

FERMENTED MILKS AROUND THE WORLD

For centuries, fermented milks have provided essential nutrients and health benefits in human diets. Milk fermentation is as simple as adding live ferments to milk, leading to dozens of popular recipes around the world. How different are they? Get the science facts about Greek yogurt, lassi, skyr, laban, ayran, kefir... and many more.

WHAT IS A LASSI?

LASSI OR DAHI? Lassi is also called stirred dahi ⁽¹⁾. Dahi is a semi-solid (set) curd, usually served plain and unsweetened ^(1,2). It forms the base for a number of other fermented dairies such as lassi, chhach or shrikhand.



THIRST-QUENCHING IS WHAT MAKES IT UNIQUE!

Lassi, a creamy, frothy fermented milk-based drink, blended with water and various fruits or common seasonings but always served chilled.

- Either sweet or salted
- Dilution with aromatic water boosts its thirst-quenching ability
- Sometimes consumed to help relieve the burning sensation of spicy foods ⁽³⁾



FERMENTATION'S PROCESS

BACTERIA

- **Predominant:** *Lactococcus lactis*, *cremoris* & *diacetylactis*
- **Occasional:** *Leuconostoc mesenteroides* (buttery flavor) ⁽¹⁾

MILK + BACTERIA



- Bacteria → Lactic acid fermentation lowers the sugars (lactose) content
- Balance between slight sweetness & mild acidity ⁽²⁾



CULTURAL ORIGINS

- Fermented dairy products have a special place in Indian diet. Products such as Dahi, Lassi, Shrikhand, Chhach are consumed throughout the country on regular basis ⁽¹⁾.
- Lassi is becoming popular worldwide



- ♥ Lassi's origins
- ♡ Lassi fans

TASTE ^{(1,2)*}

- Tart/Sour
- Sweet
- Other flavor
- Rich aroma



TEXTURE* ^(1,2)

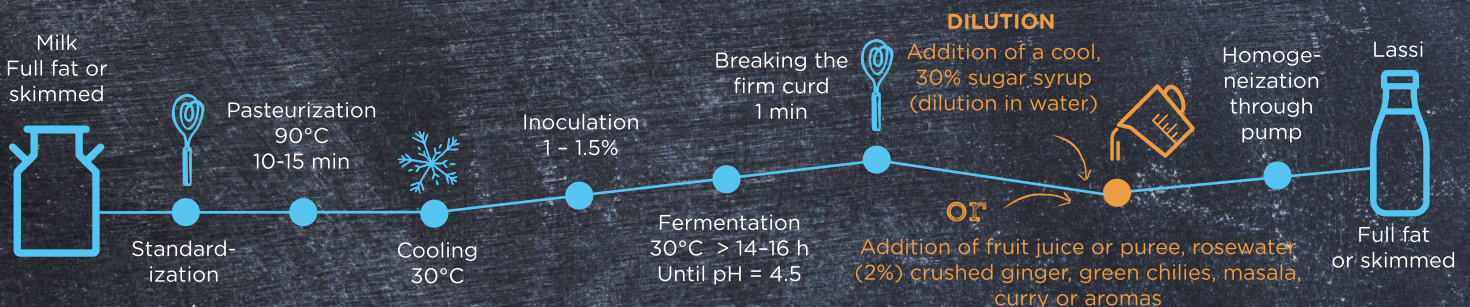
- Liquid
- Creamy
- Thirst-quenching



- NO YES • Set (as fermentation occurs in the pot)
- YES • Stirred (after fermentation, then packed)

* compared with plain yogurt

HOW IS IT MADE? ^(1,2)



Compared with standard yogurt, milk lassi is fermented at a lower temperature (30°C) for a much longer time : 14-16h (vs yogurt 40-45°C for 3h) ⁽⁴⁾.

- Lactic acid production ⁽¹⁾ decreases the pH to 4.5 - 5
- Acts as a natural preservative
- Inhibits the growth of harmful micro-organisms
- Increases shelf life ⁽¹⁾.

NUTRITION & HEALTH BENEFITS



→ DIGESTION FACILITATOR

As in all fermented dairy

- Lactose level reduced by 20-30% ⁽⁵⁾.
- The fermentation process improves the bioavailability of fatty acids ⁽⁵⁾ & protein (freeing peptides) ⁽¹⁾.

→ OTHER EFFECTS UNDER STUDY

- Rosewater flavored lassi is made with an extracted aromatic oil that might show stimulant and antispasmodic benefits: traditionally recommended against headaches & rheumatism ⁽¹⁾.

OTHER RECIPES CLOSE TO LASSI



- **Mishti doi, payodhi or lal dahi** are lassis served as a dessert in claypots that absorb the extra whey and give an earthy flavor to the end product ⁽¹⁾.
- **Saffron lassis** are a specialty of Rajasthan and Gujarat in India and Sindh. Also available with ground and roasted cumin, curry leaves, lemon...
- **Makkhaniya** is a lassi with lumps of butter added to it which makes it even creamier ⁽³⁾.
- **Chaos (chhach) or matha** is a salted lassi produced with more added water and where the top layer of butterfat is removed regularly to reduce its consistency. It is highly flavorful & highly acidic ⁽³⁾.



NUTRITION FACTS (1, 2)

COMMON PORTION SIZES:



Small
1 glass (150 ml)



Average
1 container (250 ml)

In average, for 100 ml

PROTEIN

2.4 g

CALCIUM

83 mg

FATS Level depending on milk fat %

1.5 - 3.8 g

- Transporting the fat-soluble vitamins (i.e., vit. A)

SUGARS (sweetened)

13-20 g

- Depending on the sweetening ingredient (fruit, syrup...)



WHEN TO DRINK?

- Anytime
- During or after a meal
- As a dessert
- In the hot season

1001 WAYS TO ENJOY IT



- Top with some whipped cream before serving
- Enjoy frozen or in homemade ice cream
- Try lassi for mango layer cakes or pops!
- Use as the basis to prepare a great gazpacho (cold tomato-soup)
- Add to shortbread recipes and partly replace the butter
- Serve in a dressing for a potato salad
- In warmer months, served in a handleless clay cup, the kulhar ⁽⁶⁾

References

1/Rasane P et al. Fermented indigenous Indian dairy products: standards, nutrition, technological significance and opportunities for its processing. Journal of Pure and Applied Microbiology 11:1199-1213, 2017. — 2/Lassi. Dairy Technology. <http://dairy-technology.blogspot.com/2014/01/lassi.html>
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