

## Electronic supplementary information

Figure S1

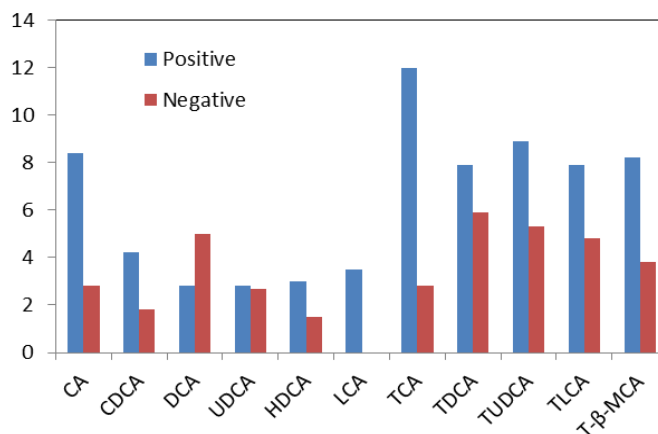


Fig. S1. Comparison of signal to noise ratios (SNRs) of several BAs at the lower limit of detection (LOD) in positive and negative ion modes.

Figure 2S

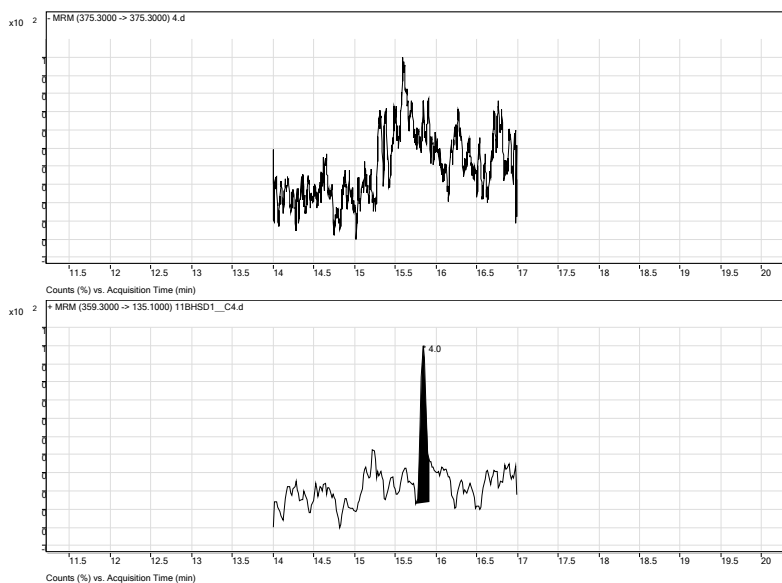


Fig. S2. Comparison of molecular ion intensity of LCA in negative ion mode (375.3 → 375.3; *upper panel*) and positive ion mode (359.3 → 135.1; *lower panel*) using MRM. The signal to noise ratio (SNR) of the latter was 4.0, thus above the lower limit of detection.

Table S1. Extraction recovery of BAs in charcoal-treated serum.

Bile acids	Extract recovery (%)
CA	84 ± 12
CDCA	79 ± 20
DCA	67 ± 19
7-oxoDCA	71 ± 23
HDCA	80 ± 6
LCA	74 ± 17
7-oxoLCA	76 ± 13
α-MCA	72 ± 15
β-MCA	70 ± 11
ω-MCA	73 ± 12
UDCA	79 ± 11
G-CA	68 ± 19
G-CDCA	69 ± 17
G-DCA	76 ± 24
G-LCA	75 ± 11
G-7-oxoLCA	76 ± 15
G-UDCA	76 ± 16
T-CA	86 ± 17
T-CDCA	80 ± 17
T-DCA	88 ± 10
T-LCA	82 ± 9
T-7-oxoLCA	77 ± 19
T-β-MCA	81 ± 15
T-UDCA	74 ± 23

Data are presented as the average ± % R.S.D of two levels of QC concentrations (200 nM and 2000 nM), six samples per concentration.