

Nippon Instruments Corporation

Products







Direct thermal decomposition mercury analyzer





Model name of MA series



Features

The MA series was so designed that anyone can quickly measure the amount of mercury contained in liquids, solids, and gases (option required) by simple operation, which does not include pretreatment but include the heat-vaporization and ensures high sensitivity and high accuracy. Different from the reducing-vaporization method, there is no need to perform any troublesome pretreatment using chemicals. This series has been highly regarded in and outside Japan for its ease of handling.

Applications

The typical measuring samples include foods, biological tissues, medicines, fertilizers, feeds, electrical and electronic equipment materials, resins, coal, ores, waste oils, waste fluids, soil, and sludge.

Also, by connecting an optional unit, you can perform reducing-vaporization

measurement (for example, of tap water or industrial wastewater) and atmospheric mercury measurement (for example, of general environment air, working environment air, LPG or LNG), so you can measure a wider variety of samples.

Measurement flow

The measuring samples are heated at high temperature in the sample heating furnace to atomize mercury compounds. Next, in the oxidization accelerating furnace, mercury compounds in the gas that was generated in the heating furnace are decomposed, and interferences are removed.

Then, in the mercury collecting furnace, atomized mercury gas is collected in a mercury collector tube as gold amalgam, interferences are passed, and mercury alone is concentrated and purified. After the thermal decomposition sequence has been completed, the mercury collector tube is re-heated, mercury is liberated once again into gas form, and its absorbance is measured.

For detection, cold-vapor atomic absorption spectroscopy with wavelength at 253.7 nm is adopted.

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