

Premium Gases to Preserve Food Quality



Gases



Equipment



Safety



Services



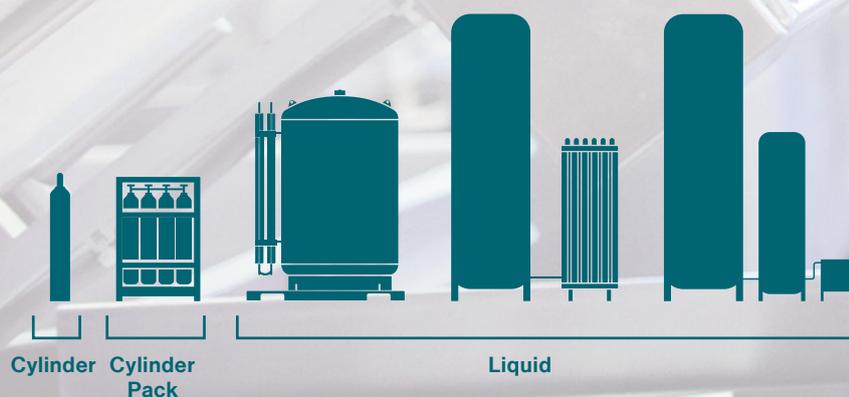
Expertise

Pioneers in food- and beverage-grade gases

Food safety is a public health priority that is presenting new challenges due to the increasing trends in global food production, processing and distribution. As a result, consumers have become as concerned with foodborne disease outbreaks as you.

Airgas, an Air Liquide company, is a leading gas and equipment supplier with **innovative solutions** to address the most challenging food productivity issues. With nearly **40 years of experience** in food and beverage processing, Airgas has been a pioneer in the development of food- and beverage-grade gases for the industry. Our processes to reliably and consistently produce food-grade gases provide you with the confidence to meet food safety and quality standards.

Our range of food-grade gases **complies with industry standards** as well as the **Food Safety Modernization Act** and purity specifications. Airgas ensures that a food safety management system based on **Hazard Analysis and Critical Control Points (HACCP)** principles is applied throughout all stages of the gas production and filling process and supply chain, and also includes a highly effective traceability system in order to provide **peace of mind** to both you and your customers.





40

Over 40 years
experience
in food
processing
and beverage
industries

50

Over 50 global
food experts

1,200

More than 1,200
worldwide
references for
chilling and freezing
processes

Deliver safe, quality products today



Food safety and quality

Our food-grade gases conform to local food and beverage regulations as well as manufacturing standards used nationwide.

- All gas cylinders are dedicated to food service and prepared in production facilities adhering to Good Manufacturing Practice (GMP) standards. Lot numbers are assigned to each cylinder and are traceable to its origin in the event of a recall
- Food-grade gas is tested to Food Chemicals Codex (FCC) standards and follows HACCP principles to ensure its integrity throughout the supply chain — from production to delivery
- Our beverage-grade gases meet the latest ISBT (International Society of Beverage Technologists) guidelines and our CO₂ production facilities are FDA registered, and certified to ISO 9001:2015 and Food Safety System Certification 22000



Reliable, continuous supply

You can depend on the same product quality, consistency and reliability nationwide. Our food-grade gases are available in various supply modes ranging from high-pressure gas cylinders for smaller applications, bulk liquid storage tanks, innovative gas mixers that allow you to mix right on your site, and FLOXAL™ on-site gas generation for larger gas consumption. Your mode of supply can be easily adapted to meet your changing gas requirements. With production facilities and filling centers close by, we can easily provide you with uninterrupted gas supply.



Expertise you can depend on

Our extensive experience includes a dedicated team of food and beverage specialists with applications expertise and is backed by global R&D capabilities to support the development of new and innovative products. Based on our knowledge of gas interactions with food and beverage products, our process experts can design comprehensive solutions which optimize your product quality and process efficiency in order to minimize your overall operational costs.

Food- and beverage-grade gas applications

Gases	Food Oils Powders					Beverages						
	Freezing Cooling Chilling	Inerting Drying	Whipping Sparging	Modified Atmosphere Packaging	Ripening	Water	Wine	Beer	Coffee	Energy	Carbonated Soft Drinks	Novelty
Argon*		•	•	•			•					
Carbon dioxide	•	•	•	•		•	•	•		•	•	•
Carbon monoxide**				•								
Dry ice	•	•					•					
Ethylene					•							
Nitrogen	•	•	•	•		•	•	•	•	•		•
Nitrous oxide			•							•		
Oxygen				•		•	•	•				
Sulfur dioxide							•					
Gas mixtures				•				•				

*FDA monograph in progress **0.4% CO, 30% CO₂, in N₂

Food- and beverage-grade gases for your processing needs

Food



Cryogenic Freezing and Chilling

The cryogenic properties of our gases are ideally suited for chilling, freezing, crust-freezing, individual quick freezing (IQF) and temperature control applications. Airgas food-grade gases reduce dehydration losses, minimize bacterial growth and freeze or chill at a faster rate than traditional refrigeration solutions in order to extend shelf life.



Modified Atmosphere Packaging (MAP)

Our gases are specially formulated for MAP applications to address shelf life requirements for a variety of food products. Airgas food-grade gases help you preserve the original appearance, color, flavor and nutritional attributes of your fresh food products by preventing spoilage from oxidation and by slowing down the growth of bacteria and mold.



Other Food Applications

The properties of food-grade gases are also ideal for protecting edible oils from oxidation, cryogrinding food materials into powders, adjusting the pH in dairy products, aerating mousse products and the stabilization of food ingredients as well as cold transportation.

Airgas provides natural food processing solutions that don't alter the original composition of the food product and help better preserve the product attributes like nutrition, color, texture and flavor.

Beverage



Carbonation

Carbon dioxide for carbonation is produced to the highest standards in order to meet the stringent requirements of the beverage industry. Airgas offers a full suite of testing, analysis and certifications depending on your specific needs.



Beverage Processing

Beverage-grade gases provide an all-natural solution for enhancing product quality by reducing and minimizing dissolved oxygen levels in order to prevent oxidation damage and to preserve the original vitamin and nutrient content. Further, nitrogen micro-bubbles provide unique organoleptic characteristics for drinks such as coffee, ales and mixed cocktails.



Winemaking

Gases can be used at many stages throughout the winemaking process in order to optimize dissolved oxygen and carbon dioxide levels to protect the wine's quality from the vine to the glass, to minimize the use of chemical preservatives like sulfur dioxide and to preserve the great flavors and sensations of the finest vintages.



Dispensing

Airgas offers a full range of gas supply (pure cylinders, mixed cylinders, gas generators and MicroBulk with mixing panels) to the hospitality and leisure industry for pushing and preparing optimized pour for draft beer, for the tapping of wine systems and trendy cocktails. We offer both MicroBulk and cylinder gases for the dispensing and carbonation of soft drinks and fast growing sparkling water.

Airgas, an Air Liquide company, is a leading U.S. supplier of food-grade gases providing sustainable solutions from farm to fork.

Along with our team of food applications experts, Airgas works with customers to develop new solutions as well as to evaluate and refine existing processes to achieve optimal production. Talk to us about how we can safely and reliably provide gases and safety products to help you meet your sustainability goals. Our solutions allow you to preserve food quality, extend product shelf life, improve safety, reduce waste and treat water. Additionally, we offer local service with more than 18,500 associates in over 1,400 locations nationwide.

As an Air Liquide company, a world leader in gases, technology and services for Industry and Health, Airgas offers customers an unrivaled global footprint and industry leading technology and innovations.