

this month's topic **Environmental Equipment****Analyzer Detects Organic Compounds in Water Samples**

The TOC-L Series analyzer employs the 680°C combustion catalytic oxidation method to measure total organic carbon in aqueous samples. With a wide detection range of 4 $\mu\text{g/L}$ to 30,000 mg/L, it is suitable for analyzing ultra-pure to highly contaminated samples of wastewater, brine, seawater, drinking water, and pharmaceutical process water. It features automatic sample acidification and sparging, as well as an automatic dilution function that reduces sample salinity, acidity, and alkalinity. This significantly extends the useful life of the device's catalysts and combustion tubes. An optional salt kit permits 12 times more salt to be analyzed before maintenance is required. Two sampling systems are available: the ASI-L autosampler can use three different vial sizes for various applications, and the smaller OCT-L autosampler can use any vial size for up to eight or 16 samples. The TOC-L can handle particulates up to 500 μm , or 800 μm with an optional particulate kit; for larger particles, solids, soils, and sludge, the SSM-5000 can be used.

Shimadzu Scientific Instruments

www.ssi.shimadzu.com

Ductless Fume Hoods Provide Chemical and Particulate Protection

The Purair ECO line consists of energy-efficient ductless containment cabinets that minimize stress on heating, ventilating, and air conditioning (HVAC) systems without compromising protection for personnel and the environment. They are available in five standard sizes and with a choice of controllers, including

the company's new ECOair touchpad control with a color display interface. An optional BACnet network interface connects all cabinet control, monitoring, and alarm functions to an open-source facility-monitoring system based on industry-wide, nonproprietary ASHRAE-compliant protocols for green-building management. A proprietary filter-installation roller assembly simplifies filter replacement, assures proper gasket sealing, and eliminates bypass leakage during operation. Filter efficacy can be confirmed by an optional electronic gas-detection system with wide-spectrum internal chemical reference standards, including a metal oxide array for hydrocarbons and volatile organic compounds (VOCs), an acid array to detect acid vapors, and a front-mounted colorimetric gas-sampling port for manual testing. An ergonomic armrest helps improve user comfort and productivity.

Air Science

www.airscience.com

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Absorbent Pads Soak Up Oil



Oil Eater Naturals are eco-friendly absorbent pads, rolls, and socks that are designed to provide a safer and cleaner workplace while helping users meet U.S. Occupational Safety and Health Administration (OSHA) and U.S. Environmental Protection Agency (EPA) requirements. The products are made of natural plant byproducts and feature woven construction. They are suitable for production lines, industrial and maintenance facility floors, loading docks, and other areas, and are available in 16-in. × 18-in. pads and 28-in. × 150-ft rolls. The line includes oil-only pads and rolls that soak up oil and repel water; universal pads and rolls that soak up oil, water, and other liquids; and absorbent socks that control larger spills and protect drains. The pads absorb up to 20% more than melt-blown polypropylene pads and cost less.

Kafko International Ltd.
www.oileater.com

Improved Ion Exchange Resin Yields Higher-Purity Water

Dowex Marathon C10 effectively removes contaminants from water in industrial water demineralization, condensate polishing, and softening applications. The strong-acid cation exchange resin has beads of uniform particle size that exhibit more consistent exhaustion, regeneration, and backwash than conventionally sized resins. A higher level of crosslinking also provides stability to compressive, osmotic, and oxidative stresses. A recent improvement to the resin is

a reduction in the mean particle size and a 15% improvement in kinetic performance, which translates to improved operating capacity and more-efficient regeneration. The resin's dark color allows for visual monitoring and confirmation of separation from the anion resin in mixed beds, resulting in shorter rinse times and higher polished water purity.

Dow Water & Process Solutions
www.dowwaterandprocess.com

Sensor Detects Subsurface Petroleum Spills



The Ultra-Violet Optical Screening Tool (UVOST) is a direct-push-delivered sensor that allows rapid screening of most petroleum-based light nonaqueous phase liquids (LNAPLs), such as fuels, lubricants, and crude oils, without interference from dissolved-phase hydrocarbons. Using laser-induced fluorescence (LIF) technology, it immediately detects subsurface contamination without having to draw samples or wait for lab results. As the probe is driven into the ground, the LNAPL's fluorescence signal is sent through a fiber-optic cable to a detector and logged by a laptop computer. Results can be seen in real time and onsite personnel can begin determining the next probing location. For each hole, UVOST generates a detailed, colored log that shows the presence of polycyclic aromatic hydrocarbons (PAHs) versus depth. The high-resolution electronic logs can be easily incorporated into 3-D conceptual site models, which is useful in estimating costs and creating a plan for contaminant removal. The system is designed for use with all

direct-push platforms, such as Geoprobe, AMS PowerProbe, and cone penetrometers.

Dakota Technologies, Inc.
www.dakotatechnologies.com

Plumb-and-Play Analyzer Simplifies Water Monitoring and Treatment



The CDA-22 chlorine dioxide (ClO_2) analyzer features a panel-mounted plumb-and-play design and automatic flow control in a low-maintenance complete measurement system for monitoring and control of chlorine dioxide ClO_2 in municipal water systems, industrial cooling and rinse water, wastewater, or fresh water. It uses a polarographic gold/silver polytetrafluoroethylene (PTFE) membrane amperometric ClO_2 sensor to measure ClO_2 concentrations ranging from 0.05 ppm to 20 ppm. The analyzer/controller is mounted on a PVC panel and features a 2.5-in. × 1.75-in. backlit LCD display with four lines for text and graphics. It offers dual measurements, an XY graphical plot, and an optional PID control output. The analyzer requires no expensive reagents and eliminates pressure regulators and rotometers. It provides a 4–20 mA output proportional to the measured ClO_2 concentration, and two alarm relays (single-pole, double-throw [SPDT] 230 VAC/5A or 30 VDC/5A); additional 4–20-mA outputs for pH or temperature and up to six additional relays can be included.

Electro-Chemical Devices
www.ecdi.com