

Fresh Milk Quality Testing Guide

Your Complete Handbook for Safe Milk in Lahore

Quick Reference Guide
5 Essential Quality Tests
Daily Testing Checklists
Adulterant Identification
Emergency Response Guide
Seasonal Safety Tips

The 5 Essential Quality Tests

Perform these tests to ensure your family's milk is safe and pure.

1. Purity Test (Water Adulteration)

What It Detects:	Water dilution in milk
Time Required:	30 seconds
Items Needed:	Clean slanted surface (plate or cutting board)
Procedure:	<ul style="list-style-type: none">Put one drop of milk at top of slanted surfaceWatch how it flows downPure milk: Flows slowly, leaves white trailWatered milk: Runs quickly like water
Frequency:	Daily for new suppliers, weekly for trusted ones

2. Freshness Test (Acidity Check)

What It Detects:	Old or sour milk, bacterial growth
Time Required:	5 minutes

Items Needed:	Small pot, stove
Procedure:	<ul style="list-style-type: none"> • Pour 1/2 cup milk in pot • Heat to rolling boil • Fresh milk: Boils smoothly without curdling • Old milk: Curdles or forms lumps • Also smell before heating - should be sweet
Frequency:	Daily for unpasteurized milk

3. Fat Content Test

What It Detects:	Whether you're getting full-fat milk or diluted milk
Time Required:	12 hours (overnight, no effort)
Items Needed:	Transparent glass, refrigerator
Procedure:	<ul style="list-style-type: none"> • Pour milk in clean glass • Cover and refrigerate overnight • Check cream layer in morning • Good fat: 1-2cm for cow milk, 2-3cm for buffalo • Low fat: Very thin or no cream layer
Frequency:	Weekly

4. Synthetic Milk Test (Chemical Detection)

What It Detects:	Detergent, urea, and other dangerous chemicals
Time Required:	1-3 minutes
Items Needed:	Small bottle, water (for detergent test) Soybean powder (for urea test)
Detergent Test:	<ul style="list-style-type: none"> • Mix 10ml milk + 10ml water in bottle • Shake vigorously for 15 seconds • Pure milk: Light, quick-disappearing foam • Detergent milk: Dense, long-lasting lather
Urea Test:	<ul style="list-style-type: none"> • Mix 5ml milk + 5ml soybean solution • Heat gently (don't boil) • Pure milk: Stays white/cream • Urea milk: Turns pink/red
Frequency:	Weekly, or when switching suppliers

5. Source Verification Test

This isn't a chemical test, but the most important verification of all.

Essential Questions to Ask Your Supplier
✓ Where exactly does your milk come from? (Specific farm name/location)
✓ Can I visit your farm or see photos/videos?
✓ What breed of cattle do you have?
✓ How do you keep milk cold during transport?
✓ Do you test milk quality? Can I see recent reports?
✓ What happens if I report a quality problem?
✓ Can you provide customer references?

Your Testing Schedule

Consistency is key. Use this schedule to maintain vigilance without overwhelm.

Daily Quick Checks (30 seconds)

Check	What to Look For	Action if Fails
Smell Test	Sweet, pleasant aroma (not sour)	Reject immediately
Visual Check	No lumps or unusual separation	Reject immediately
Delivery Time	Within promised window	Call supplier
Packaging	Clean, properly sealed	Report to supplier

Weekly Detailed Checks (5 minutes)

Check	What to Look For	Action if Fails
Boiling Test	No curdling when boiled	Switch supplier
Drop Test	Slow flow with white trail	Test for water adulteration
Cream Test Setup	Measure cream thickness next morning	Verify fat content claim
Detergent Test	Minimal foam when shaken	Report and switch

Monthly Verification (10 minutes)

✓ Review all weekly test results - any patterns or concerns?
✓ Request updated quality testing reports from supplier
✓ Compare current milk with market alternatives
✓ Reassess pricing - still fair and competitive?
✓ Evaluate overall satisfaction and supplier responsiveness
✓ Consider scheduling farm visit if not done recently

Seasonal Testing Adjustments

Season	Special Concerns	Extra Precautions
Summer (May-Aug)	<ul style="list-style-type: none"> • Rapid bacterial growth • Heat stress on cattle • Higher adulteration 	<ul style="list-style-type: none"> • Test daily • Boil immediately • Refrigerate within 30 min • Watch for preservatives
Monsoon (Jul-Sep)	<ul style="list-style-type: none"> • Waterborne contamination • Supply disruptions • Cattle health issues 	<ul style="list-style-type: none"> • Boiling mandatory • Extra water adulteration tests • Verify farm not flooded • Watch for unusual taste
Winter (Dec-Feb)	<ul style="list-style-type: none"> • Best natural quality • Higher milk production • Natural preservation 	<ul style="list-style-type: none"> • Still refrigerate properly • Good time to try new suppliers • Make bulk ghee/yogurt

Common Adulterants & Health Risks

Know what you're testing for and why it matters.

Adulterant	Why Added	Health Risk	How to Detect
Water	Increase volume, easy profit	Diluted nutrition, waterborne diseases	Drop test, Cream layer test
Detergent	Create froth, white appearance	Digestive disorders, toxicity	Shake test (excessive foam)
Urea	Increase SNF reading	Kidney damage, long-term harm	Soybean test (turns red)
Starch/Flour	Add thickness after dilution	Digestive issues, no nutrition	Iodine test (turns blue)
Formalin	Preserve milk without cooling	Cancer risk, organs damage	Chemical test kit required

Caustic Soda	Neutralize acid in old milk	Burns, serious poisoning	pH test, unusual taste
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Emergency Response: If Milk Fails Tests

Step 1: Immediate Actions (Within 1 Hour)

1. STOP using the milk immediately - don't consume or give to family
2. PRESERVE a sample in clean container with date/time label
3. DOCUMENT - take photos, save receipts, note supplier details
4. CHECK family members for any symptoms (nausea, stomach pain, etc.)
5. PROVIDE alternative milk source immediately

Step 2: Contact Supplier (Within 24 Hours)

1. Call supplier and explain specific test failure calmly
2. Request explanation and immediate refund/replacement
3. Note their response - cooperative or defensive?
4. If unresponsive/defensive - proceed to Step 3
5. If cooperative - give one more chance with intensive testing

Step 3: Official Reporting

Authority	Contact	When to Use
Punjab Food Authority (PFA)	Helpline: 1223 www.pfa.gop.pk	Any adulteration detected
Consumer Rights Commission	Phone: 051-9213691	Disputes, compensation
PSQCA	www.psqca.com.pk	Official testing, legal documentation
Local Police	Emergency: 15	Only if serious health harm occurs

Supplier Evaluation Scorecard

Use this to objectively evaluate any milk supplier before committing.

Criteria	Points	Your Score
Can provide farm location and details	10	
Has business registration and PFA license	15	
Offers or agrees to farm visits	10	
Maintains visible cold chain (refrigerated transport)	15	
Has documented quality testing (recent reports)	15	
Milk passes all 5 home tests consistently	20	
Good customer service and responsiveness	5	
Fair pricing (Rs. 220-280/liter for quality milk)	5	
Long-term customers willing to give references	5	
	Total: /100	

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Scoring Guide:

- 80-100 points: Excellent supplier - safe to commit long-term
- 60-79 points: Good supplier - acceptable with regular monitoring
- 40-59 points: Marginal - use temporarily while finding better option
- Below 40 points: Avoid - too many red flags

Proper Storage & Safety Guidelines

Refrigeration Rules

DO	DON'T
✓ Set fridge to 3-4°C (check with thermometer)	Store milk in refrigerator door (temperature fluctuates)
✓ Store in coldest part of fridge (back lower shelves)	Mix old and new milk together
✓ Use clean, covered glass or food-grade containers	Leave milk at room temperature "just for a few minutes"
✓ Label containers with date received	Use milk after expiry even if it "smells okay"
✓ Refrigerate within 30 minutes of receiving	Store near strong-smelling foods

Boiling Milk Correctly

Step	Action	Why
1	Use medium-high heat (not maximum)	Prevents burning, preserves nutrients
2	Stir occasionally while heating	Prevents sticking and skin formation
3	Bring to rolling boil (big bubbles)	Kills harmful bacteria effectively
4	Simmer for 2-3 minutes	Ensures complete pasteurization
5	Cool quickly in cold water bath	Stops bacterial multiplication
6	Refrigerate when cooled to room temp	Safe storage, doesn't warm fridge

Milk Shelf Life - Lahore Climate

Milk Type	Refrigerated	After Boiling	Room Temp
Raw (unpasteurized)	Summer: 12-24 hrs Winter: 24-48 hrs	Add 1-2 days	1-2 hours only
Lightly pasteurized	Summer: 2-3 days Winter: 3-5 days	Same as raw	1-2 hours only
UHT (packaged)	Unopened: 6-12 mo. Opened: 5-7 days	Not needed	Unopened: months Opened: 2 hours

Signs of Spoiled Milk - Discard Immediately

X Sour, vinegar-like smell
X Lumpy or curdled appearance
X Unusual yellowing (beyond normal cream)
X Sour or bitter taste
X Thick, slimy texture
X Any visible mold growth

Important Contacts & Resources

Organization	Contact Information	Purpose
Punjab Food Authority (PFA)	Helpline: 1223 Website: www.pfa.gop.pk Address: 4-E Saman Abad, Lahore	Report adulteration Quality complaints Official raids
Pakistan Standards & Quality Control Authority (PSQCA)	Phone: 051-9205271 Website: www.psqca.com.pk	Official milk testing Standards information Certification
Consumer Rights Commission	Phone: 051-9213691 Lahore Office: 042-99203621	Disputes Compensation Legal advice
World Health Organization (WHO)	Website: www.who.int/food-safety Guidelines and standards	Food safety info International standards

About Heaven Dairies

Heaven Dairies is committed to providing Lahore families with pure, tested, traceable milk and dairy products. We created this guide to empower consumers with knowledge to make informed decisions about milk quality.

Our Promise: Every liter of milk we deliver passes all five tests in this guide.

Disclaimer: This booklet provides educational information about milk quality testing for home use. While these tests can identify common adulterants, they do not replace professional laboratory testing. Always consult healthcare professionals for medical advice regarding dietary choices. Information current as of January 2026.