



ASAS II

Automated Standard Addition System

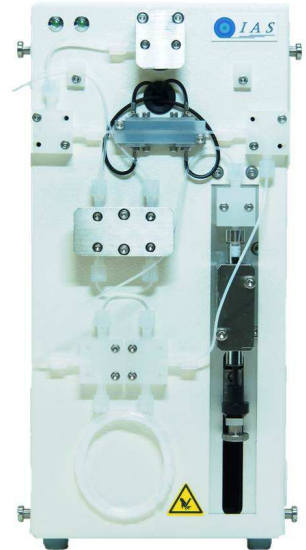


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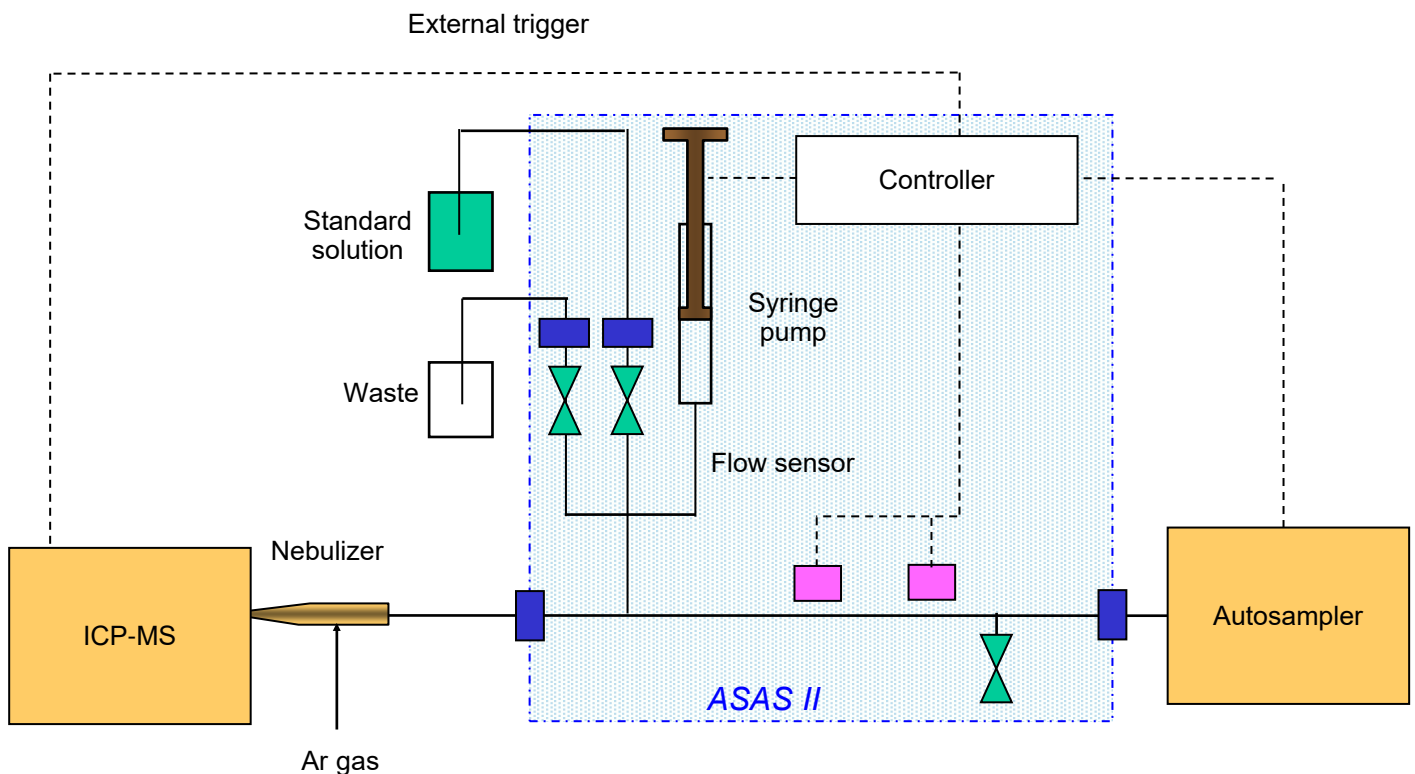
ASAS II sets an operator free from troublesome preparation of standard solution and improves the productivity and precision of your ICP analysis.

Features

- ◆ Calibration standard solution is prepared automatically.
- ◆ Optical flow sensors that don't contact sample solution measure the sample uptake rate automatically.
- ◆ High precision syringe pump (Glass: 1,000 μL) and the patented configuration of no valve in the standard addition line allows the addition of standard solution into sample line at $\mu\text{L}/\text{min}$ level automatically. A typical output flow is around 1-10 $\mu\text{L}/\text{min}$.
- ◆ Self aspiration of sample can be used.
- ◆ Metal free fluoropolymers are used for all wetted surface.
- ◆ Auto refilling of standard solution when solution in the syringe becomes the empty level.

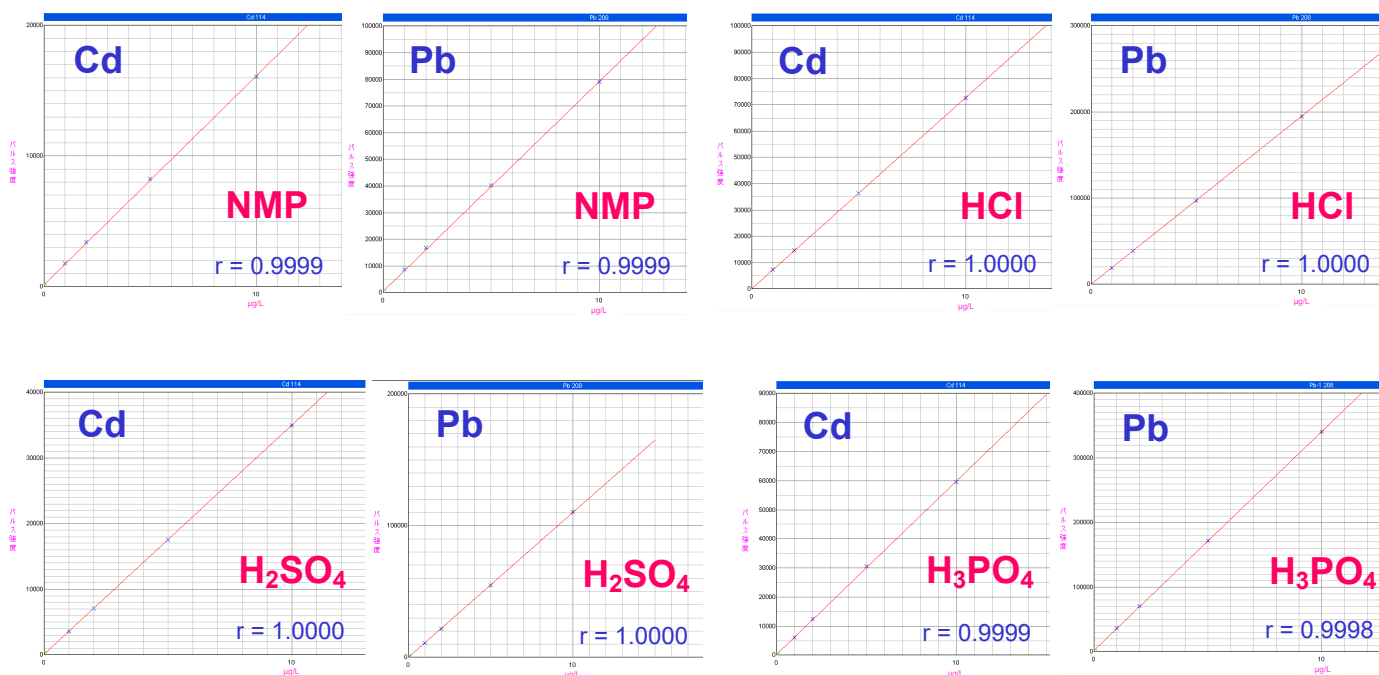


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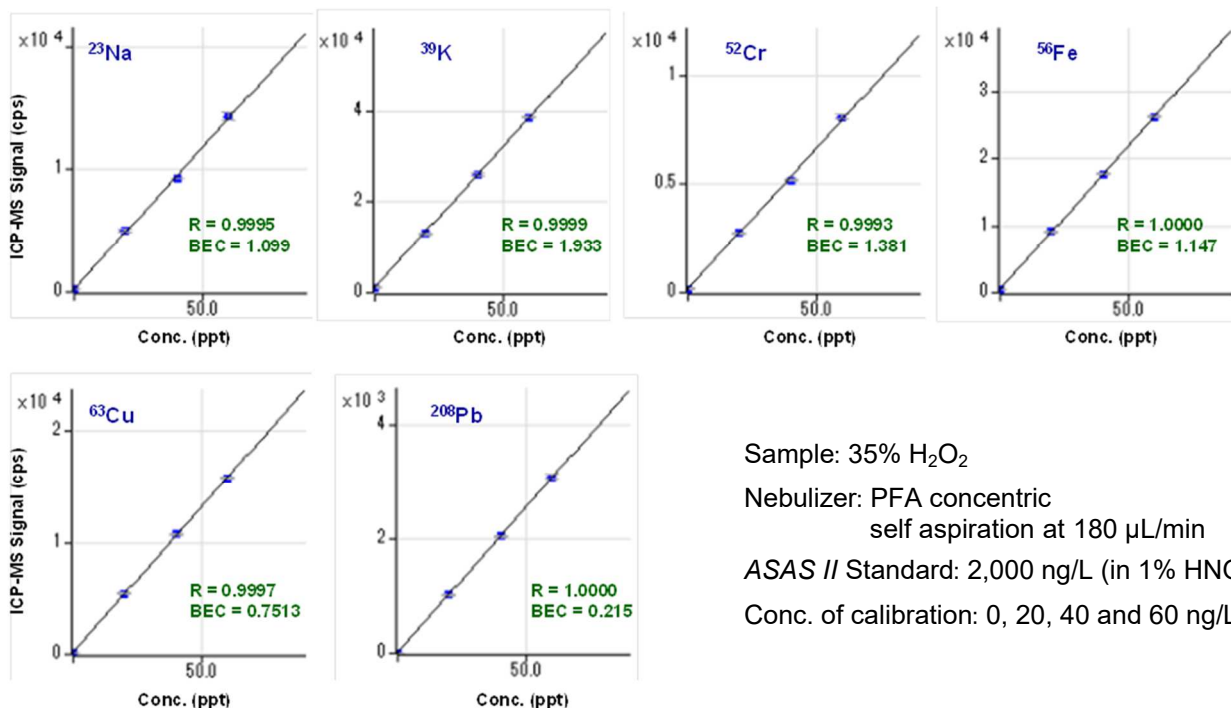
Standard Addition Calibration Curves Using Autosampler

Different chemical samples were set on an autosampler and analyzed by the method of standard addition.



Sample: 10% NMP, 10% HCl, 5% H₂SO₄, 1% H₃PO₄
 Nebulizer: PFA concentric, self aspiration at 200 µL/min
 ASAS II Standard: 0.2 mg/L (in 1% HNO₃)
 Conc. of calibration: 1, 2, 5 and 10 µg/L

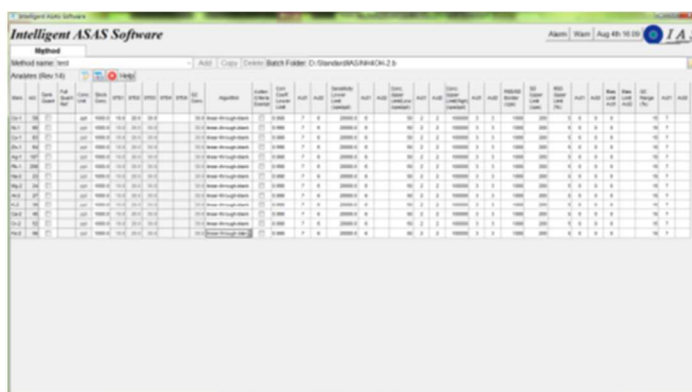
Standard Addition Calibration Curves of 35% H₂O₂



Sample: 35% H₂O₂
 Nebulizer: PFA concentric self aspiration at 180 µL/min
 ASAS II Standard: 2,000 ng/L (in 1% HNO₃)
 Conc. of calibration: 0, 20, 40 and 60 ng/L

ASAS Software

- ◆ Standard ASAS software controls not only ASAS // and autosamplers, but also sends a trigger signal to ICP. The sequence setup in ICP software can be performed automatically.
- ◆ Intelligent software has the following functions. ASAS // takes the result data from ICP and does all data analysis.
 - Make calibration curves and check correlation coefficient and sensitivity of each elements. Recalibration can be done automatically.
 - Check SD and RSD of each analysis, and function of re-analysis when they are over the limit.
 - Analysis of QC solution at specified frequency, and function of re-analysis or recalibration when it is over the limit.
 - Alarm when results are over the limit.
 - Accuracy and precision check according to SEMI C10-1109 protocol.



Specifications

Model : ASAS2-S, ASAS2-E
Flow range : 0.10 - 99.99 $\mu\text{L}/\text{min}$
Flow sensor : Optical fiber sensor
Syringe volume : Glass 1,000 μL
Safety : CE marked

Environment & Utilities
Room temp. : 15 - 30°C
Humidity : 35 - 85%RH, no condensation
Power : 100 - 240 VAC $\pm 10\%$ 2 A,
Single phase, 50/60 Hz
Size : 166(W) x 241(D) x 324(H) mm
Weight : 7 kg

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