

**Supplemental Table S3.** Precision and recovery rate of QC (quality control) samples

Component	Intra-day precision		Inter-day precision		Recovery		
	RSD%		RSD%		%		
	LQC	HQC	LQC	HQC	LQC	MQC	HQC
Acetic acid (AA)	2.29	2.1	3.4	1.58	104.63	93.58	92.23
Propionic acid (PA)	0.55	1.82	1.57	1.45	105.09	102.3	102.66
Isobutyric acid (IBA)	1.28	1.34	1.26	3.07	99.98	87.42	109.3
Butyric acid (BA)	1.37	1.25	1.86	2.99	93	101.49	109.72
Isovaleric acid (IVA)	0.42	1.94	1.75	3.25	94.4	109.28	108.36
Valeric acid (VA)	1.33	3.64	1.2	3.36	110.21	108.81	110.67
Caproic acid (HA)	0.5	2.29	1.12	2.49	99.51	106.6	109.99

**Note:** LQC, MQC and HQC respectively mean low, middle and high concentrations of QC samples.