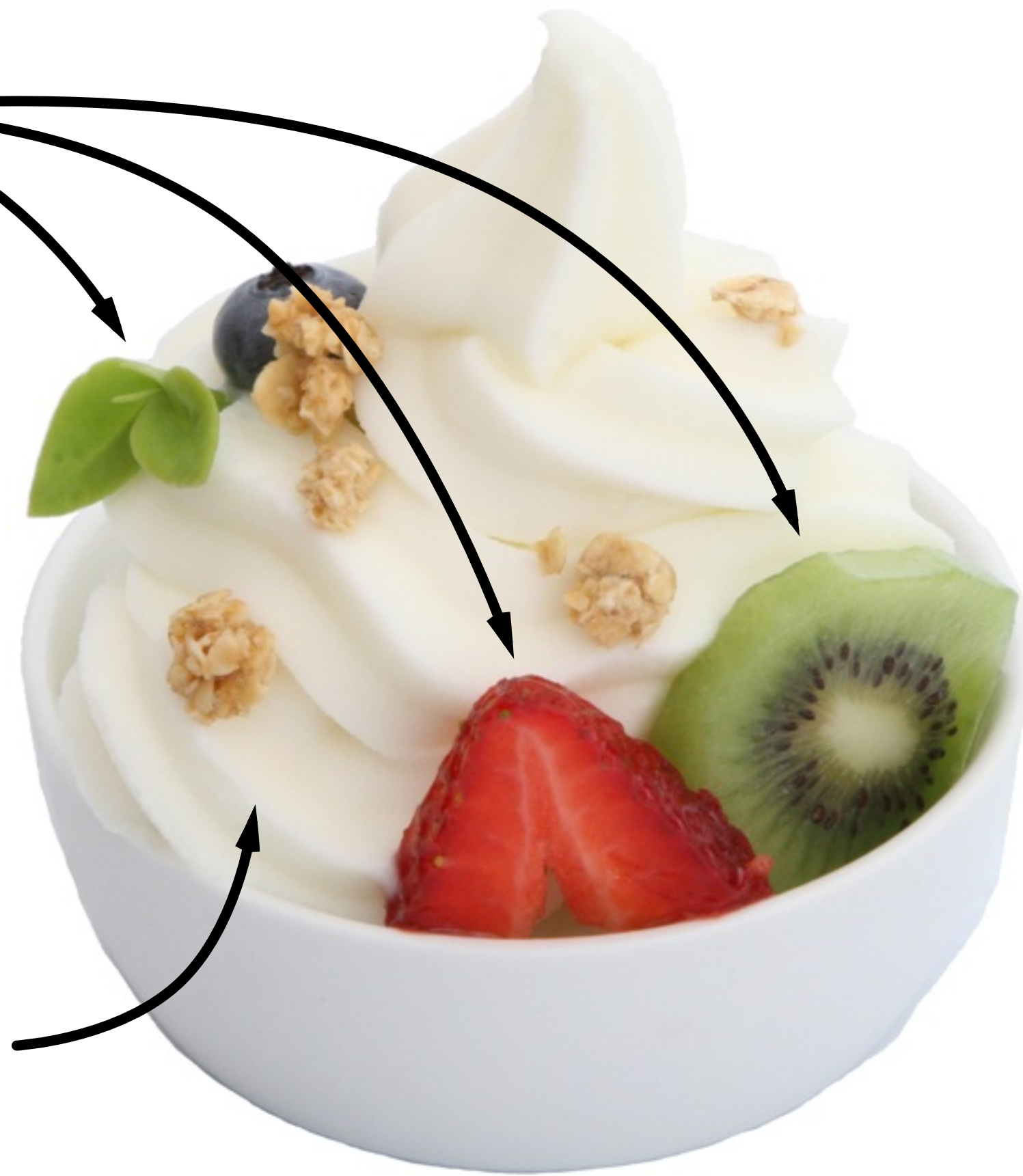


A close-up, slightly blurred photograph of a white bowl filled with white yogurt. The yogurt is topped with several fresh fruits: a sliced kiwi, a strawberry, and a blueberry. The background is a soft, out-of-focus green, suggesting a natural setting. The text is overlaid on a semi-transparent white horizontal band across the middle of the image.

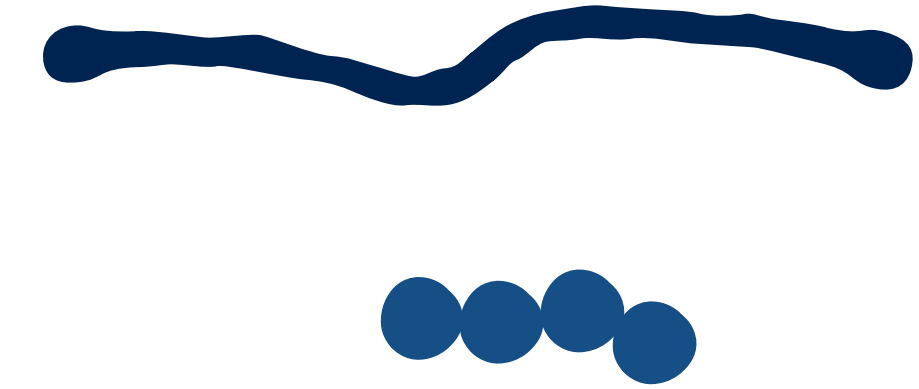
Yogurt

Fermented milk through bacterial action.

Toppings



Fermented milk



yoğurt

Turkish word for curdled or coagulated, thickened.

Why eat yogurt?

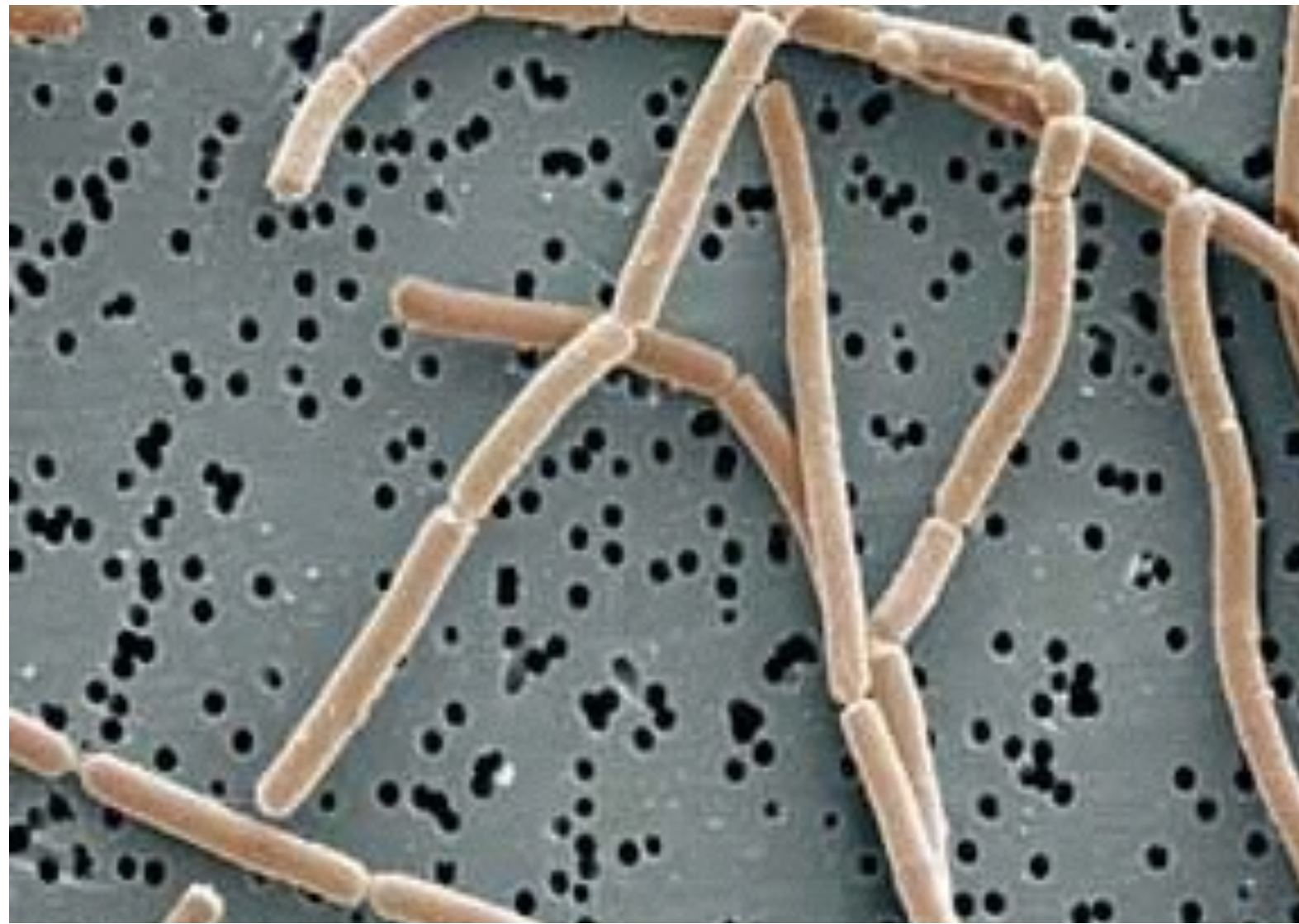
Rich in protein, calcium, riboflavin, vitamin B6 and vitamin B12.

Eating low-fat yogurt can promote weight loss.

Can help keep harmful gut bacteria at bay.

May discourage vaginal infections

How is yogurt made?



Lactobacillus delbrueckii
subsp. *bulgaricus*



Streptococcus
thermophilus

How is yogurt made?

L. d. bulgaricus and *S. thermophilus* are used together to produce lactic acid.

Lactic acid coagulates milk proteins to give yogurt its thick consistency.

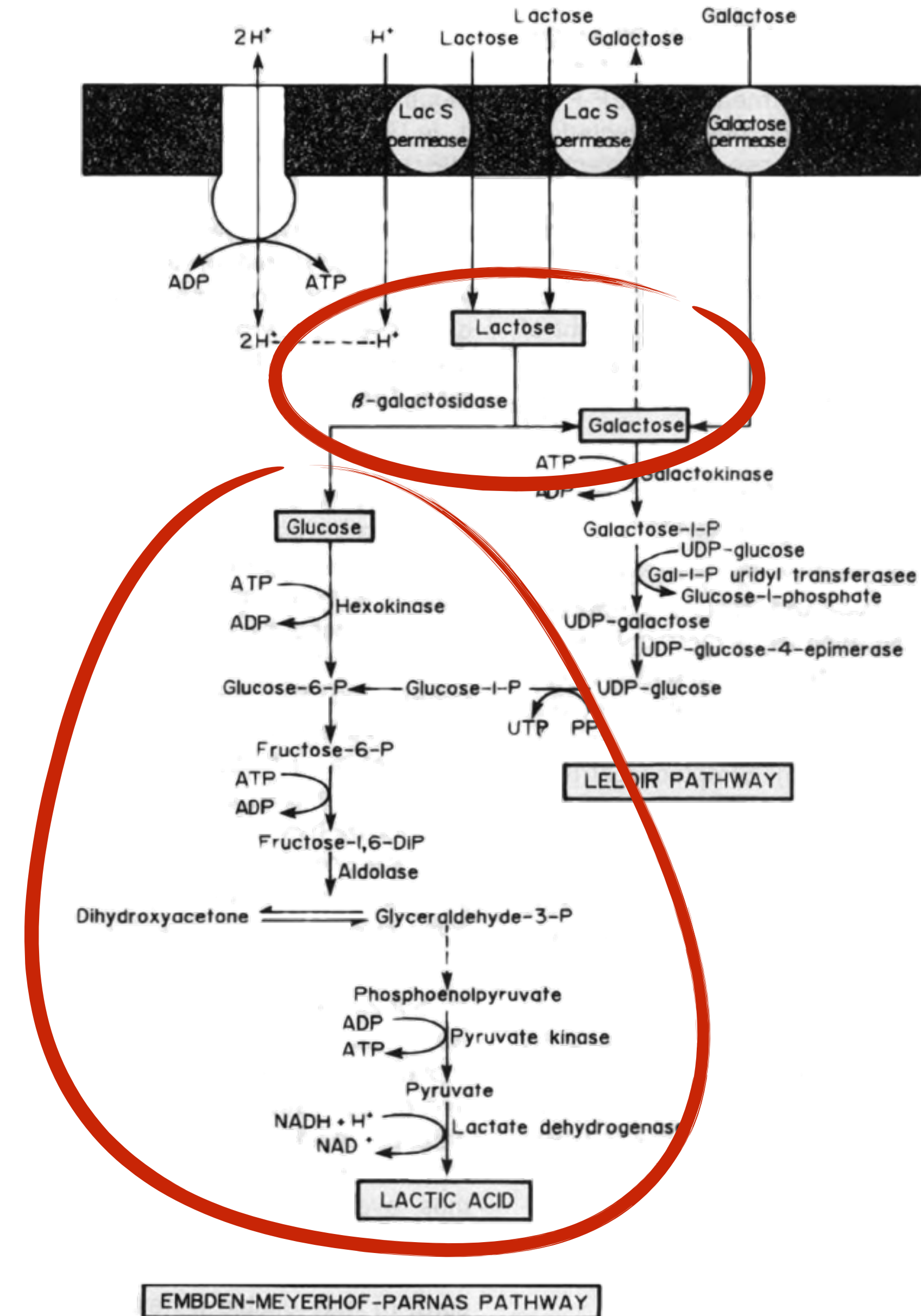
L. d. bulgaricus produces acetaldehyde, a major compound responsible for the aroma of yogurt.

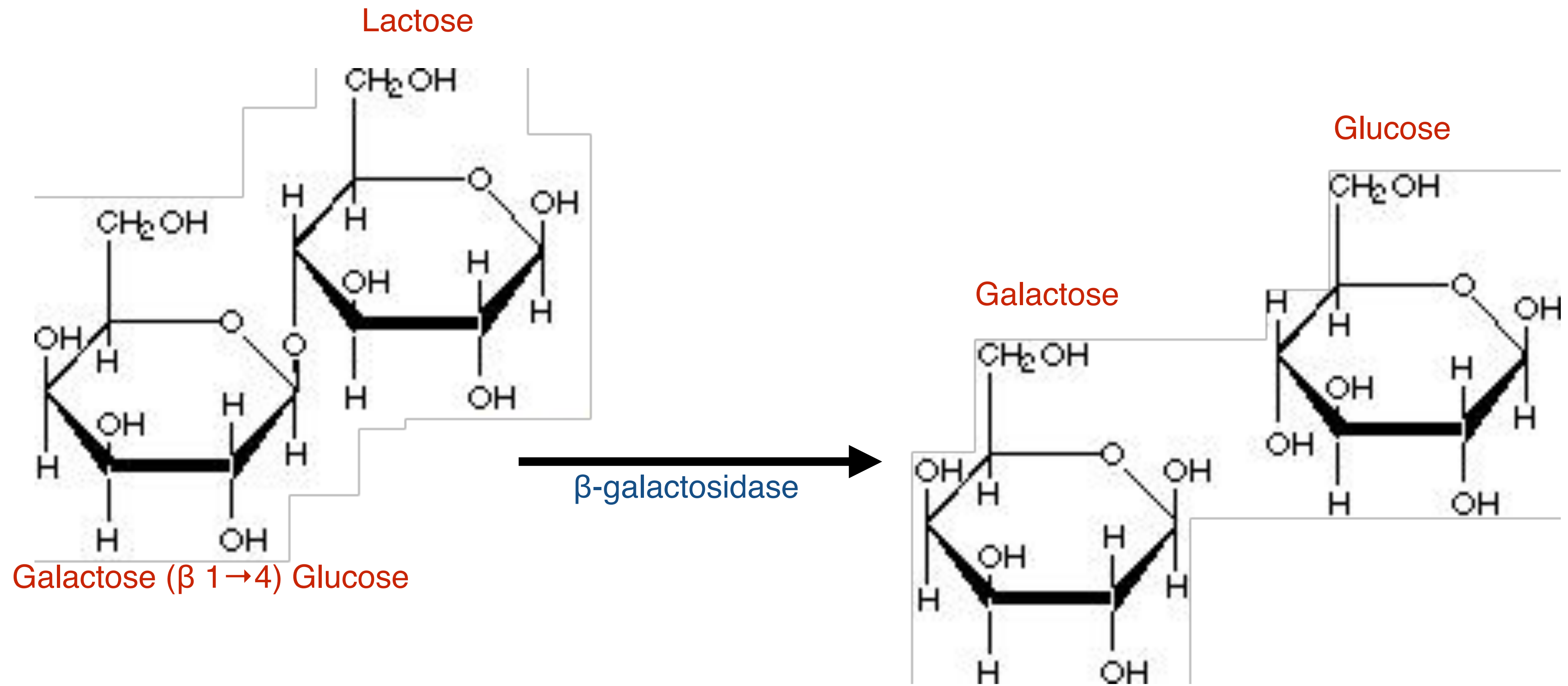
Biochemistry overview

β -galactosidase metabolizes lactose to glucose.

Glucose is metabolized to lactic acid through the Embden-Meyerhof-Parnas pathway.

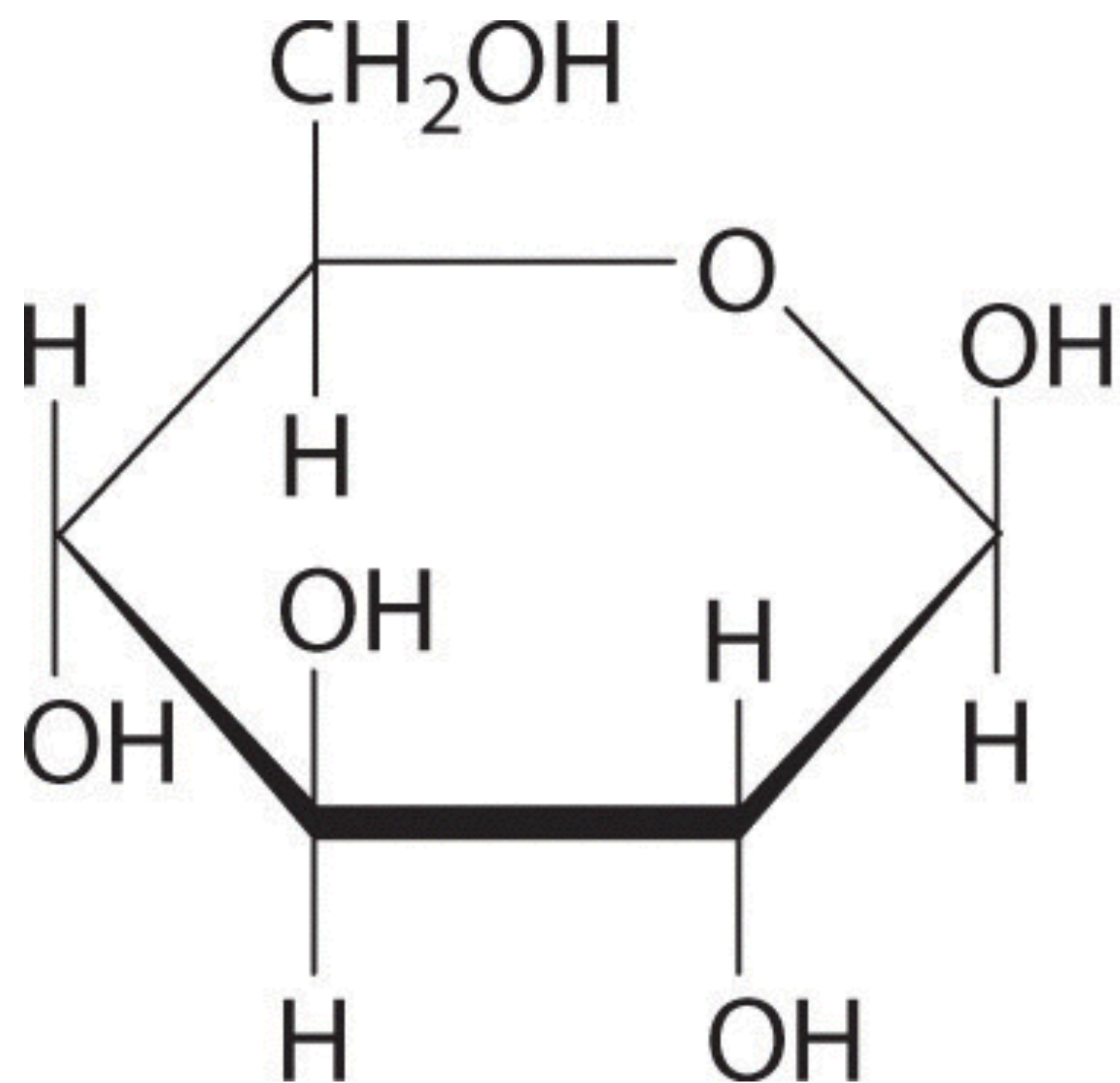
Lactic acid coagulates milk proteins to produce yogurt.



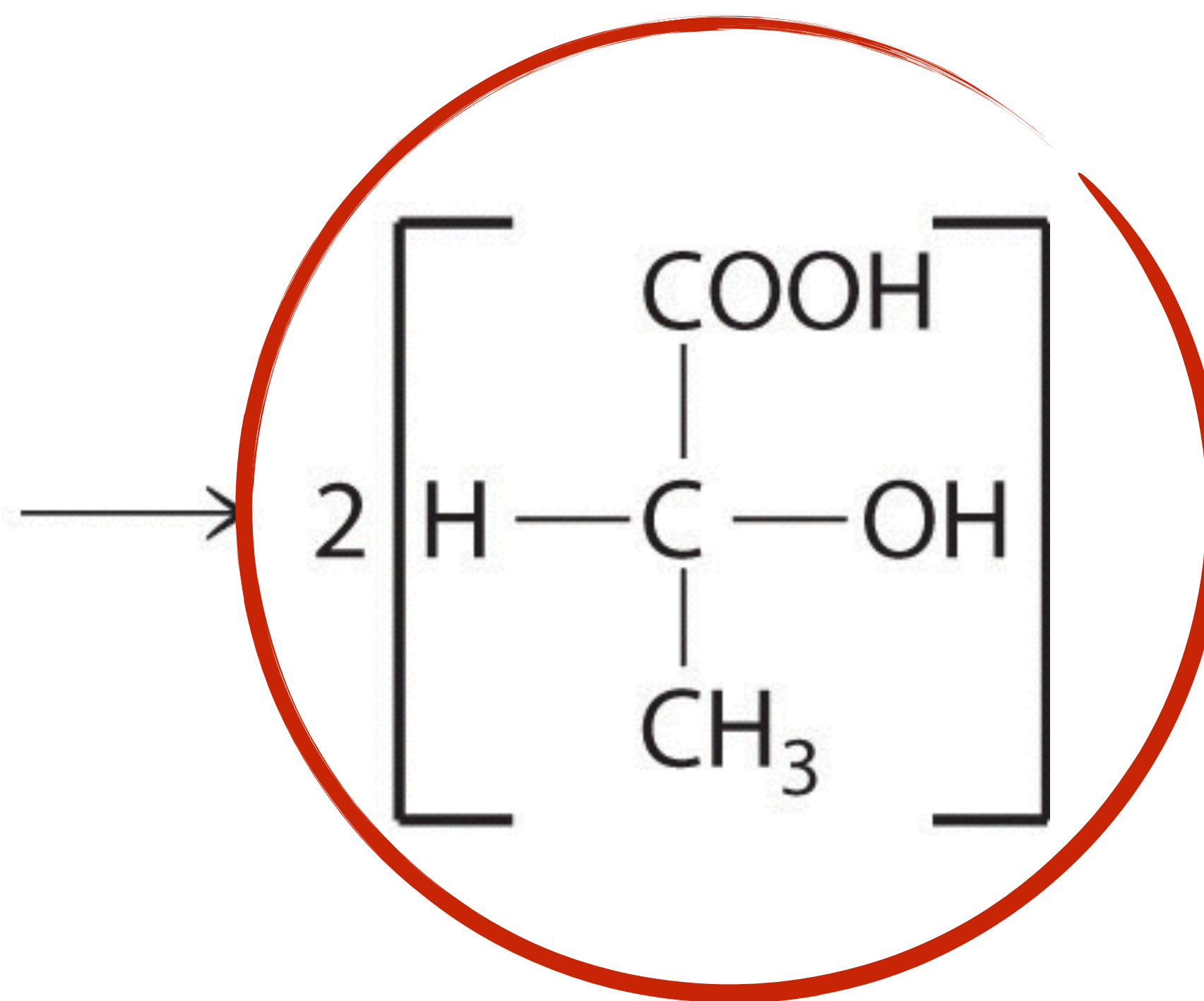


β -galactosidase

Enzyme catabolizes lactose into galactose and glucose.



Glucose



Lactic acid

Embden-Meyerhof-Parnas Pathway

Enzymes convert glucose to lactic acid.

Why homemade yogurt?

It tastes better.

No additives.

It's less expensive.

Just because you can.



Ingredients

1 litre of milk

3 tbsp plain yogurt as starter

large pot with lid

spoon to stir

thermometer



Sanitize

You are incubating bacteria!

Need to sanitize equipment to prevent contamination.

Easiest method: put your stuff in the pot and boil water to steam.



Heat the milk

Using the thermometer, heat the milk to 80°C for ~10 min.

This denatures the milk proteins and yields a smoother texture.

Careful not to burn the bottom!



Cool the milk

Using the thermometer, cool the milk to 45°C.

If too hot, it will kill the bacteria!



Add starter culture

Introduce *L. d. bulgaricus*
and *S. thermophilus*
using the starter yogurt.

Stir well.



Keep warm overnight

Now we incubate for 8-12 hours.

The longer you wait, the thicker and tangy it gets.



Stir and chill

Stirring and chilling stops bacteria metabolism.



You've made yogurt!

Enjoy with your favourite flavour 😊