

Food Cryogenics



High performance cryogenic solutions for preserving the quality of your food products

- Extend product shelf life by addressing food preservation issues through freezing, chilling, and temperature control applications
- Enhance product quality by freezing faster to minimize any ice crystal damage and to retain its original organoleptic profile
- Contribute to higher yields by rapidly locking in the product's moisture content and minimizing any weight loss from dehydration
- Ensure optimum processing results for slicing, dicing, coating, shaping, crystallizing, and glazing

ALIGAL™

Quality you can depend on...

- Food grade gases compliant with local regulations & HACCP* methodology
- Traceability and product recall systems are in place
- Easy access to proof of compliance documentation

* Hazard Analysis and Critical Control Points

Reliability when you need it..

- The same quality & consistency anywhere in the world
- Local availability supported by an extensive production and distribution network
- Different storage vessel sizes to adapt to your changing gas requirements
- Automated re-ordering services to ensure continuous supply

Refrigeration that delivers extreme power..

- Faster freezing speed provides better quality and improves product yields
- More productivity and process flexibility due to the versatility of cryogenics
- High performance refrigeration when & where you need it, using a specially-designed cryogenic pipeline distribution network
- Customized equipment solutions, with a low initial investment, that require a minimal amount of floor space
- Easy optimization of the gas consumption in order to ensure a competitive freezing or chilling cost

Liquid Nitrogen	Liquid Carbon Dioxide
Liquid Nitrogen is nitrogen in a liquid state at an extremely low temperature (-196°C). As a liquid, its refrigeration properties are used to rapidly chill or freeze many types of food products.	Liquid Carbon Dioxide is normally transformed into dry ice, which is the solid form of carbon dioxide. Dry ice has a temperature of -78.5°C and is commonly used for its freezing or cooling properties during food processing activities.

Let Air Liquide's food specialists recommend the best ALIGAL™ solution for your process requirements.

ALIGAL™ is your guarantee for consistent quality and purity, worldwide:

Product Specifications	ALIGAL™ 1	ALIGAL™ 2
Gas composition - Gas purity	N ₂ ≥ 99.995%	CO ₂ ≥ 99.9%
H ₂ O (ppm v/v)	≤ 50	≤ 50
O ₂ (ppm v/v)	≤ 20	≤ 30
CO (ppm v/v)	≤ 10	≤ 10
NO/ NO ₂ (ppm v/v)	≤ 10	≤ 10

Product Specifications	ALIGAL™ 1	ALIGAL™ 2
C _n H _m (ppm v/v)	≤ 30	≤ 30
Total Sulphur (ppm v/v)		≤ 0.5 ⁽³⁾
NVOR ⁽¹⁾ (ppm w/w)		≤ 5 ⁽³⁾
Tests ⁽²⁾		tests passed

(1) NVOR = Non Volatile Organic Residue (oil, grease)

(2) "Acidity" test and "Reducing substances + hydrogen phosphide & sulfide" test

(3) Guaranteed in the liquid CO₂ raw product

ALIGAL™ is part of our Nexelia for Freezing & Chilling and Nexelia for Temperature Control "all-in-one" solutions. Please contact your local sales representative for more information.

www.airliquide.com



The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 65,000 employees and serves more than 3 million customers and patients.