



บริษัท เอ็มบี เซลส์ แอนด์ เซอร์วิส จำกัด

**MB Sales and Services Co., Ltd.**



**Established 2005**



## Precision CO<sub>2</sub> Analysis for Beverage Applications – ISBT Focus



At MB Sales and Services Co., Ltd, we are proud to lead with our advanced capabilities in **ISBT-compliant CO<sub>2</sub> analysis**, delivered in partnership with ASTG. For beverage producers, CO<sub>2</sub> quality is not just a specification — it is critical to product safety, taste consistency, and regulatory compliance.

The **International Society of Beverage Technologists (ISBT)** defines strict limits for impurities in CO<sub>2</sub> used in beverage applications. Contaminants such as hydrocarbons, sulfur compounds, moisture, oxygen, and volatile organic compounds (VOCs) must be tightly controlled, often at trace (ppm/ppb) levels.

### Our ISBT CO<sub>2</sub> Analysis Capability Includes:

- **Comprehensive impurity profiling** in accordance with ISBT guidelines
- Detection of **trace sulfur species** (e.g., H<sub>2</sub>S, COS, SO<sub>2</sub>) impacting taste and odor
- Measurement of **oxygen and moisture** affecting product stability and shelf life
- Identification of **hydrocarbons and VOCs** from upstream contamination sources
- High-sensitivity instrumentation capable of **ppm to ppb-level detection**

### Technical Approach:

- Use of advanced analytical techniques including **gas chromatography (GC)** and selective detection methods
- Configurations optimized for **multi-component analysis in a single workflow**
- Calibration strategies aligned with **certified reference standards**
- Robust sampling systems designed to prevent contamination and ensure repeatability

### Engineering Value:

- Ensures **compliance with ISBT and international beverage standards**
- Enables **root-cause analysis** of contamination events in CO<sub>2</sub> supply chains
- Supports **process optimization** and supplier qualification
- Reduces risk of **off-spec product and costly recalls**

With increasing scrutiny on beverage quality — especially for export markets — our ISBT CO<sub>2</sub> analysis solutions provide the **technical assurance engineers require**.

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## **Hemera Gas and Liquid Analyzers**

### **High-Integrity Measurement with Advanced Analytical Control**

**Hemera analyzers are engineered for high-performance process environments where measurement stability, low detection limits, and long-term reliability are critical.**

#### **Core Technical Capabilities:**

- Multi-technology platforms supporting NDIR, UV, paramagnetic O<sub>2</sub>, TCD, and electrochemical sensing
- Configurable for both extractive and in-situ measurement architectures
- Measurement ranges from percentage levels down to low ppm, depending on configuration
- Advanced signal processing delivering low noise, high repeatability, and minimal drift

#### **System Design Features:**

- Temperature-controlled measurement cells for improved baseline stability
- Integrated sample conditioning systems (filtration, pressure regulation, moisture removal)
- Optional auto-calibration and validation routines for reduced manual intervention
- Modular hardware design allowing field upgrades and application-specific customization

#### **Integration & Control:**

- Seamless integration with PLC, DCS, and SCADA systems via industry-standard protocols (Modbus, analogue I/O, etc.)
- Real-time diagnostics with predictive maintenance indicators
- Data logging and trending capabilities for process optimization and audit readiness

#### **Application Fit:**

- Ideal for process gas monitoring, emissions tracking, and quality control in industrial environments
- Proven performance in applications requiring continuous, high-uptime analysis





## **AGC Analyzers**

### **Advanced Gas Chromatography & Process Analysis Solutions**

**AGC analyzers deliver high-resolution analytical performance, particularly suited to applications requiring component-level separation and quantification.**

#### **Core Analytical Technologies:**

- Process Gas Chromatography (GC) with configurable column sets for targeted separations
- Detector options including FID, TCD, ECD, and specialized sulfur detection systems
- Capability for complex multi-stream and multi-component analysis

#### **Performance Characteristics:**

- Detection limits reaching low ppm to ppb levels, depending on detector selection
- High repeatability with precise sample injection and flow control systems
- Fast cycle times enabling near real-time process feedback

#### **System Engineering:**

- Automated valve switching and stream selection for multi-point monitoring
- Heated enclosures and sample systems for stable operation in variable environments
- Advanced calibration routines with multi-point linearization and validation
- Designed for continuous operation with minimal downtime

#### **Data & Integration:**

- Full integration with plant systems via digital communication protocols
- Built-in data handling for chromatogram analysis, trending, and reporting
- Remote diagnostics and support capabilities

#### **Application Fit:**

- Ideal for refinery gas analysis, petrochemical processes, specialty gas verification, and CO<sub>2</sub> purity analysis
- Particularly valuable where component-level accuracy and trace impurity detection are required



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## Our Unique Strengths in Thailand

### Exclusive Representation

MB Sales and Services Co., Ltd is the **exclusive representative** for these leading analyzer solutions in Thailand, ensuring:

- Direct access to **manufacturer-certified systems**
- Priority support and **genuine spare parts**
- Strong alignment with **OEM technical standards**

### Highly Experienced Engineering Team

Our team delivers:

- Deep application knowledge across **industrial and beverage sectors**
- Professional **system design, installation, and commissioning**
- Practical, solutions-driven engineering support

### Comprehensive After-Sales Support

We provide lifecycle support to maximize system performance:

- Preventive maintenance and **precision calibration services**
- Fast-response **local technical support**
- Operator training and ongoing **technical consultation**

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## Engineering Confidence, Delivered

At MB Sales and Services Co., Ltd, we go beyond supplying analyzers — we provide **engineered solutions that ensure accuracy, compliance, and operational reliability.**

If your process demands precision, compliance, and trusted local support, we are ready to assist.

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**Contact us today** to discuss your application requirements.

*MB Sales and Services Co., Ltd*

Your trusted partner in Gas & Liquid Analysis in Thailand

