PURIC Water Information

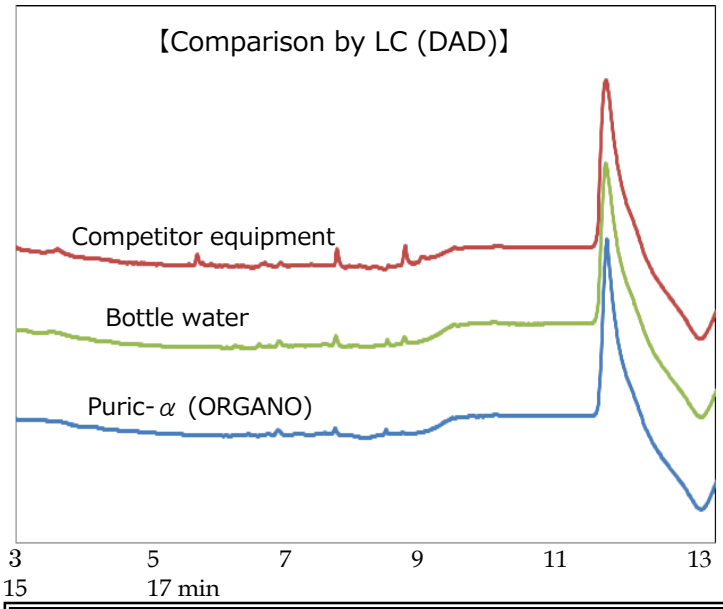
Evaluation for ultrapure water by LC

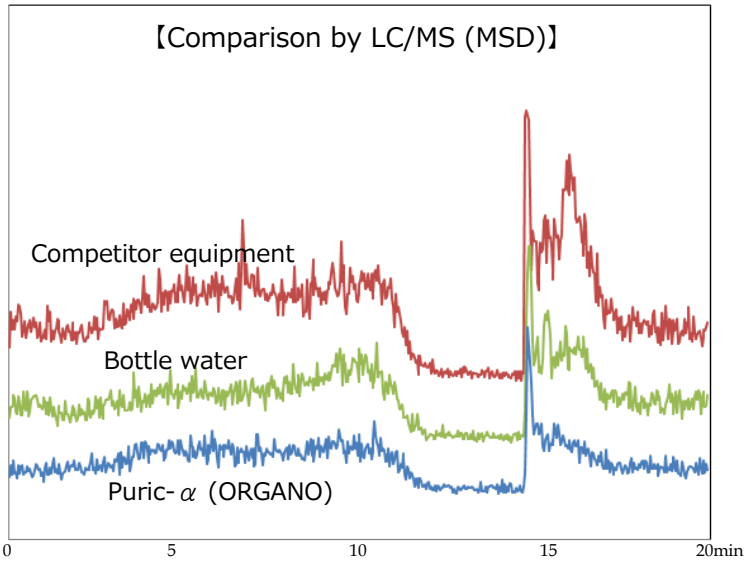
According to general rules for HPLC (JIS K0136), the used water should be purified by either one of RO, distillation, ion exchange resins or UV, or those combinations, not influencing the analysis. The water quality should be referred to the parameters such as resistivity, TOC, absorbance for the evaluation. In fact, considering of the ghost peaks, even higher purities of water is required. This material shows the result of LC/MS for Puric-α ultrapure water.

・Analytical equipment: LCMS2010 (Shimazu)
・Ultrapure water production equipment: PR-FP-0120α-UT0 set (ORGANO)
・Analytical conditions
Column: TSK ODS-100V 2mm x 50mm 3um
Mobile phase: A H_2O B acetonitrile
Mobile phase flow rate: 0.2mL/min
DAD detection wave length: 210nm
Gradient: 0min-10min-13min- 15min, 5% B-100% B-100% B-5% B

Puric-α ultrapure water, competitor equipment's ultrapure water and LC/MS bottle water are used for mobile phase A. Immediately after dispensing or after opening bottles, the analysis was conducted. Inside LC is converted by water, stabilized by initial conditions and conducted initial gradient analysis. Then, data was collected . 20mins/test.

Analysis result





Summary

Puric-α ultrapure water is of the equivalent quality to competitor equipment or commercial bottle water, proving Puric-α ultrapure water is suitable for mobile phase for LS/MS.

While competitor equipment shows below TOC 5ppb, Puric-α shows 1ppb as an actual value and has no ghost peaks, which means the notable feature of Puric-α to be able to provide continuously low TOC.

Date provided by Faculty of Bioresources, Mie University

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