Manufacturing Processes

- State-of-the-art manufacturing facility in Rochester NY, USA
- ISO 13485 Certified, GMP & FDA registered
- Injection Molding – Closures, Micro Packaging Vials
- Injection Blow Molding – Bottles
- Injection Stretch Blow Molding – PET Bottles
- Extrusion Blow Molding - Carboys
Anatomy of Thermo Scientific™ Nalgene Bottles™

Nalgene bottle and closure system makes Nalgene the only GUARANTEED leakproof system available.

- **Closure**: is one-piece linerless. The closure and bottle system work together to supply a guaranteed leakproof system.
- **Shrink Ring**: at the neck of most Nalgene bottles is moulded so the inside surface is smooth, minimizing content.
- **Seal Ring**: is moulded inside the closure. It fits tightly against the bevelled inner edge (chamfer) of the bottle neck. No closure liner to wear, crease or cause contamination.
- **Threads**: on bottles and closures have continuous, straight-shouldered semi-buttress threads, not low-quality round threads.
- **Heavy-Duty Uniform Walls**: are generally thicker and very resistant to splitting or puncturing.
- **Bottom**: has curved inner corners for easy cleaning. Stable base has permanent, moulded-in resin code and volume.

Competitors will be, at best, leak resistant!
Nalgene Key Features

• Manufacture both bottle and closure to work as a LEAKPROOF system
• High quality plastic resins (virgin resins, very low extractable)
• Guarantee quality (Lot Control)
• Wide Product offering (size, resins, specials)
• Standards compliant (DMF, FDA, EP …)
• Customer and Technical Support
• Ability to manufacture many products in controlled environments and certify sterility
• Product change control (customer notification)
• Inventory Support
Product Families Packaging Containers

- **Media Bottles**
  - PET & PETG

- **Diagnostic Bottles**
  - Dropper Bottles
  - Serum Vials
  - Micro Packaging Vials
  - Small Bottles

- **Bulk Pack Bottles**
  - Lab & Packaging Quality

- **Specialty Bottles**
  - Low-particulate
  - HDPE IP2 (air shipment)
  - Teflon
  - Heavy Wall
Nalgene Media Bottles

- PET and PETG bottle with HDPE closure
- Leakproof
- Sterile $10^{-6}$ SAL
- Validated resins (ADCF)
- Bottle sizes from 30 mL – 2 L
- Clear (glass look like), natural and amber
- Low gas permeability
- Square space-saving shape
- ISO Class 7 Clean Room Manufacturing Environment (PETG)
- Tray Packed
- Tamper-evident closures available
Nalgene Micro Packaging Vials

- PPCO, natural and amber
- Leakproof
- Sizes
  - 0.5, 2.0, 4.5 mL free standing
  - 1.5 mL conical
- Closure Options
  - Threaded screw
  - PP and HDPE High Profile with color coder
  - Colored Low Profile
- Sterile
  - Gamma and e-beam
  - RNAse and DNAse free
- Non sterile
- Bulk packed
Nalgene Dropper Bottles

• For reliable and repeatable dispensing (alternative to pipetting)
• Three components (separate)
  • Bottle (4.0 mL, 8.0 mL, 15.0 mL)
    • LDPE (natural and white)
  • Dispensing tip (40 µL, 50 µL)
  • Closure (various color)
Nalgene Diagnostic Bottles

- HDPE Natural, White, Amber and Translucent Amber
- PPCO Natural
- Sizes: 3.5 mL, 8.0 mL, 15.0 mL

Packaging Options

- Bulk Pack
  - With or without closures
- Tray Pack
  - Sterile
Nalgene Serum Vials

- PETG
- Crimp finish, sterile and non sterile
  - Stoppers and caps not included
- Continuous thread natural and amber
- Trayless shrink wrapped modules
- Sizes: 3 mL, 5 mL, 10 mL, 20 mL

**Closure option**

- Continuous thread unlined (black and white)
- Continuous thread lined multiple colors
Nalgene Bulk Packaging Bottles

- Same look as standard Nalgene bottles
- Leakproof
- Lighter gram weight
- Lower cost
- Anonymous PP closures
- Sizes: from 30 mL to 1L
- Round, narrow-mouth and wide-mouth finish
- HDPE (also in amber and translucent amber), PPCO, LDPE

Packaging Options
- Bulk pack
  - Closure included but not assembled
  - Bottles and closure in separate cartons (narrow mouth)
- Tray Pack
  - Sterile and HDPE NM
Nalgene Bulk Lab Quality Bottles

- Bulk pack of standard lab bottles
- Leakproof
- Nalgene branded
- Narrow-mouth (also w/o closure) & wide-mouth finish
- Round, square (also graduated), rectangular
- Sizes: from 30 mL to 1L
- HDPE (also in amber & white), LDPE, PPCO, PC, FLPE

Packaging Options
- Bulk pack
  - Closure included but not assembled
  - Bottles and closure in separate cartons (narrow mouth)
  - Tray (PC bottles w/o closures)
Nalgene Specialty Bottles

- Standard Nalgene bottles
- Leakproof
- Low particulate (and low metals)
  - Manufactured in controlled environment
  - Minimizes particulate contamination
  - Bottles average <30 parts/ml at 0.3 micron and greater
    - Size from 30 mL to 1L
    - Closure assembled
- IP2 certified (15 psi, air shipment)
- Heavy-duty and vacuum, 1L up to 5L
- FEP and PFA (Teflon)
Nalgene Bulk Closures & Torque Equipment

**Bulk Pack Closures**
- 5 sizes (NM bottles)
- 6 colors
- Use with bottles bulk packed without closures

**Torque Equipment**
- Hand torque wrench
- Torque fittings
Industry standard for multiple applications

- Diagnostic kit manufacturers
- Biomedia production
- Fine and specialty chemicals
- OEM (Original Equipment Manufacturers)
- Pharmaceutical companies
- BioProduction
- Intermediate storage
- Research
New Catalog and Dedicated Web Page

Interactive Catalog Overview

Navigating through the catalog
- Easy-to-use Table of Contents allow for specific content area selections. The side panel tucks away for a larger catalog view and can easily be selected again for other selections.
- "Flip" through the pages in the lower page corners.
- Click the arrows above to flip pages.
- Type a number in the "Page" window to jump directly to a specific page.
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Export your own PDF
- Select the Acrobat icon to download a copy of the entire catalog or specific pages.
- Separate pages with a comma and indicate page range with a dash (ex: 1-5, 14, 21-29)

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www.thermoscientific.com/labconsumables
Plastic Packaging Bottles and Vials

Landing page

• Page for packaging bottles and vials

www.thermoscience.com/packagingbottles
Selection guide

- Enter your criteria and see the range of Thermo Scientific Nalgene bottles that match your criteria.

www.thermoscientific.com/nalgenecontainers
Nalgene is the Only Guaranteed Leak-Proof Bottle

All the rest are, at best, leak-resistant
THANKS FOR YOUR ATTENTION

Your name
Your title
Your contact details

www.thermofisher.com
www.thermoscientific.com/packagingbottles
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