

The Next Generation of Headspace Gas Analysis

Ensuring every modified atmosphere package delivers maximum freshness, quality and shelf life.

The demand for longer shelf life, reduced food waste and superior product quality has made Modified Atmosphere Packaging (MAP) one of the most widely adopted packaging technologies across the food industry. From fresh meat and poultry to dairy products, bakery items and ready meals, manufacturers increasingly rely on controlled gas mixtures to preserve freshness and maintain product integrity throughout the supply chain.

However, successful MAP packaging depends on more than simply injecting gases into a package. The actual gas composition inside every sealed pack must be verified before products reach consumers. Even small deviations in oxygen or carbon dioxide concentrations can significantly reduce shelf life, accelerate oxidation, alter product appearance and increase the risk of customer complaints.

The **AGC MAP PAK2** has been developed specifically to solve this challenge by providing fast, accurate and reliable headspace gas analysis directly on the production floor. Designed and manufactured by **AGC Instruments**, the MAP PAK2 enables food manufacturers to verify package integrity and monitor residual oxygen and carbon dioxide levels in seconds, ensuring consistent packaging quality and supporting modern food safety systems.



Built for Modern Food Manufacturers

Food manufacturers today require analytical equipment that combines accuracy, speed and ease of operation without interrupting production. The MAP PAK2 has been engineered with these priorities in mind.

Its lightweight portable design allows operators to perform quality inspections anywhere on the production line. A simple sampling needle extracts a small gas sample from the package, while the analyser automatically measures the gas composition and displays the results on a high-resolution colour touch screen in less than twenty seconds.

The analyser is available in two configurations.

The **MAP PAK2 O₂** measures residual oxygen for applications such as nitrogen-flushed snacks, bakery products and coffee packaging.

The **MAP PAK2 COMBI** measures both oxygen and carbon dioxide while automatically calculating nitrogen as

the balance gas, making it suitable for meat, poultry, seafood, dairy products, ready meals and fresh produce.

Designed Around Quality Assurance

Unlike traditional portable analysers that simply display gas readings, the MAP PAK2 has been designed as a complete quality assurance tool.

Users can create individual product profiles containing product names, operator identification, production line information and user-defined pass/fail limits. During testing, the analyser immediately indicates whether each package complies with the required gas specification.

This significantly reduces operator error while improving consistency across multiple production shifts.

More than **10,000 measurement records** can be stored internally and exported directly to Microsoft Excel using standard CSV files without requiring proprietary software.

For manufacturers operating under HACCP, BRCGS, ISO 22000 and customer quality audits, this provides complete traceability for every measurement performed.

Technical Specifications

The **MAP PAK2** combines advanced sensing technology with an intuitive operating system suitable for both laboratory and production environments.

Measurement Parameters

- Oxygen (O₂): 0–100%

Carbon Dioxide (CO₂): 0–100% (COMBI)

- Nitrogen (N₂): Calculated Balance Gas

Performance

- Colour touch-screen display
- Measurement time below 20 seconds
- Resolution: 0.1%
- Rechargeable lithium battery
- Internal memory exceeding 10,000 measurements
- USB data export (CSV)
- Optional Bluetooth printer
- Multiple product profiles
- Lightweight portable construction

Practical Advantages

The **MAP PAK2** offers several operational advantages that make it particularly attractive for food manufacturers seeking efficient package verification.

Among its key benefits are:

- Rapid production floor testing
- Excellent repeatability
- Simple one-button operation
- Colour touch-screen interface
- Annual calibration interval with low cost of ownership
- User programmable PASS / FAIL alarms

- No proprietary software required for data export
- Internal SD memory
- Automatic nitrogen calculation
- Low maintenance requirements
- Fast operator training
- Compact and lightweight design

These features enable manufacturers to reduce inspection times while maintaining high standards of packaging quality.

Applications

The **MAP PAK2** is suitable for virtually every Modified Atmosphere Packaging application, including:

- Fresh Meat
- Poultry
- Seafood
- Dairy Products
- Cheese
- Fresh Produce
- Ready Meals
- Bakery Products
- Coffee Packaging
- Snack Foods
- Pet Food
- Pharmaceutical Packaging

Whether installed in quality laboratories or used directly beside packaging machines, the analyser provides immediate verification that every package meets its required gas specification before distribution.

Why Choose AGC MAP PAK2?

For more than five decades, **AGC Instruments** has supplied analytical instrumentation to industries worldwide.

The **MAP PAK2** represents the company's latest generation of portable headspace gas analysers, combining proven gas

sensing technology with user-focused software, modern connectivity and production-ready reliability.

For manufacturers committed to reducing food waste, extending shelf life and protecting brand reputation, the MAP PAK2 provides a practical and dependable solution for everyday quality control.

For more information, please contact us:

