

# Introduction to Mixed Culture Brewing

The sour and the funky

# Topics

What is Mixed/Alternate Fermentation?

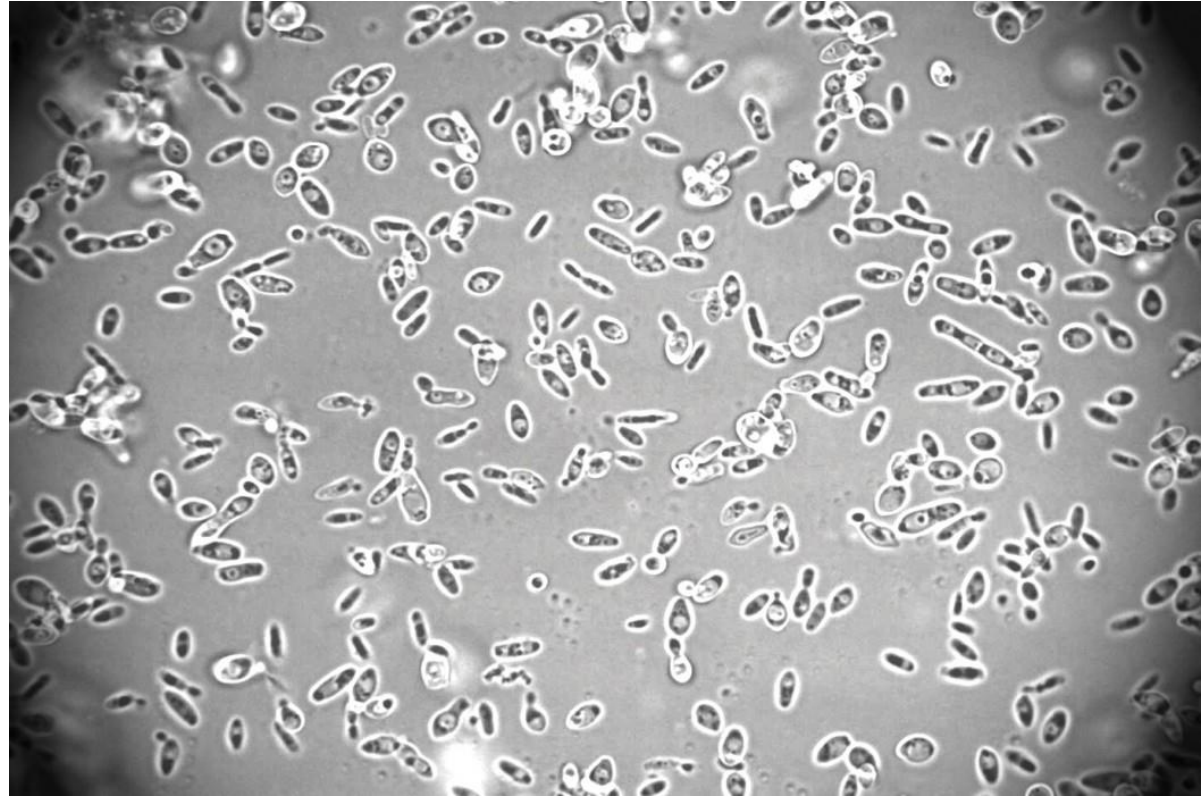
Mixed fermentation styles

Myths of Mixed Culture Brewing

Kettle Souring

How to Get Your Toes Wet

Jumping Off the Deep End



# What is Mixed/Alternate Fermentation?

Emil Christian Hansen and commercial beer production

Pure culture brewing

Niels H. Claussen 1904 discovery and the typo

Clean vs. Mixed

The four horsemen of deliciousness (Sacch, Brett, Lacto, Pedio) and their characteristics

Alternate fermentation: Brett in the spotlight

What is Lambic/Geuze



# Mixed Fermentation Styles

Belgian (Flander Red, Oude Bruin, Lambic/Geuze)

German (Gose, Berliner Weiss, Lichtenhainer)

UK (Old Ale, Foreign Extra Stout, and other Bigger beers)

American Wild Ale/Farmhouse Ale



# Myths about Mixed Fermentation

Infections are wild Brett

You can tell what is in a beer based on the pellicle

Once it touches non Sacch organisms it can only be used for mixed ferm

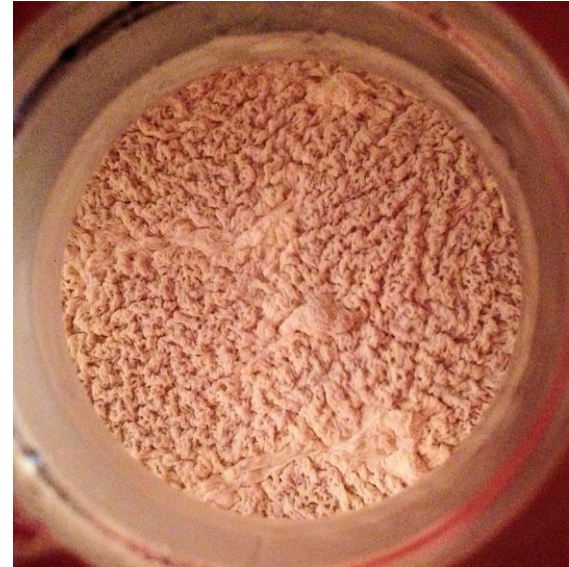
Brett beers take +12 months to make

You can only do spontaneous fermentation in the Pajottenland/lambic region

Brett = Sour

WLP644 is brett

Dump as soon as you taste off flavours



# Kettle Souring

Quick way to make tart beers

Mash, pasteurize, pitch lacto, wait for pH target, Boil and ferment as normal

Pros: Quick, Sanitary, Fairly simple, easy way to add sourness to any beer style

Cons: Takes 2 brewdays, Big potential for off flavours, Lacks depth of flavour

Hybrid quick sours

# Getting your Toes Wet

Recipe design

Blending

Microbe selection

Bottle Dregs

What to ferment in

Needed equipment

Please do not force carbonate



# The Deep End

Fruit

Equipment that will make your life easier (although not completely needed)

Troubleshooting off flavours

Troubleshooting carbonation

Troubleshooting microbial swing

Solera brewing

Spontaneous

