

Separation of gluconic acid, tartaric acid, and malic acid

By using the normal Organic Acids Analysis System, the good separation of gluconic acid, tartaric acid, and malic acid cannot be obtained because the retention times are too close. In order to improve the separation, two columns were connected in series with the column temperature of 40 deg C. The standard mixture of the sample, 100mg each were dissolved in 100ml water and then 30ul were injected. Fig.1 shows a chromatogram.

Conditions:

Pump:	PU-980
Detector :	UV-970
Wavelength :	445 nm
Column :	Shodex Ionpak C-811 x 2
Eluent :	3 mM HClO ₄
Flow rate :	1.0 ml/min
Temperature :	40 degree celsius
Reagent :	0.2 mM BTB, 15 mM Na ₂ HPO ₄
Sample :	Tartaric acid Gluconic acid Malic acid

