

Press Release

for immediate publication

The 2060 MARGA – a re-invented way of air quality monitoring

Ambient air quality is critical for our health and the environment. According to the World Health Organization 91% of the world population lives in places where the WHO air quality guideline levels are not met. To monitor the air quality, Metrohm Process Analytics has re-invented the well-known Monitor for AeRosols and Gases in ambient Air (MARGA) as the 2060 MARGA.

When considering the effects of aerosols on health and the environment, it is necessary to understand how they are formed from their precursor gases and how their concentration and composition vary with diurnal and seasonal cycles. To achieve this, continuous measurements are required with sufficient time resolution so that the various aerosol formation processes can be clarified.

Metrohm Process Analytics has developed the 2060 MARGA, which is a fully autonomous sampling and measurement system that continuously measures the water-soluble gas and aerosol components that have a direct effect on air quality. Air is drawn in to the instrument by a vacuum pump at a constant flow rate. Before entering the instrument, the maximum size of particulate matter (PM) can be limited by utilizing a size-selective inlet (e.g. PM 1.0, PM 2.5 or PM 10). A dual-channel ion chromatograph (IC) quantifies anions and cations in aerosols and water-soluble gases simultaneously with high accuracies to reach detection limits as low as $0.001 \mu\text{g}/\text{m}^3$.

- Gases measured: Hydrochloric Acid (HCl), Nitric acid (HNO_3), Nitrous acid (HONO), Sulfur dioxide (SO_2), Ammonia (NH_3)
- Aerosol ions measured: Chloride (Cl^-), Nitrate (NO_3^-), Sulfate (SO_4^{2-}), Ammonium (NH_4^+), Potassium (K^+), Calcium (Ca^{2+}), Magnesium (Mg^{2+})

The 2060 MARGA is available in two versions:

The 2060 MARGA **Research** is an excellent choice for air monitoring during research campaigns (e.g. to study seasonal cycles). When the 2060 MARGA **R** isn't being used for air monitoring, the IC can still be used as a stand-alone laboratory instrument.

The 2060 MARGA **Monitor** is used to monitor the air quality 24/7 at a fixed position.



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Weblink: [metrohm.com/company/news/](https://www.metrohm.com/company/news/)

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