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THE VOID SAKE CO
EST. 2020
LEXINGTON, KY

TALE OF TWO BEVERAGES:

CASE STUDY FOR ACADEMIC & INDUSTRY PARTNERSHIPS VIA STUDENT INQUIRY

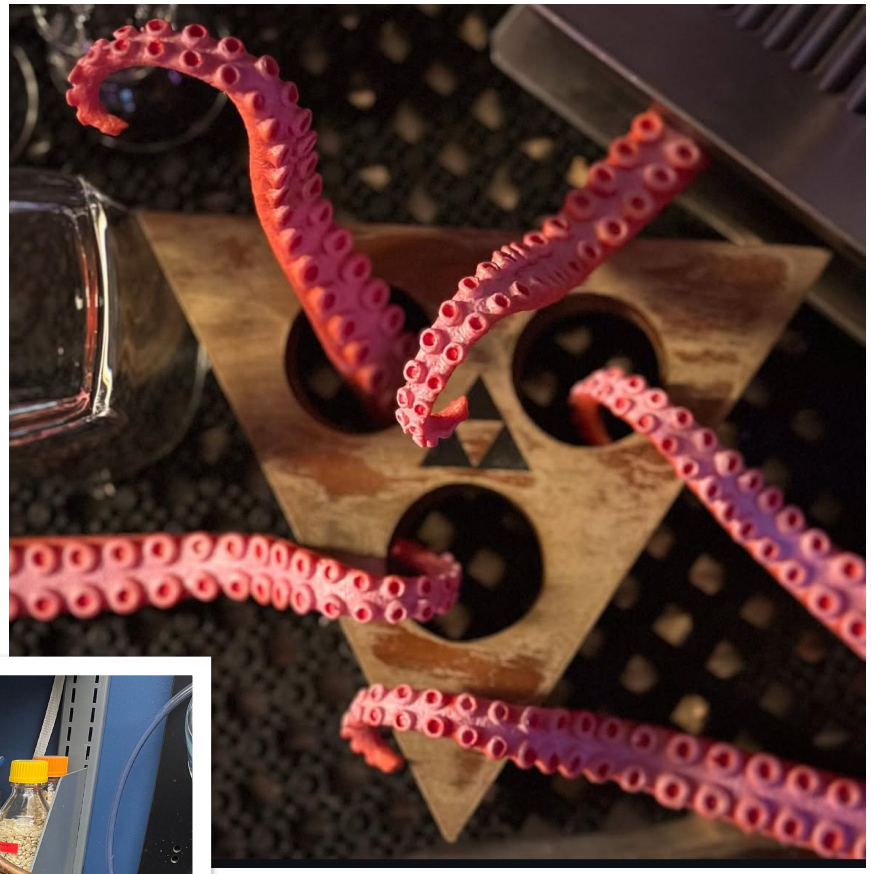
Justin LeVaughn – The Void Sake Co

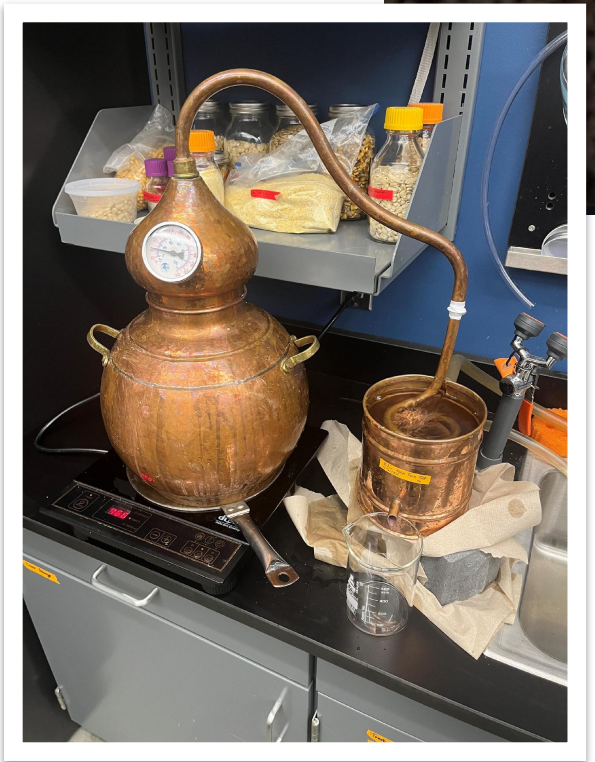
Dr. Tyler Barzee – JBBI

Benjamin Lin - JBBI

OUTLINE

- The People & Places
  - James B Beam Institute of KY Spirits (JBBI)
  - The Void Sake Company
- Goals
  - Potential new product line
  - Guided student inquiry
  - Industry outreach & Collaboration
- Outcomes
  - Academic – Industry Talent Pipeline
  - Industry connections across beverages
  - Expanding Sake brewing impact
- Conclusions





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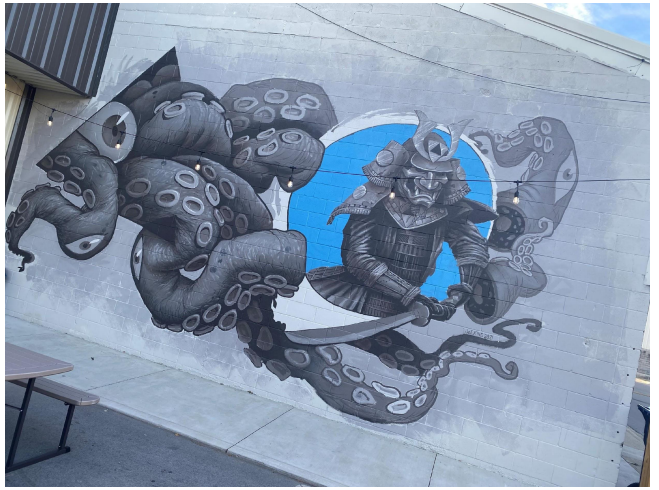
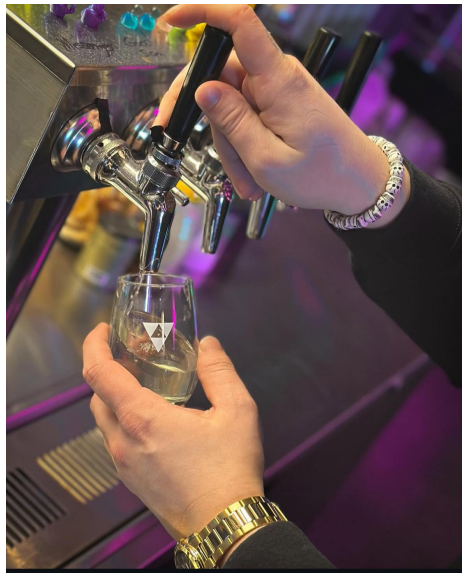


"Out of the Darkness emerges a creature born of American Craft & Japanese tradition."

- Sake brewery
  - 1700 sq ft production space
  - Traditional & Flavor infused sakes
  - Experimental & collaborative



"Out of the Darkness emerges a creature born of American Craft & Japanese tradition."

- Full-service tasting bar
  - 2500 sq ft
  - Lexington Warehouse Block
  - Low-lit intimate sake forward experience
  - Sake, sake cocktails, beer & spirits
  - Community space

VOID EDUCATION & COMMUNITY SPACE

Values

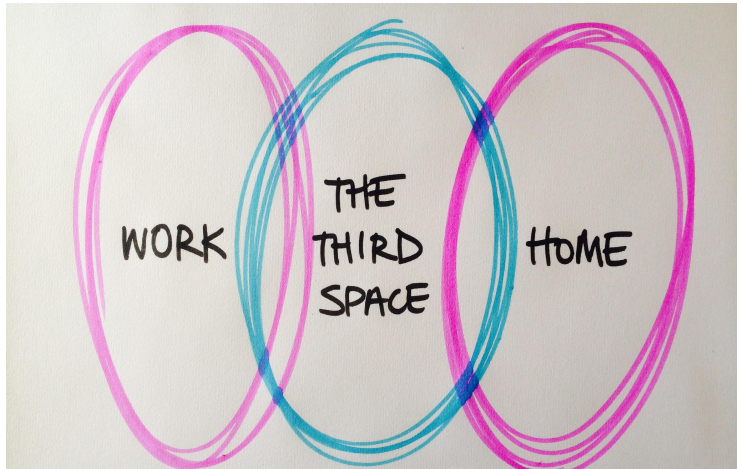
- Expand sake awareness & Education

Education

- Brewery tours & guided Tastings
- Bar staff Sake School

Outreach

- 3rd Spaces Concept: bring people together & engage with Community over Sake
- Engagement & collaboration with other institutions, other businesses



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World's largest teaching distillery

- First barrel filled March 14, 2024
- 80 barrels in first year
- Target: 150 barrels / year
- 400 gallon Cook & Ferm -> 1.25 barrel / batch
- Vendome 12" column still with doubler

- Boswell Family & ISC Maturation Facility with 660 Barrel K-Rax system

Leading the global advancement of the American whiskey industry through workforce education, scientific discovery, environmental sustainability, community and social responsibility.

SUNTORY GLOBAL SPIRITS

Pigman College of Engineering

Martin-Gatton College of Agriculture, Food and Environment

Gatton College of Business and Economics

College of Arts and Sciences

Research

- Collaborative Projects
- Confidential Projects

Education

- Certificate Program
- Internships and Scholarships
- Capstone Projects
- Industry Trainings and Workshops

Outreach and Community

- Annual Conference

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Certificate in Distillation, Wine and Brewing Studies (DWBS) – 12 credits

1 Required Course

- Distillation, Wine and Brewing Science
- Spirit Chemistry

Pick any 3 Electives from the Following Courses

Brewing
- Brewing Science & Technology*

Distilling
- Bourbon Production Engineering
- Distilled Spirits Production: Gin*
- Spirits Commercialization

Food Systems
- Food Fermentation
- Sensory Evaluation of Foods

Wine
- Introduction to Viticulture
- Introduction of Enology*
- Wine Appreciation*

General Topics
- DWBS Independent Research
- DWBS Experiential Learning
- Craft Writing
- Beer, Wine and Spirits Tourism*

*Must be 21 by first day of class

In Person & On-line Courses

Study Abroad Opportunities 2026 - Belgium

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Fermentation and Bioprocess Engineering Lab

Department of Biosystems and Agricultural Engineering

Harnessing microbes for food, fuel, and materials

Teaching:

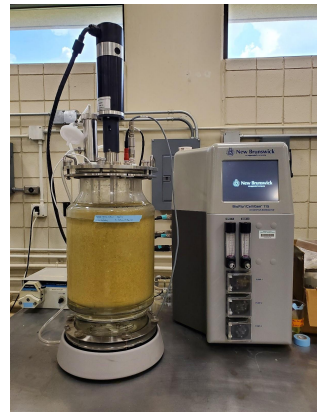
- **Graduate Experimental Design/Stats Course**
- **Life Cycle Assessment for Bioresource Engineering**
- **Independent Study**: Biosystems Engineering, Agricultural and Medical Biotechnology, Chemistry, Chemical Engineering

- **Students**:
  - 6 Graduate Students (3 MS, 3 PhD)
  - 5 Undergraduate Students
- **Co-PI** NSF Research Experience for Undergraduates (REU) on Water Resource and Sustainable Engineering for Appalachia

Dr. Tyler Barzee

Dr. Tyler

- **Lab and Analytical Capabilities**
  - HPLC
  - Headspace GC
  - Mastersizer
  - Automated Fermentation Systems and Bioreactors
  - Lab-scale Distillation
  - Shaking Incubators
- **Goal:** Enable translation of high-impact ideas to industry & build a pipeline of talent through student projects



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PROJECT GOALS

PROJECT GOALS

- Potential commercial product
  - Kasu-tori shochu
- Inquiry-based approach
- Fostering student connections with Industry
  - Talent pipeline

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INQUIRY BASED LEARNING

Student centered approach that emphasizes asking questions, investigation, and constructing meaning through active engagement

Principles:

- Constructivist
- Student-led
- Collaborative
- Real-world connections

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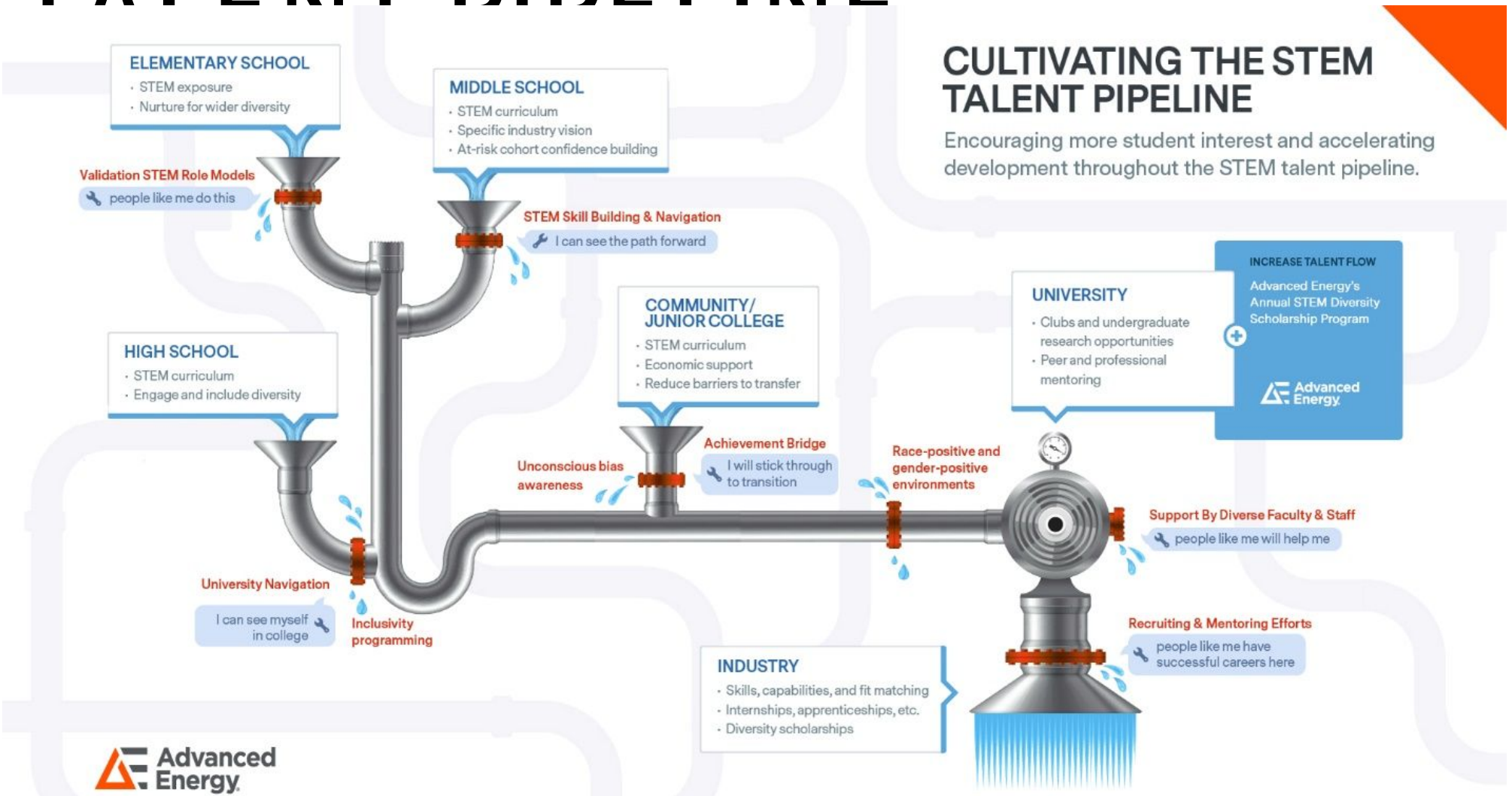
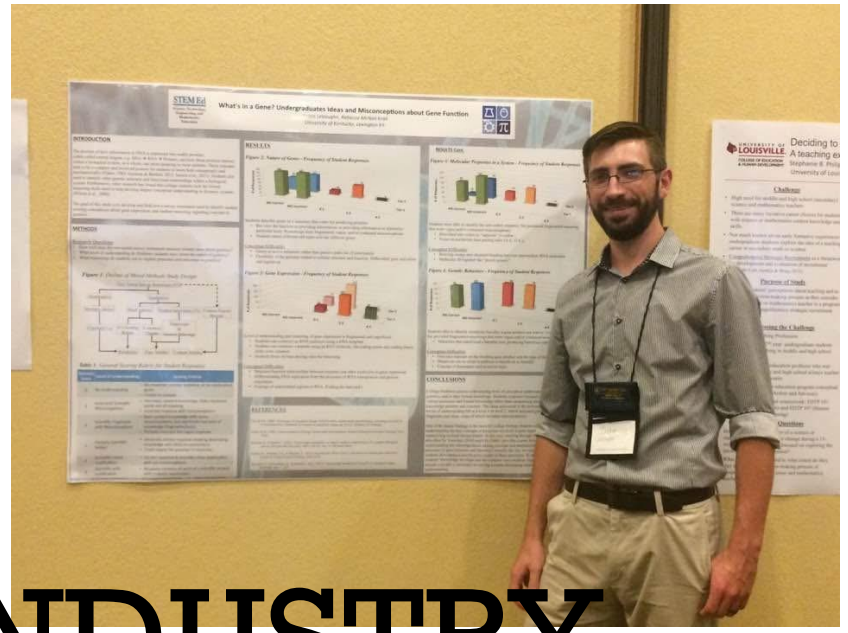
ACADEMIC – INDUSTRY TALENT PIPELINE





ACADEMIC-INDUSTRY PIPELINE EXAMPLE

PROJECT OUTLINE

- Pilot study & Brewery Intern
- Guided Student Inquiry
- Publication of work & Industry Connections
- Large scale application

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PROJECT OUTCOMES

GUIDED INQUIRY & INDUSTRY SUPPORT

- Pilot study & Brewery Intern
  - Exploration & Learning by doing…
  - Focusing research question
- Guided Student Inquiry
  - Targeted student questioning
  - Real-world connection
    - Tree House Distilling connection
- Publication of work
- Large scale application
  - Application w/ Void Sake Co
  - Creation of new product

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PROJECT OUTCOMES

Academic – Industry Talent Pipeline

Student Publication…

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PROJECT OUTCOM

Other industry connections across beverages

TREE HOUSE BREWING CO.

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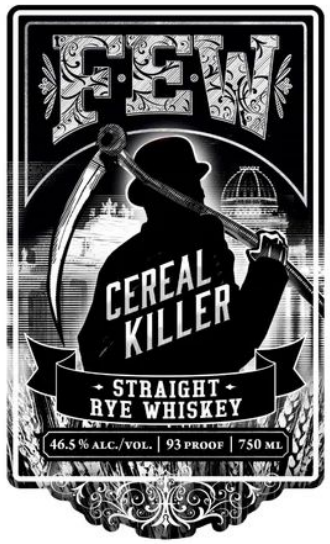
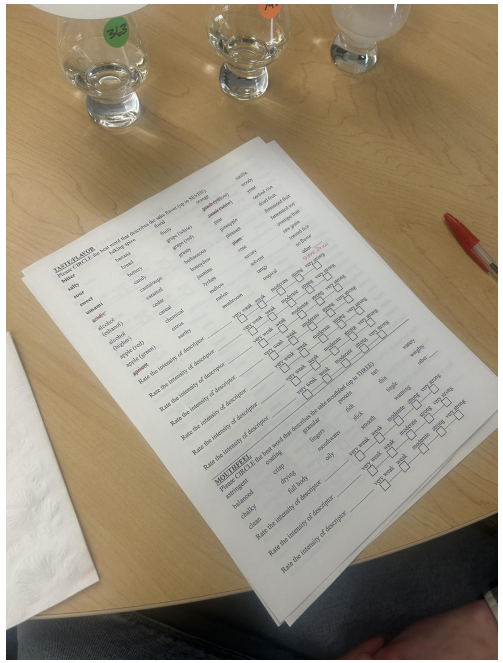
SAKE INDUSTRY EXTENSION OPPORTUNITIES

Koji Whiskey Projects



Sake Sensory Panel



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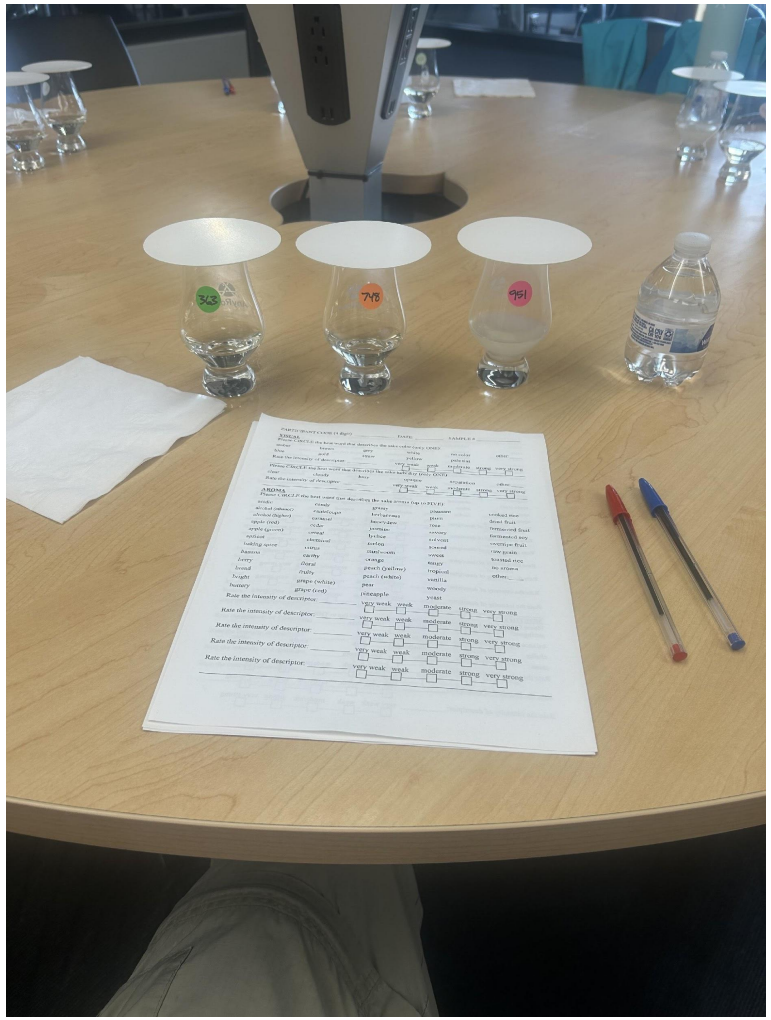
SAKE SENSORY PANEL



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SENSORY BALLOT

PARTICIPANT CODE (4 digit): ______________ DATE: __________ SAMPLE # _______________

VISUAL

Please CIRCLE the best word that describes the sake color (only ONE):

amber	brown	grey	white	no color	other:____
blue	gold	straw	yellow	pale tint	

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Please CIRCLE the best word that describes the sake turbidity (only ONE):

clear	hazy	cloudy	opaque	separation	other:____

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

AROMA

Please CIRCLE the best word that describes the sake aroma (up to FIVE):

acidic	candy	grassy	pleasant	cooked rice
alcohol (ethanol)	cantaloupe	herbaceous	plum	dried fruit
alcohol (higher)	caramel	honeydew	rose	fermented fruit
apple (red)	cedar	jasmine	savory	fermented soy
apple (green)	cereal	lychee	solvent	overripe fruit
apricot	chemical	melon	soured	raw grain
baking spice	citrus	mushroom	sweet	toasted rice
banana	earthy	orange	tangy	no aroma
berry	floral	peach (yellow)	tropical	other:____
bread	fruity	peach (white)	vanilla	
bright	grape (white)	pear	woody	
buttery	grape (red)	pineapple	yeast	

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

TASTE/FLAVOR

Please CIRCLE the best word that describes the sake flavor (up to SEVEN):

bitter	baking spice	floral	orange	vanilla
salty	banana	fruity	peach (yellow)	woody
sour	bread	grape (white)	peach (white)	yeast
sweet	buttery	grape (red)	pear	cooked rice
umami	candy	grassy	pineapple	dried fruit
acidic	cantaloupe	herbaceous	pleasant	fermented fruit
alcohol (ethanol)	caramel	honeydew	plum	fermented soy
alcohol (higher)	cedar	jasmine	rose	overripe fruit
apple (red)	cereal	lychee	savory	raw grain
apple (green)	chemical	mellow	solvent	toasted rice
apricot	citrus	melon	tangy	no flavor
	earthy	mushroom	tropical	other:____

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

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Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

MOUTHFEEL

Please CIRCLE the best word that describes the sake mouthfeel (up to THREE):

astringent	coating	granular	protein	tart	watery
balanced	crisp	lingers	rich	thin	weighty
chalky	drying	mouthwater	slick	tingle	other:____
clean	full body	oily	smooth	warming	

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

Rate the intensity of descriptor: __________ very weak ☐ weak ☐ moderate ☐ strong ☐ very strong ☐

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TRIANGLE TESTING

PARTICIPANT CODE (4 digit): _____ DATE: _____

Triangle Test Set A

Please smell and taste the three samples. Circle the sample that is different than the other two.

106 752 843

If you can, please indicate how the one sample is different from the other two:

_____

Please rate your linking of the "different" sample:

Dislike extremely	Dislike very much	Dislike moderately	Dislike slightly	Neither like or dislike	Like slightly	Like moderately	Like very much	Like extremely

Please rate your liking of the "similar" samples:

Dislike extremely	Dislike very much	Dislike moderately	Dislike slightly	Neither like or dislike	Like slightly	Like moderately	Like very much	Like extremely

Which do you prefer? # _____

Triangle Test Set B

Please smell and taste the three samples. Circle the sample that is different than the other two.

394 211 650

If you can, please indicate how the one sample is different from the other two:

_____

Please rate your linking of the "different" sample:

Dislike extremely	Dislike very much	Dislike moderately	Dislike slightly	Neither like or dislike	Like slightly	Like moderately	Like very much	Like extremely

Please rate your liking of the "similar" samples:

Dislike extremely	Dislike very much	Dislike moderately	Dislike slightly	Neither like or dislike	Like slightly	Like moderately	Like very much	Like extremely

Which do you prefer? # _____

PARTICIPANT CODE (4 digit): _____ DATE: _____

Triangle Test Set C

Please smell and taste the three samples. Circle the sample that is different than the other two.

576 483 019

If you can, please indicate how the one sample is different from the other two:

_____

Please rate your linking of the "different" sample:

Dislike extremely	Dislike very much	Dislike moderately	Dislike slightly	Neither like or dislike	Like slightly	Like moderately	Like very much	Like extremely

Please rate your liking of the "similar" samples:

Dislike extremely	Dislike very much	Dislike moderately	Dislike slightly	Neither like or dislike	Like slightly	Like moderately	Like very much	Like extremely

Which do you prefer? # _____

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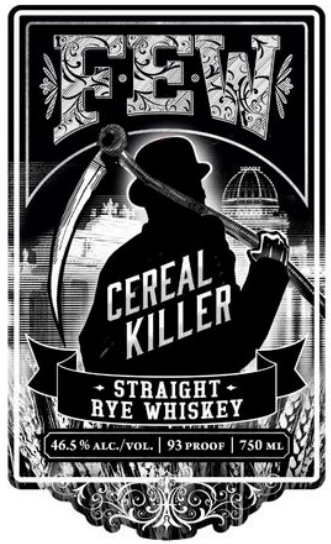
WHY IT ALL MATTERS…

Kelsey Lamb
ASC 771 Seminar
2:00pm Monday 3/31/25 in B52



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