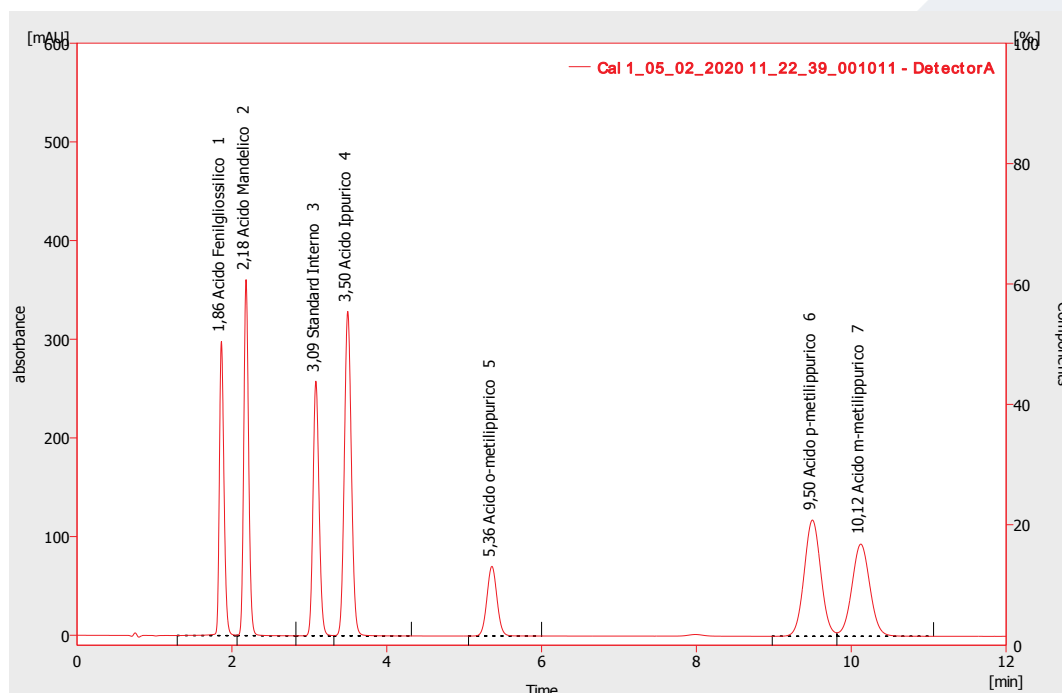


FLOCHROM[®] HIPPURIC ACID AND STYRENE METABOLITES IN URINE

The presence of high levels of Hippuric Acid or its metabolites in urine is associated with high exposure to solvents such as benzene, toluene, xylene and styrene, as they are the substances that are produced by the body when these solvents are metabolized to be eliminated.

Prolonged exposure to high doses of these solvents can lead to kidney and respiratory damages. In more severe cases, it can also induce leukemia and neoplastic formations. The determination of these compounds therefore finds application in the field of occupational medicine.



HPLC system conditions

Injection volume: 10 μ L (variable according to instrumental sensitivity)

Flow rate: 1.3 mL/min

Running time: 12 min

Column heater: 30°C

UV detector: 205 nm

Column conditioning: column should be conditioned for 10 min at flow rate of 1.0 mL/min with mobile phase

Sample preparation

Calibrator preparation

- Take 20 µL of each of the six standards. Put them in 2.0 ml vial. If it is not required to analyze some components, replace standard volume with water
- Add 200 µL of Internal Standard, wash the tip and vortex
- Transfer 200 µL of the solution in autosampler vial, inject in the system and analyze with HPLC technique

Sample/control preparation

- Transfer 20 µL of urine in a 2.0 ml vial
 - Add 100 µL of water
 - Add 200 µL of Internal Standard, wash the tip and vortex
- Transfer 200 µL of the solution in autosampler vial, inject in the system and analyze with HPLC technique

Performance

ANALYTE	LINEARITY (ng/mL)	LLOD (ng/mL)	LLOQ (ng/mL)	CV% INTRA	CV% INTER
Phenyl Glyoxylic Acid	5 - 2500	2	5	2.7 – 6.8	4.9 – 7.8
Mandelic Acid	5 - 2500	2	5	2.5 – 6.5	7.6 – 11.7
Hippuric Acid	50 - 5000	30	50	2.6 – 6.3	6.2 – 8.6
<i>o</i> -Methyl Hippuric Acid	5 - 2500	2	5	2.8 – 6.5	4.5 – 5.5
<i>p</i> -Methyl Hippuric Acid	5 - 2500	2	5	3.1 – 5.4	7.6 – 11.6
<i>m</i> -Methyl Hippuric Acid	5 - 2500	2	5	2.8 – 6.5	9.9 – 1.3

Ordering guide

EUH02100	FloChrom® Hippuric Acid and Stryrene Metabolites in Urine	100 assays
EUH02051	2-Levels Controls, lyphil.	5 x 2 x 0.5 mL
EUH02090	Analytical Column	1 pc