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BREWERS
CONFERENCE**
& BrewExpo America®

Draught System Sensory



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What is Draught System Sensory?

What is Draught System Sensory?

- Core = Sensory Analysis
 - In your tap room or at an account
 - Same issues, different resolutions



Topics

- Where to start
- What can go wrong
- Solutions
- Resources



Where to Start



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Where to Start

- Know YOUR beer
- What is True To Type?
 - Brewers Intent
- What is an off flavor?
 - Draft Systems



Critical Control Points



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Critical Control Points

- When to taste?
- Where is there risk of a flavor impact
- Who should taste?
 - Inside the brewery
 - In the trade?

Best Sensory Practices



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Best Sensory Practices

- Consistent
- Focused
- Reduce Bias



What Can Go Wrong?



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Where to Start

- Now that your team is prepared, what are they looking for?
 - Start Simple
 - Wrong beer?
 - Date code
 - Draught balance issues?
 - Temperature
 - Simple explanations don't explain it?
 - Are the lines clean?

**Lines should be
cleaned every 14
days.**

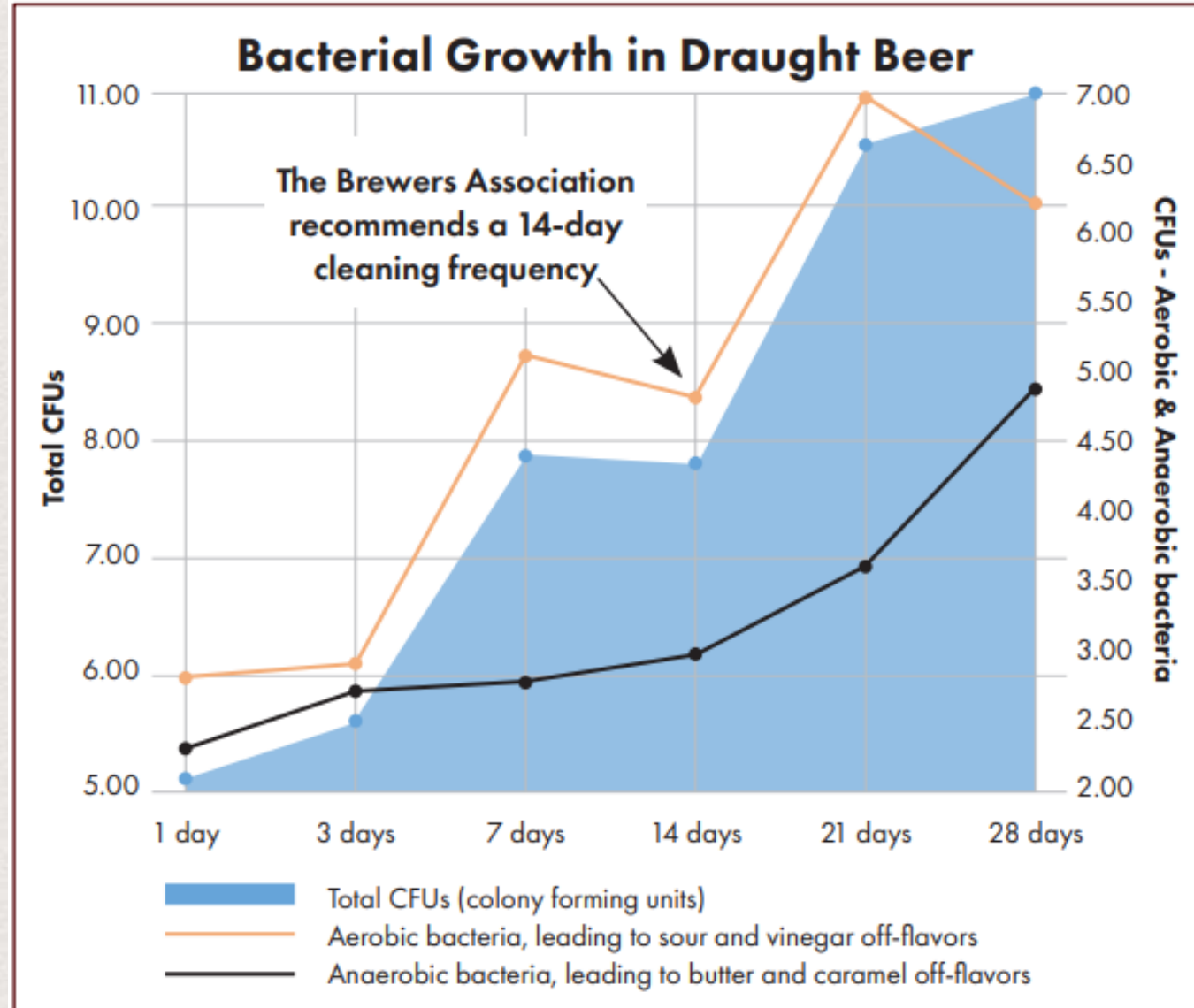


Figure 7.2. Bacteria can grow exponentially in uncleaned draught lines.

Graph adapted from E. Storgårds, "Microbiological Quality of Draught Beer—Is There Reason for Concern?" in Proceedings of the European Brewing Convention Symposium Draught Beer, Packaging and Dispense, Monograph XXV, Edinburgh, September 1996 (Nürnberg: Carl Getränke-Fachverlag), 92-103.

Dirty Draught Lines



Figure 7.1. Biofilms can easily become established in dirty lines.

Creative Commons: D. Davis - From: D. Monroe. "Looking for Chinks in the Armor of Bacterial Biofilms". *PLoS Biology* 5 (11, e307)
journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.0050307.

Diacetyl



Causes:

- *Pediococcus* and *Lactobacillus* bacteria



Solutions:

- Routine Line Cleaning

Lactic Acid



Causes:

- Lactobacillus bacteria

Solutions:

- Routine Line Cleaning



Acetic Acid



Causes:

- Acetobacter



Solutions:

- Routine Line Cleaning

4-Ethylphenol



Causes:

- Brettanomyces
- Lactobacillus

Solutions:

- Routine Line Cleaning

Other Flavor Changes



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Trans-2-Nonenal



Causes:

- Oxygen



Solutions:

- Product Rotation
- Extended time in vinyl lines

Foamy/ Flat Beer

Causes:

- Wrong pressure



Solutions:

- Balance system, use correct pressure

Lightstruck



Causes:

- UV Light



Solutions:

- Tell your customer to keep their beer in the shade

What to do Next

- Think you found something?
 - Try another taster
 - Try another line
 - Try another keg
- Develop a process
 - Follow up
 - Record keeping
 - Don't be surprised
 - Have system beforehand
 - Train team on system

[QC Issue in the Trade](#)

Date

[04-04-2022](#)

Details

Account:	Corner Pizza Spot
Distributor:	Beer Distributors International
Source of Complaint	Email - Wholesaler
Account Address	12 Maine Street
On or Off Premise	On
Item	White 1/2 BBL Keg
Batch	7371
Issue	Off-Flavor
Comments	Scott called and said it was tasting sour. He and I assumed it was unclean be lines, but the bar manager said the lines had recently been cleaned. New keg delivered.



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Resources



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Resources

- DIY
 - Ask a brewer
 - Grocery store options
 - Skunk some bottles



Guidelines for Doctoring Beers

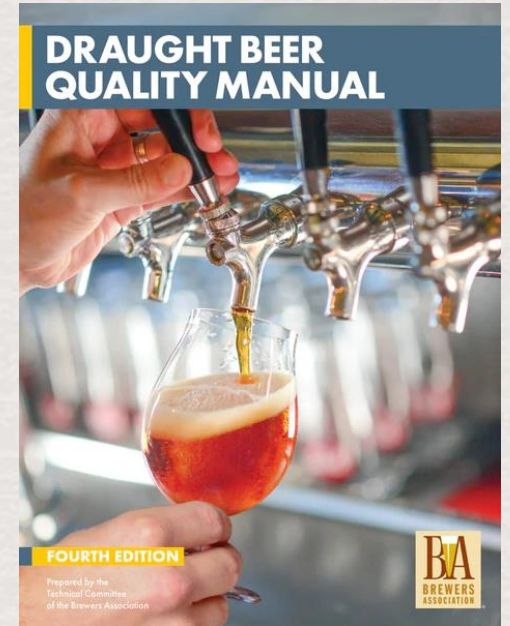
- BJCP has some DIY options
 - Google – “**Guidelines for Doctoring Beers**”
- Here’s an example



FLAVOR	SENSORY PROFILE	ADULTERANT	AMOUNT FOR 12 OZ.	AMOUNT FOR 1L.
Acidic – lactic	Clean, sharp sourness. Acidic	USP lactic acid	Make a solution of one part 88% lactic acid and four parts water. Use ½ tsp of the diluted solution.	Add 7.5 ml of the solution.
Acidic – acetic	Vinegar	White wine vinegar	3/4 tsp	10.5 ml.
Diacetyl		Butter extract	4-5 drops	11 – 14 drops
Lightstruck		N/A	Expose commercial beer in green bottles to sunlight for 1-3 days	Same.
Papery oxidation		N/A	Open bottles to air, reseal, and keep at 100 °F (40 °C) or warmer for several days	Same.
Sherry Oxidation	Sherry-like	Dry sherry	3/4 tsp	10.5 ml.
Vanilla	Custard powder, vanilla essence	Vanilla extract	Make a solution of one part vanilla extract to five parts water. Add ¼ tsp to the sample.	Add 3.75 ml of the solution.

Resources

- Brewers Association
 - Resource Hub
- Kits
 - Siebel
 - Aroxa



Recap

- Know your beer.
- Know what can go wrong.
- Know what to do - and how best to prevent future issues!



THANK YOU!

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