

## 1. Determination Para-aminohippuric Acid (PAH) in Human Plasma by LC/MS/MS Analysis

Description: **Aminohippuric acid** or **para-aminohippuric acid (PAH)**, a derivative of hippuric acid, is an amide derivative of the amino acid glycine and para-aminobenzoic acid that is not naturally found in human. PAH is a diagnostic agent used in medical tests involving the kidney.

Analysis PAH in human Plasma is useful in the measurement of renal plasma flow ([http://en.wikipedia.org/wiki/Renal\\_plasma\\_flow](http://en.wikipedia.org/wiki/Renal_plasma_flow)). It needs to be IV infused before use diagnostically.

PAH in human plasma is pretreated by protein precipitation, the supernatant is evaporated, reconstituted using mobile phase, eluted by High Performance of Liquid Chromatography (HPLC), and determined by Mass Spectrometry (MS) in Electrospray Ionization (ESI) source at positive ionization mode and multiple reaction monitoring (MRM) of transition. Deuterated stable isotope PAH-d<sub>4</sub> is utilized as internal standards for the calibrations of PAH.

### Performances

Lower limit of Quantization (LOQ):

Linear range: (R ≥ 0.999) 0.5 – 80 µg/mL

### Precision (CV%)

Intra-assay CV: See table

Inter-assay CV: See table

| Concentration | Intra assay, RSD(%) | Inter assay, RSD(%) |
|---------------|---------------------|---------------------|
| 5 ug/mL       | 10.13               | 11.31               |
| 20 ug/mL      | 8.74                | 3.15                |
| 38 ug/mL      | 6.37                | 6.37                |