


From Last Time:



Science of Cooking – BCBT100
Fall 2012 - Bodwin

Cheese Ingredients

Milk
Milk bacteria
Rennet
Salt
Time




Science of Cooking – BCBT100
Fall 2012 - Bodwin

Cheese Microbes

Bacteria are what make cheese

- Lactococci (mesophilic, sour cream)
- Lactobacilli & streptococci (thermophilic, yogurt)
- Propionibacteria (holes, variant causes acne)
- Brevibacterium linens (stronger flavors, salty environment, seashore & skin, "smear bacteria")



Science of Cooking – BCBT100
Fall 2012 - Bodwin

Cheese Microbes

Molds

Penicillium – large family

Blue molds – *roqueforti*

- Survive lower oxygen (inside cheese)
- Breaks down fats – “peppery”, aroma

White molds – *camemberti*

- Surface ripening
- Break down protein – creamy, flavor



Image: <http://www.gourmetsouth.com/Dictionary/M/Maytag-blue-cheese-6166.aspx>

Science of Cooking – BCBT100
Fall 2012 - Bodwin

Making Cheese

Acidify (bacterial)

- Milk sugar to lactic acid

Curdle casein (*rennet*) and drain whey

- Stabilizes curd

Ripening

- bacteria + time = good



Science of Cooking – BCBT100
Fall 2012 - Bodwin

Curdling

Acid

- Fine, fragile gel
- Formed over hours
- Retains moisture



Image: <http://jamesranch.net/cheese/cheesemaking/>

Rennet

- Firm, rubbery curds
- Formed under an hour
- Cut to small grains, loses more water



Image: <http://www.thekitchn.com/better-butch-snarks-make-squaky-cheese-at-home-167438>



Science of Cooking – BCBT100
Fall 2012 - Bodwin



After the curd...

Draining – gravity, press, heat
 Salting – mix or smear, inhibit spoilage
 Shaping – Why wheels?
 Ripening – Let the bacteria work!

Images: <http://www.theardentepicure.com/2010/04/food-of-day-parmigiano-reggiano.html>
 Science of Cooking – BCBT100
 Fall 2012 - Bodwin

Enjoying cheese...

Don't cut too soon
 Aromatics lost
 Oxygen attacks!
 Let it warm a bit
 Humid & 55-60°F ideal
 Softens fats – Don't go too far!
 Store loosely wrapped
 Puddles of moisture are bad

Image: <http://www.kitewhite.com/archives/2006/07/kill-cheese-experiment-3.html>
 Science of Cooking – BCBT100
 Fall 2012 - Bodwin

Tasting

Use all your senses!

Sight – What does it look like?

Touch – Is it smooth? Crumbly? Sticky?

Smell – Surface and inside

Taste – Salty? Sweet? Like it smells?

Touch – How does it feel on your tongue?

Hearing – OK, maybe not *all* your senses...



Science of Cooking – BCBT100
Fall 2012 - Bodwin