

Supplementary Material

for

Determination of ketoacids in drinking water by DNPH

derivatization and LC-ESI-MS/MS

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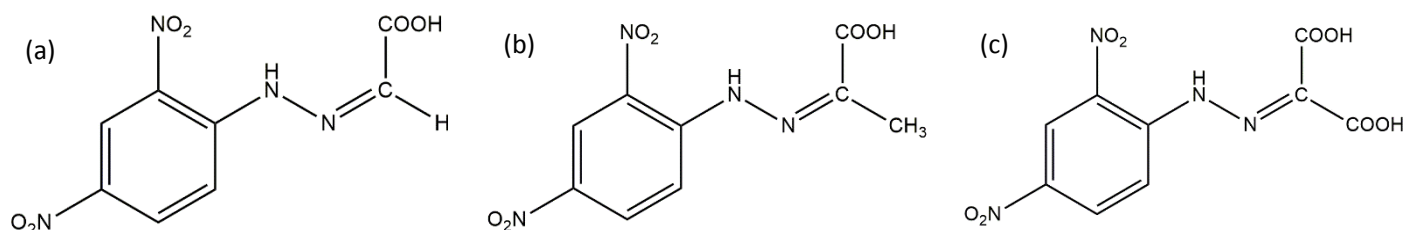


Fig. S1 Chemical structures of derivatized ketoacids: (a) glyoxylic acid, (b) pyruvic acid, (c): ketomalonic acid

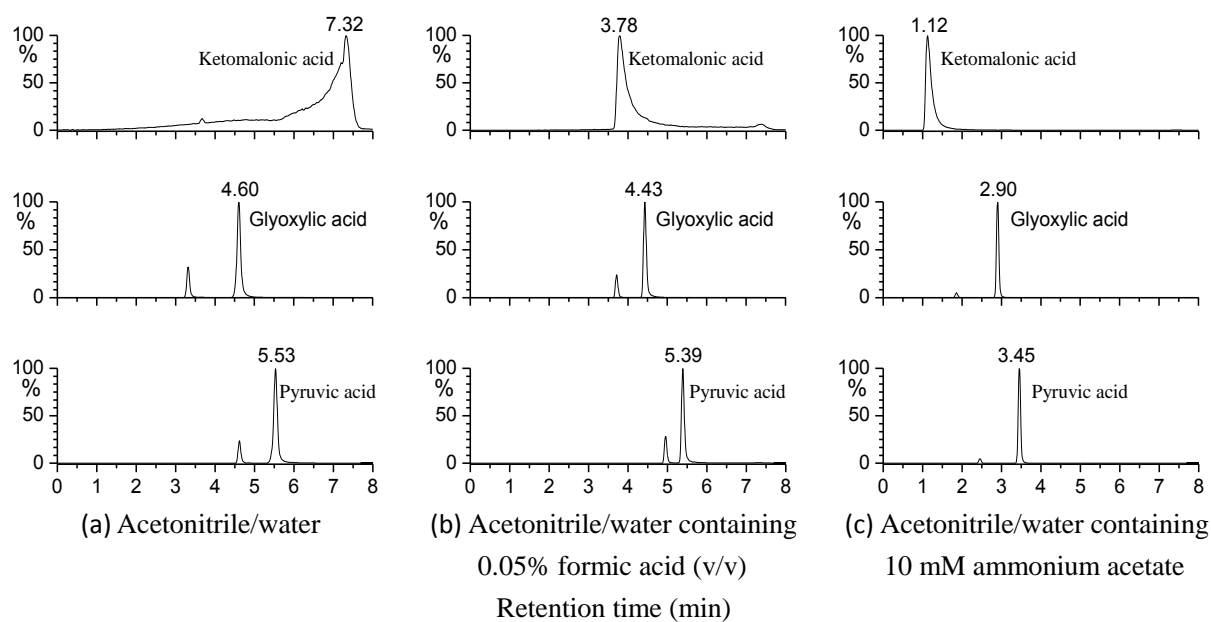


Fig. S2. Comparison of LC-MS/MS chromatograms of ketoacids (5 mL of the mixed standard solution of 100 $\mu\text{g/L}$, pH 3.0, temperature 40 ± 1 $^{\circ}\text{C}$, derivatization time 1 h, molar ratio of DNPH to the total reaction groups at 150).

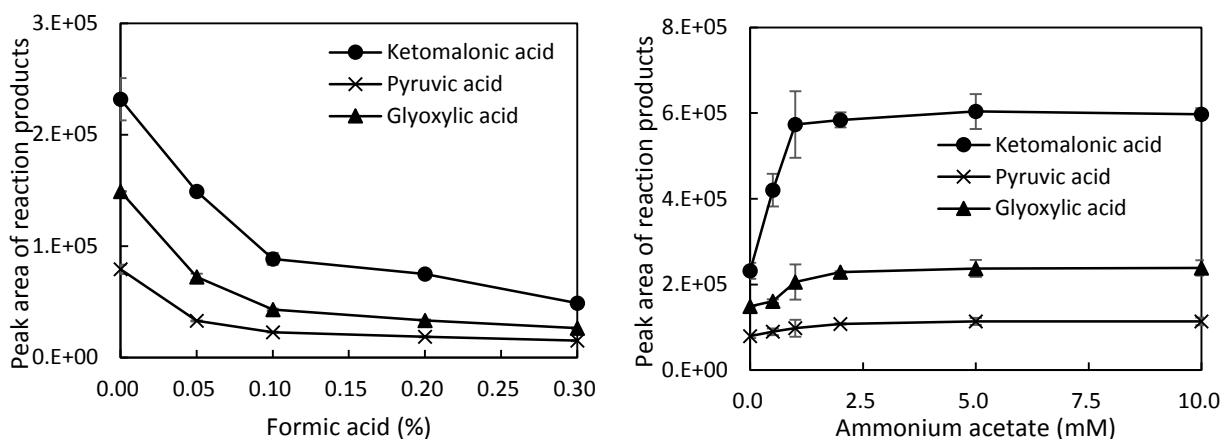


Fig. S3. Effects of mobile phase compositions on signal intensities (5 mL of the mixed standard solution of 100 $\mu\text{g/L}$, pH 3.0, temperature 40 ± 1 $^{\circ}\text{C}$, derivatization time 1 h, molar ratio of DNPH to the total reaction groups at 150).

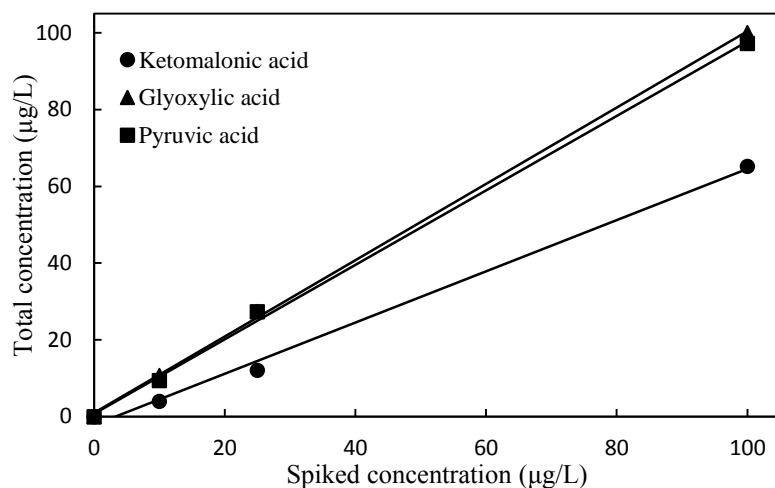


Fig. S4. Spiked recoveries of ketoacids from tap water (5 mL of tap water spiked with mixed standard solutions at 0, 5, 25, 100 $\mu\text{g/L}$, pH 3.0, temperature 40 ± 1 $^{\circ}\text{C}$, derivatization time 1 h, molar ratio of DNPH to the total reaction groups at 150).

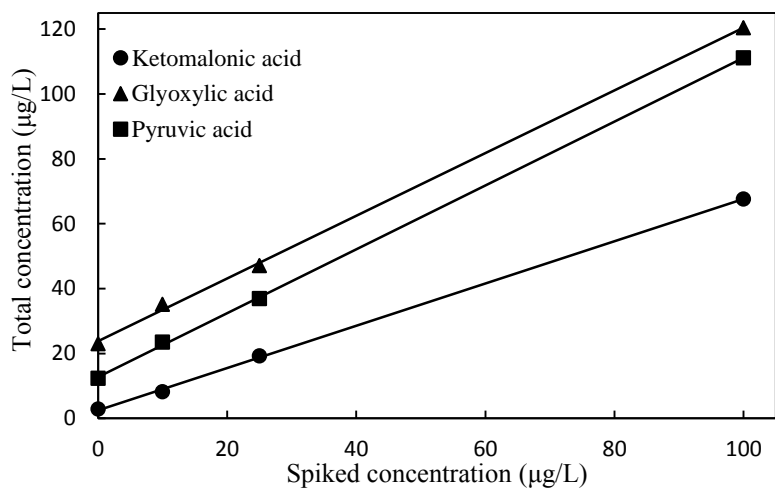


Fig. S5. Spiked recoveries of ketoacids from ozonated water (5 mL of ozonated water spiked with mixed standard solutions at 0, 5, 25, 100 µg/L, pH 3.0, temperature 40 ± 1 °C, derivatization time 1 h, molar ratio of DNPH to the total reaction groups at 150).