

# Laboratory Gloves Buying Guide



An essential guide to help you  
be **better** informed when  
purchasing laboratory gloves.

Choosing the right lab gloves is essential for safety, comfort, and regulatory compliance. Whether you're handling chemicals, biological agents, sharp instruments, or sensitive samples, the right glove protects you and your work. This guide walks you through the key factors, glove materials, safety standards, and selection tips to make the right purchase.



# 1. Identify Your Primary Use Case

What am I protecting against?

Environment	Requirements
Chemicals	High chemical resistance, thicker material (nitrile/neoprene), long cuff options
Biological agents	Disposable gloves, nitrile/latex, good barrier properties
Sharps or mechanical risks	Cut-resistant gloves, reinforced materials, thicker options
Extreme temperatures	Thermal or cryogenic gloves, specialized materials
General lab tasks	Lightweight nitrile or latex

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# 2. Choose the Right Glove Material

Each glove material offers different strengths.

## Common Glove Types

### Nitrile

Most commonly used in modern labs  
Resistant to chemicals, punctures, and abrasion  
Latex free (safe for allergies)  
Suitable for chemical handling, biology work, and general tasks  
**Best for:** Chemical handling, medical labs, anyone with latex allergies



### Latex

Excellent fit, dexterity, and tactile sensitivity  
Good biological protection  
Less chemical-resistant than nitrile  
Can cause allergic reactions  
**Best for:** High precision tasks, microbiology, general lab use



### Vinyl

Low cost  
Less durable; lower chemical resistance  
Easy to put on and remove  
**Best for:** Short, low risk tasks



### Neoprene

Strong chemical resistance  
Good flexibility and durability  
More expensive than latex/nitrile  
**Best for:** Harsh chemicals, long-term chemical exposure



## Specialty Glove Materials

Butyl rubber: Excellent against ketones, esters, and strong chemicals  
Viton®: Resistant to highly aggressive chemicals  
PVC: Good for large-scale chemical or cleaning tasks  
PE/Barrier film gloves: For highly toxic chemicals where other gloves fail  
**Best for:** Harsh chemicals, long-term chemical exposure



# 3. Pick the Correct Thickness & Length

## Thickness (measured in ml)

- **2-4 mm**  
High dexterity (not ideal for harsh chemicals)
- **5-8 mm**  
Standard lab use; good balance of protection and dexterity
- **8+mm**  
Heavy-duty chemical or mechanical protection

## Thickness (measured in inches)

- **Standard (9–10")** for general lab tasks
- **Extended cuff (12–16")** for chemical handling or splash risk



## 4. Glove Size and Fit

**Proper fit** ensures dexterity and reduces tear risk.

Gloves should fit snugly without restricting movement

Too small → likely to tear

Too large → reduces grip and tactile sensitivity

Many manufacturers provide size charts—measure palm width for best accuracy (see appendix)

## 5. Powdered vs. Powder-Free

Powder-free is standard for labs (no contamination risk)

Powdered gloves are rarely used now due to:

Allergic reactions

Potential sample contamination

**Always choose powder-free for professional lab environments.**



# 6. Disposable vs. Reusable

## Disposable Gloves

- Nitrile, latex, vinyl
- Ideal for biological work, routine chemical exposure
- Single-use to avoid contamination



## Reusable Gloves

- Neoprene, butyl, PVC, heavy-duty nitrile
- Thicker, longer lasting
- Better for large-volume chemical hazards

# 7. Safety Standards & Certifications

Look for gloves that meet relevant safety standards:

**Look for:**

- **EN ISO 374** Chemical and microbial protection
- **EN 388** Mechanical risks (cut, abrasion, tear)
- **EN 455** Medical/Disposable Gloves (barrier protection and sterility)
- **EN 1186** Materials in contact with foodstuffs (non leaching of harmful substances to food)

**Ensure the manufacturer clearly lists test results and compliance markings.**



## 8. Additional Features to Consider

- Textured fingertips for better grip
- Ambidextrous (common for disposables) vs. hand specific
- Color coding to separate clean/dirty areas or hazard levels
- Accelerator-free nitrile if skin sensitivity is a concern
- Double gloving compatibility for high-risk biological or chemical work



# 1. Summary

## Recommended Glove Choices by Use

Task	Recommended Glove
Chemical handling	Nitrile (5–8 mm), neoprene, butyl rubber for strong solvents
Biological work	Nitrile or latex, powder-free
Precision tasks	Latex or thin nitrile
Cryogenic handling	Specialized cryogenic gloves
Cleaning / heavy-duty	Thick nitrile, PVC, or neoprene

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# 11. Buying Checklist

**Before purchasing, make sure you confirm:**

## What hazards will the gloves be protecting against?

Are we working with chemicals, biological agents, solvents, or sharps?  
Are the chemicals corrosive, toxic, volatile, or permeating?  
Is there a risk of splashes, spills, or aerosol exposure?

This determines the material, thickness, and certification required.

## Which glove material is most suitable?

Nitrile → chemical & general lab use  
Latex → fine dexterity (if allergies are not a concern)  
Neoprene / Butyl → aggressive chemicals  
Vinyl → low risk, short tasks

## Are the gloves compatible with the specific chemicals used?

Has the glove material been tested against the chemicals we use?  
What are the breakthrough times and permeation rates?

Always request or review the chemical compatibility chart from the manufacturer.



# 11. Buying Checklist (contd.)

## What thickness and cuff length do we need?

Is high tactile sensitivity required, or is protection the priority?

Is there a risk of forearm exposure?

## Do the gloves fit properly for all users?

Are multiple sizes available?

Do the gloves run small or large?

Are they comfortable for long wear?

## Are the gloves powder-free and low-contamination?

Are the gloves powder-free?

Are they suitable for clean room or analytical work?

Do they contain residues, inhibitors, or additives that could affect samples?

## Are there allergy or skin-sensitivity concerns?

Are the gloves latex-free?

Are they accelerator-free (important for dermatitis)?

Are there known skin reactions among staff?



# 11. Buying Checklist (Contd.)

## Do the gloves meet required safety standards?

Which standards or certifications do these gloves meet?  
Are the test results documented?

## Disposable or reusable—what's more appropriate?

Disposable = control contamination  
Reusable = cost-effective for heavy chemical work

## Do we need extra features?

Do we need textured fingertips for grip?  
Should gloves be ambidextrous or hand-specific?  
Would color coding help with safety or workflow?  
Is double-gloving required for high-risk tasks?

## What is the cost vs. performance balance?

Are we paying for features we don't need?  
What is the cost per glove or per box?  
Is the glove durable enough to reduce waste?



# 11. Buying Checklist (Contd.)

## What is the warm-up time and stabilization time?

How long before the balance is ready after power-on?  
How fast does a measurement stabilize?

## What safety or compliance standards does it meet?

Does it support ISO, GLP/GMP, USP Class I/II requirements?  
Are certificates provided (e.g. ISO 17025 calibration certificate)?

## What accessories are needed? Possible extras:

Anti-static ionizer  
Weighing table  
Printers  
Density kits  
Bar code scanners  
Filter weighing kits



# Appendix. Nitrile Gloves Size Guide



## Palm Width

<b>XS</b>	80mm ±5
<b>S</b>	85mm +5
<b>M</b>	98mm ±5
<b>L</b>	108mm +5
<b>XL</b>	115mm ±5

