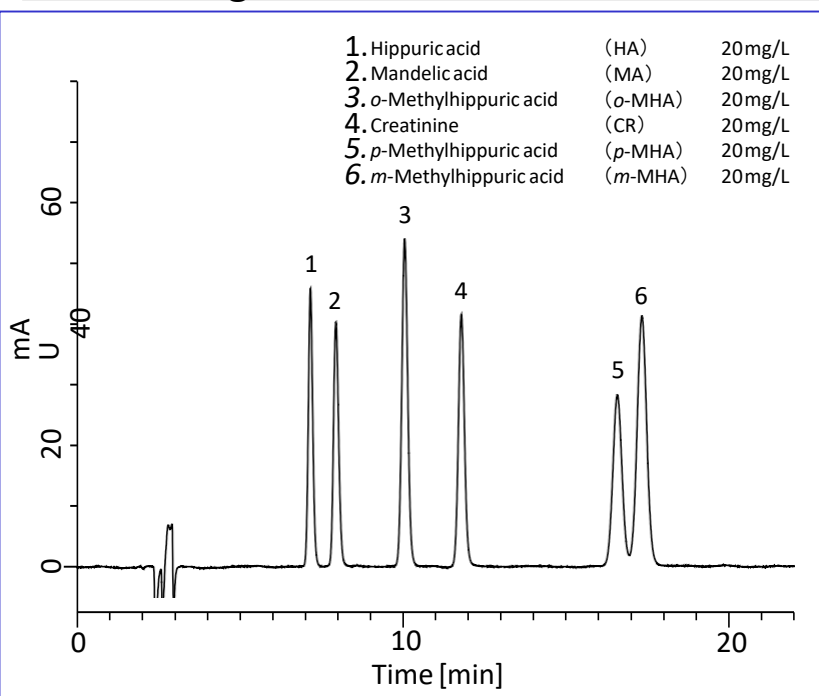


# Analysis of Hippuric Acid in Urine by HPLC

Hippuric acid, methylhippuric acid, and mandelic acid are major urine metabolites of aromatic organic solvents (e.g. toluene, xylene, and styrene). Their amounts in urine are most widely used as an indicator of the organic solvent exposure. This note describes a simultaneous determination method for the urinary metabolites and creatinine.

The separation is usually performed with ODS columns

## A chromatogram obtained from standard solution



### Conditions

**System** : GL-7400 HPLC system

**Column** : Inertsil ODS-80A  
(5  $\mu$ m, 250 x 4.6 mm I.D.)  
Cat.No. 5020-01602

**Eluent** : A) 2-propanol  
B) 10 mM phosphate buffer (pH 2.5) containing 2 mM sodium 1-nonanesulfonate A/B = 10/90, v/v  
(Mixed by a gradient mixer)  
: 1.0 mL/min

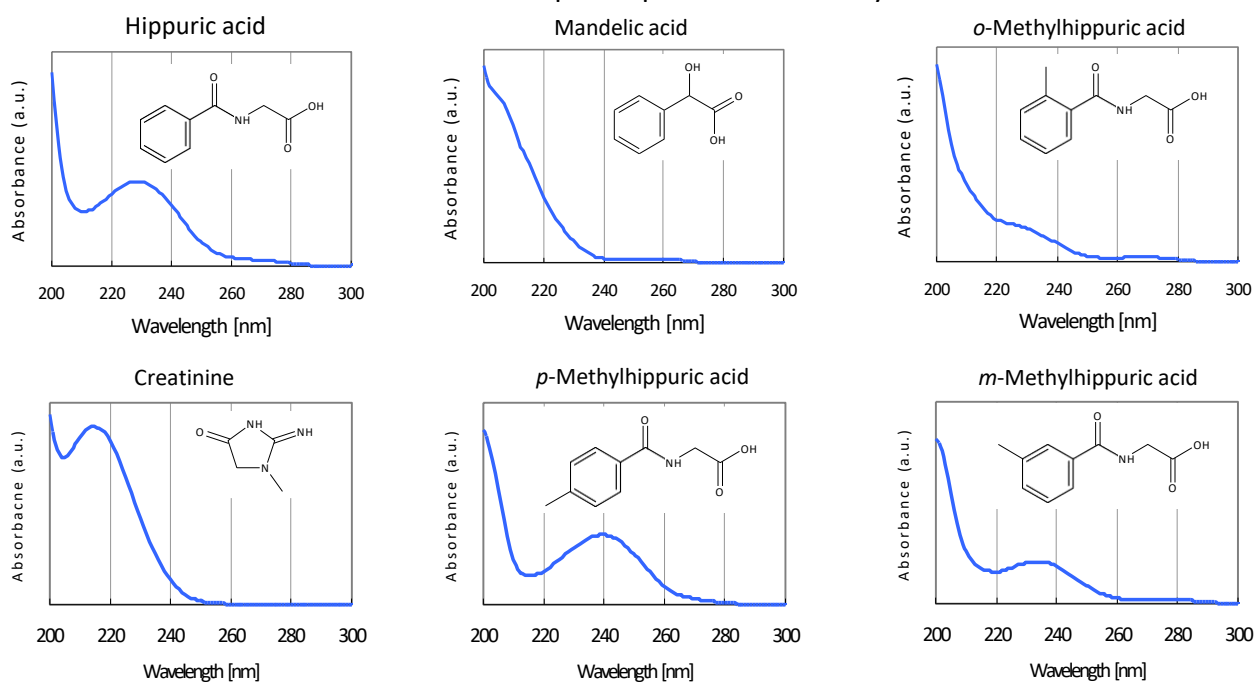
**Flow rate**

**Col. Temp.** : 40  $^{\circ}$ C

**Detection** : PDA 210 nm

**Inj. Vol.** : 10  $\mu$ L

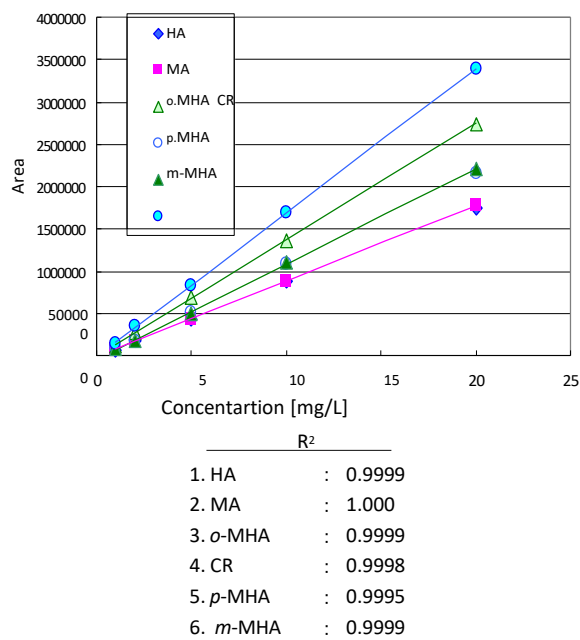
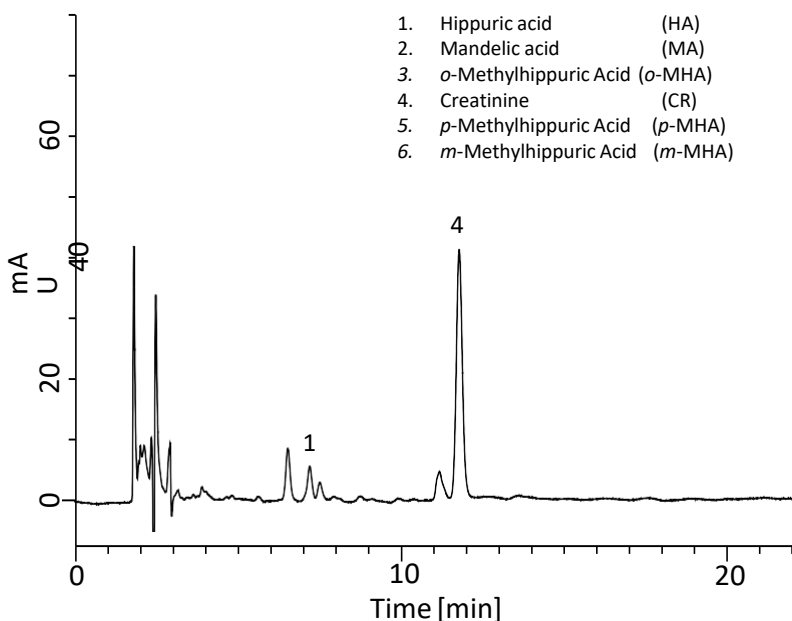
The chemical structures and the absorption spectra obtained by PDA



## An analysis of human urine sample

After 100-fold dilution with water, the sample was filtrated using a 0.45  $\mu\text{m}$ -membrane filter.

The filtrate was injected into the HPLC system.



The calibration curves and their correlation coefficients

GL Sciences disclaims any and all responsibility for any injury or damage which may be caused by this data directly or indirectly. We reserve the right to amend this information or data at any time and without any prior announcement.

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