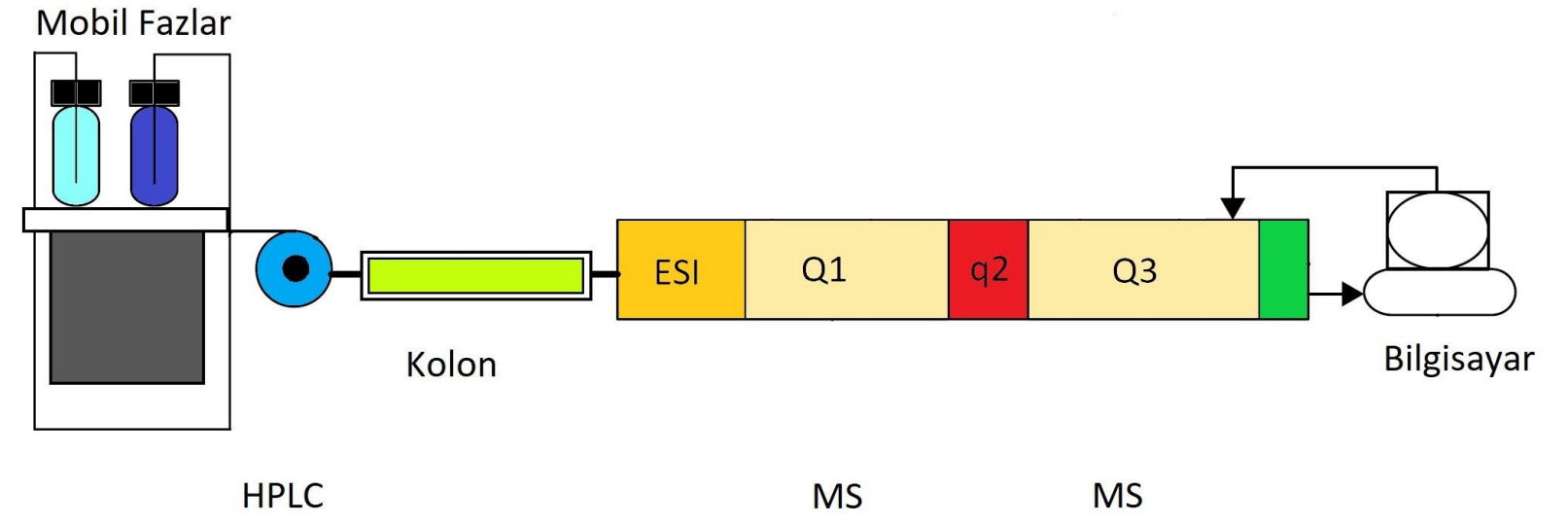








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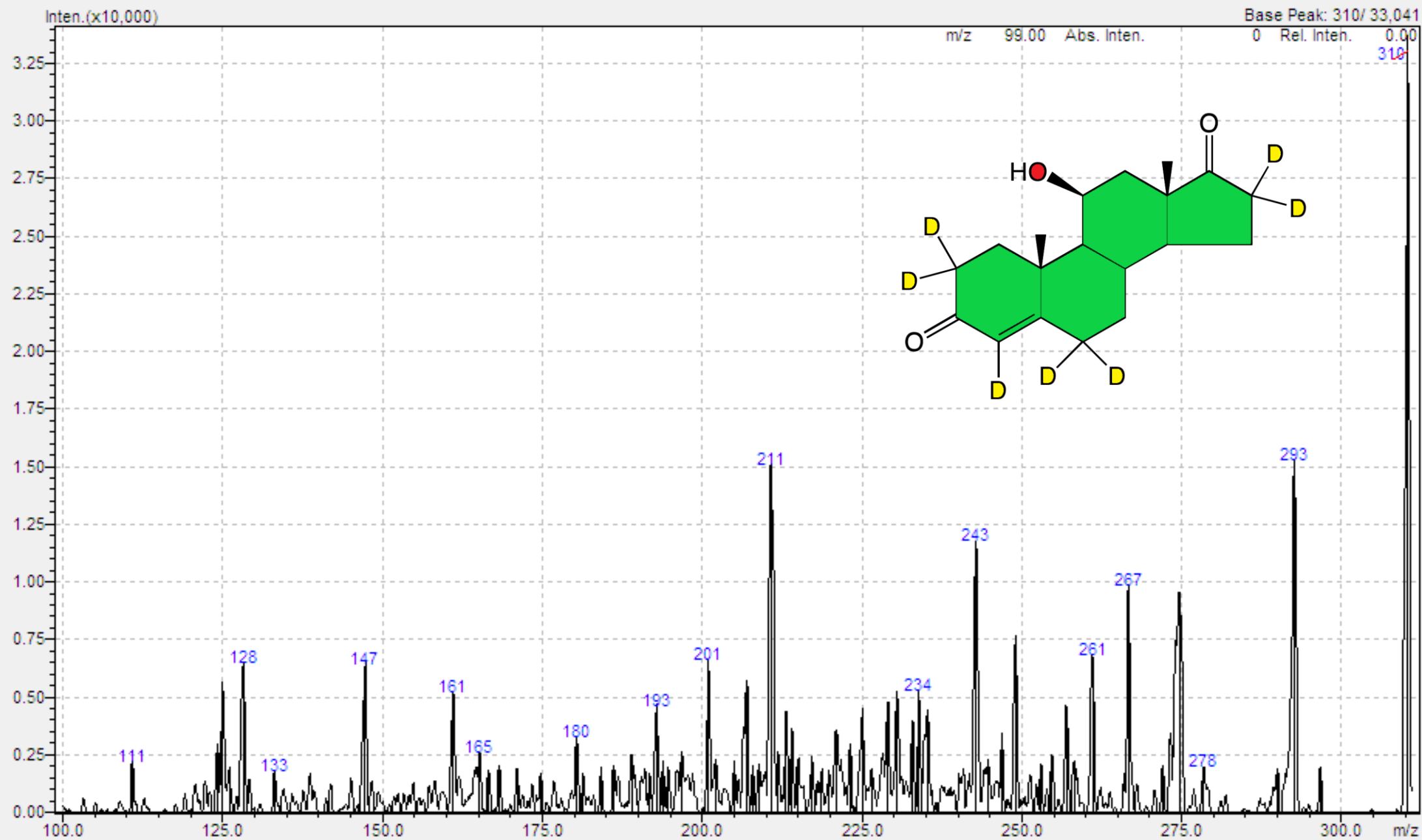
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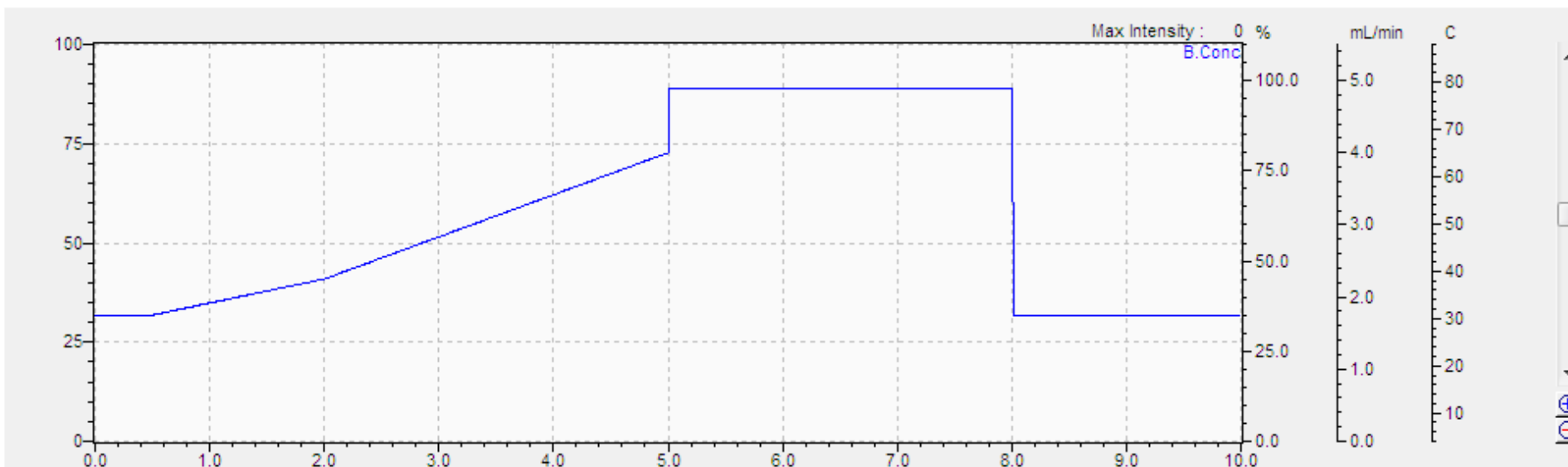
1

| Analytes | Precursor ion m/z | Product ion (quantitative) m/z | Product ion (qualitative) m/z | Dwell time msec | Pause time msec |
|----------|----------------------|--------------------------------------|-------------------------------------|--------------------|--------------------|
| 11OHA4 | 303.2 | 121.0 | 267.2 | 100 | 3 |
| 11OHA-d7 | 310.4 | 128.2 | 243.0 | 100 | 3 |
| 11OHT | 305.3 | 121.0 | 269.0 | 100 | 3 |

| Ionisation Technique | Electrospray Ionization |
|------------------------|-------------------------|
| Nebulizing Gas Flow | 3 L/min |
| Heating Gas Flow | 13 L/min |
| Interface Temperature | 400 °C |
| DL Temperature | 170 °C |
| Heat Block Temperature | 450 °C |
| Drying Gas Flow | 7 L/min |

Event#: 1 Product Ion Scan(E+) Precursor: 310.45 CE:-20.0 Ret. Time : [0.117] Scan#: [8]





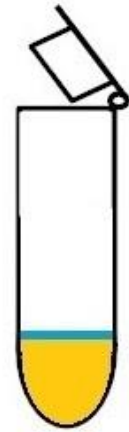
| | Time | Module | Command | Value | Comment |
|----|-------|------------|--------------|-------|---------|
| 1 | 0.01 | Pumps | Pump B Conc. | 35 | |
| 2 | 0.50 | Pumps | Pump B Conc. | 35 | |
| 3 | 1.40 | Controller | Event | 1 | |
| 4 | 2.00 | Pumps | Pump B Conc. | 45 | |
| 5 | 5.00 | Pumps | Pump B Conc. | 80 | |
| 6 | 5.01 | Pumps | Pump B Conc. | 98 | |
| 7 | 6.00 | Controller | Event | 0 | |
| 8 | 8.00 | Pumps | Pump B Conc. | 98 | |
| 9 | 8.01 | Pumps | Pump B Conc. | 35 | |
| 10 | 10.00 | Controller | Stop | | |
| 11 | 0.00 | | | | |
| 12 | 0.00 | | | | |
| 13 | 0.00 | | | | |
| 14 | 0.00 | | | | |

Load Data...

Draw curve



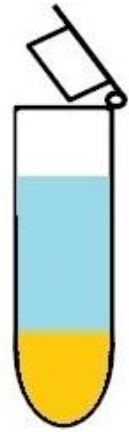
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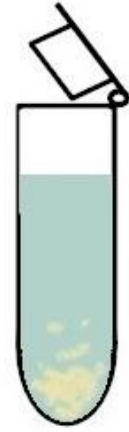
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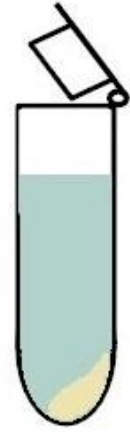
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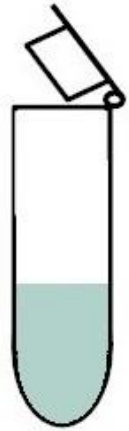
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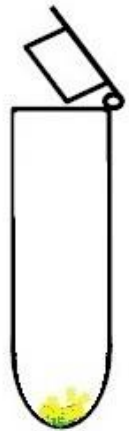
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6



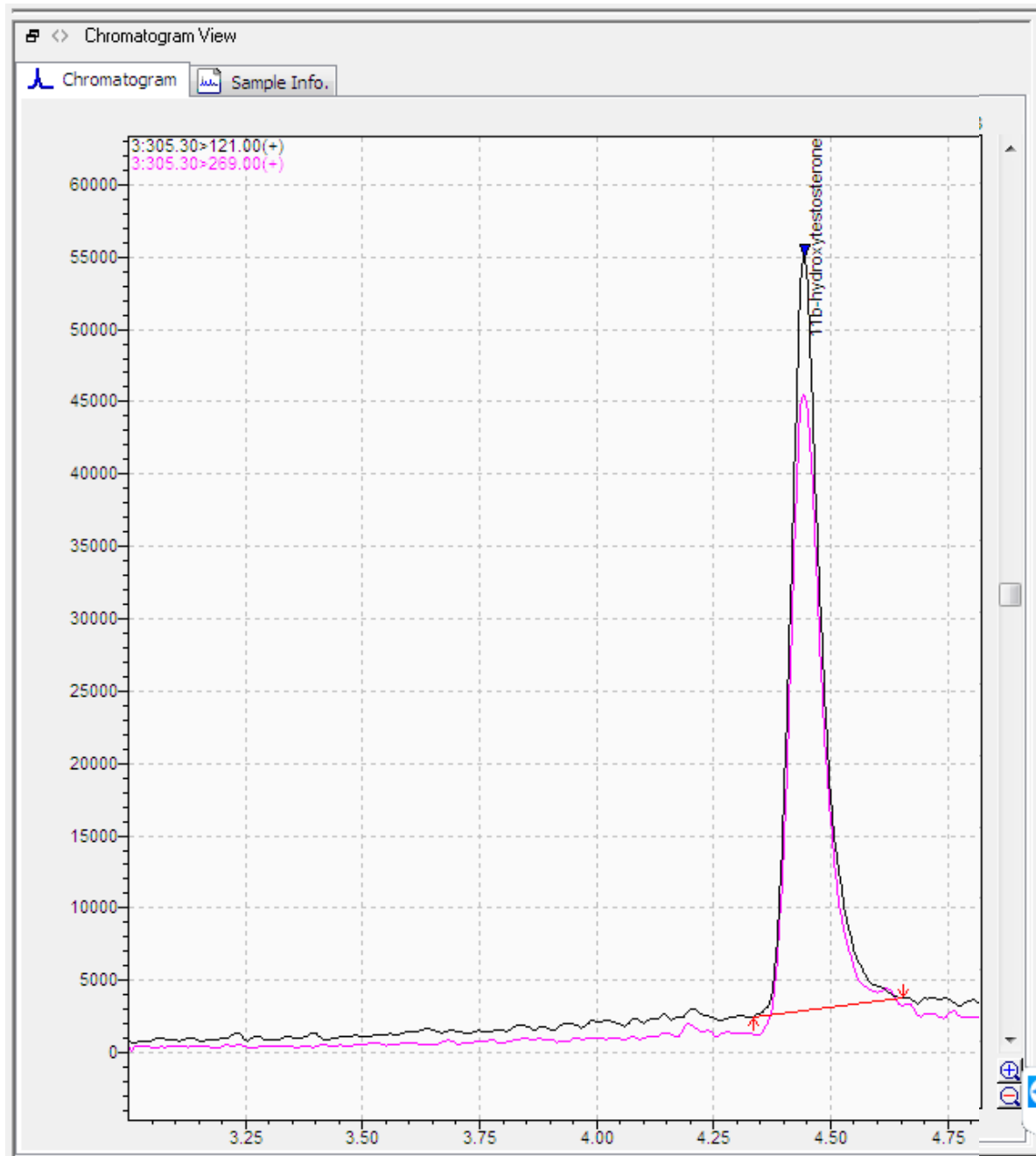
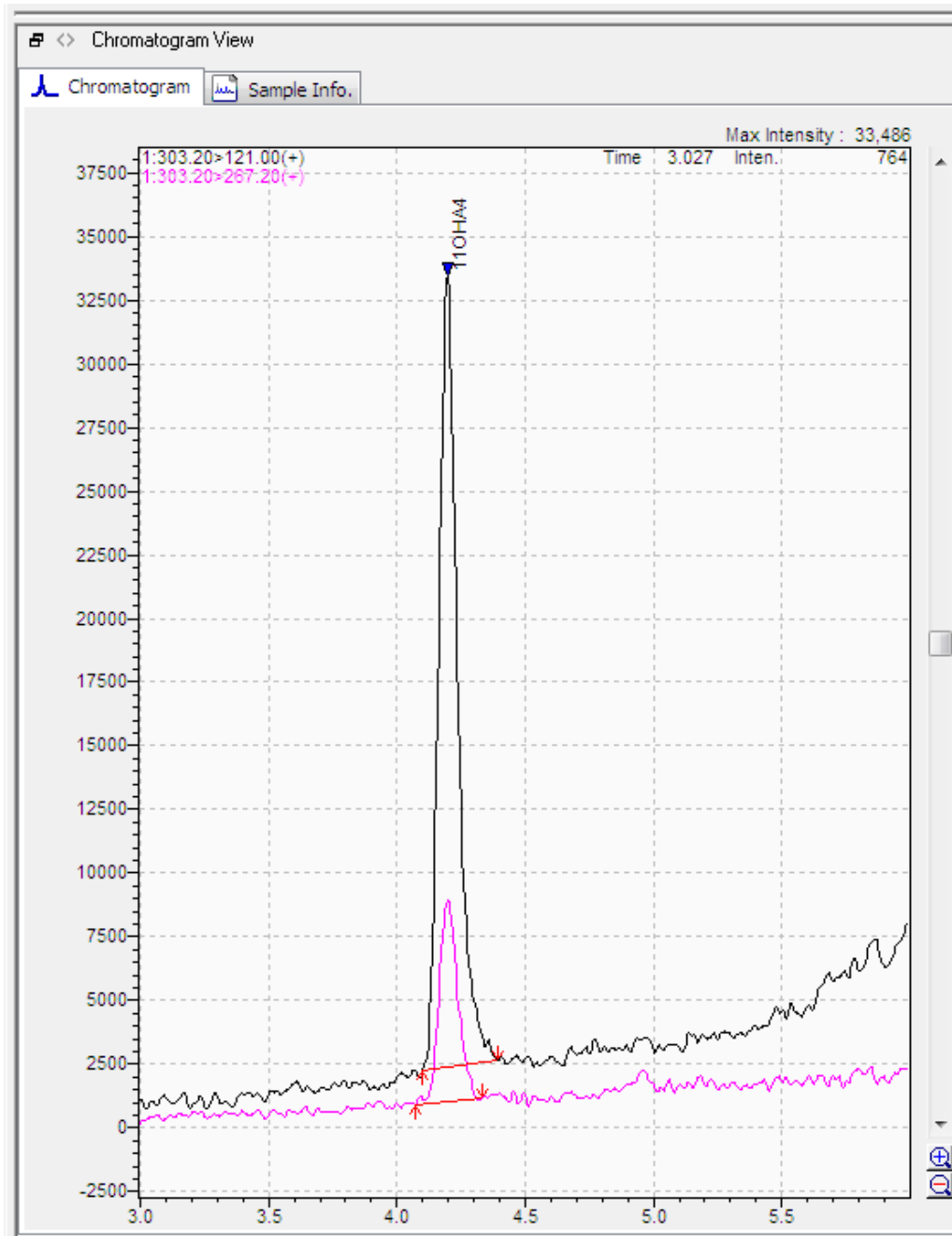
7



8



9



| Analytes | Concentration | %CV (with-in day) | %CV (between day) | % Recovery |
|------------------------------------|---------------|-------------------|-------------------|------------|
| 11OHA4 (ng/mL) (MR 0.1-20.0) | 3,1 | 8,3 | 9,1 | 98,3 |
| | 12,5 | 5,1 | 3,1 | 97,0 |
| 11OHT (pg/mL) (MR 50-1000) | 200 | 4,1 | 9,1 | 102,2 |
| | 500 | 3,2 | 3,7 | 97,4 |

| Analytes | Control (n=56) | 21OHD (n=7) | <i>P value</i> |
|--------------------------------|----------------|-------------|--------------------|
| 11OHA4 ng/mL RR(1.5-3.6) | 2.1 | 7.7 | <i>< 0.0001</i> |
| 11OHT pg/mL RR(30-90) | 74 | 370 | <i>< 0.0001</i> |

Multiple research questions remain

- Do these 11-oxy steroids have a circadian rhythm?
- What fractions are free and protein-bound?
- Do they have bone or sexual health benefits in postmenopausal women?
- What are their dynamic changes with glucocorticoid therapy as compared with established biomarkers?
- Finally, how do they correlate with clinical evidence of androgen excess?



Thank you
