



# ASMR



Autonomous



Sensory

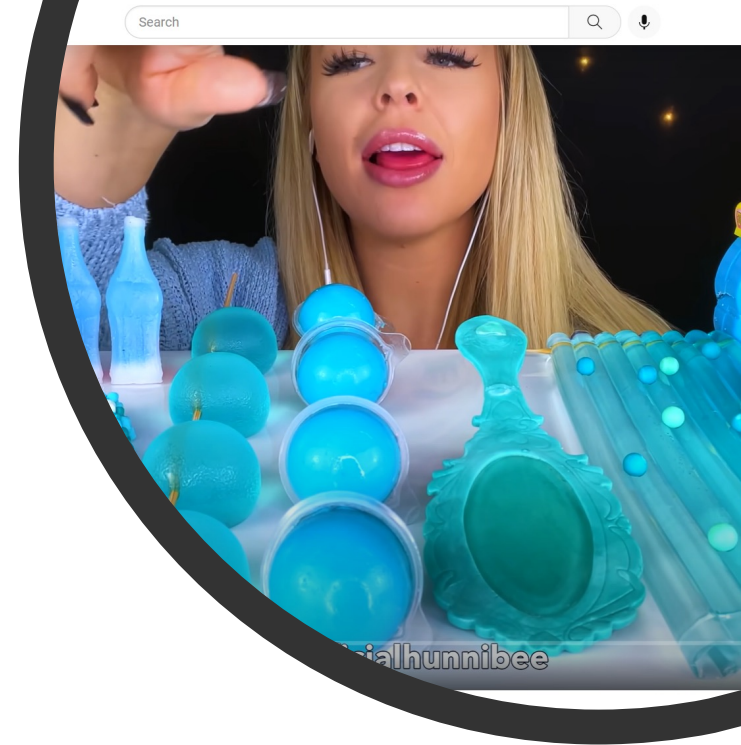
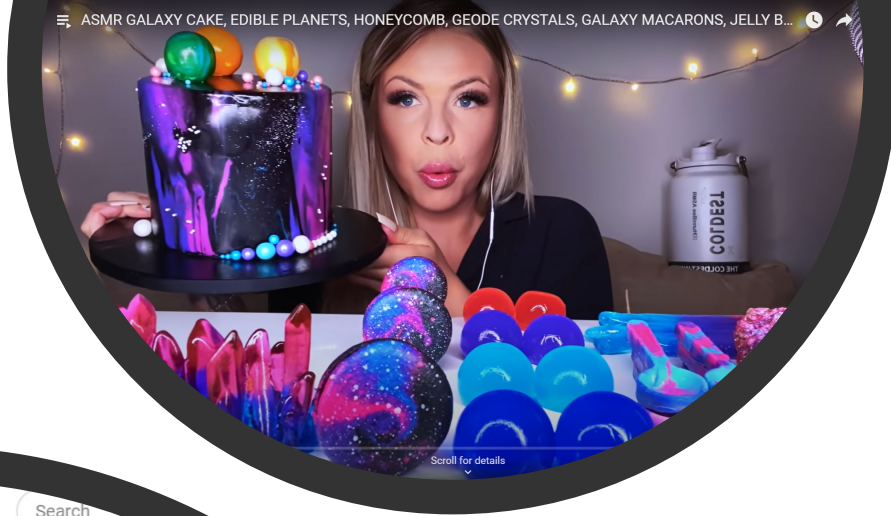


Meridian



Response





#ASMRfood is consistently a top 10 search on YouTube

Top 5 #ASMRfood vloggers uses color to enhance the experience for viewers







# Inclusion of Colors in Flavor Development Process

**IACM 2022**

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Global Applications Manager- Lycored



# Presentation Overview


Importance of Color in Food

Partnering with Flavor + Color Suppliers

Building a Sensory Journey for the Consumer

Case Study



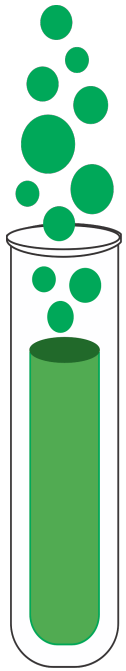


Color creates a psychological  
expectation that is often impossible  
to dislodge

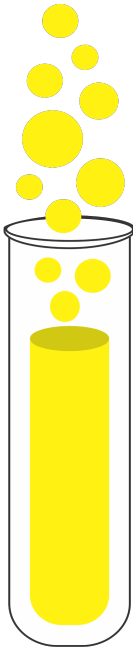
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Harris G.

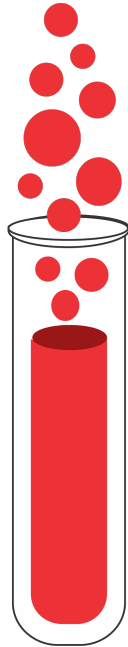
# Psychological effects of food color: basic taste perception



↓ detection threshold for sourness  
↑ threshold of sweetness



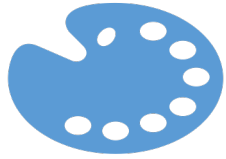
↓ detection threshold for both sourness and  
sweetness



↓ detection threshold for bitterness

Adding food coloring (red, green, or yellow) to an otherwise clear solution exerted a significant effect on thresholds for the detection of basic tastes when presented in solution.

# Psychological effects of food color: setting sensory expectations



## Color

Red  
Green  
Orange  
Colorless



## Color Concentration

Standard  
Double



## Flavor

Strawberry  
Lime  
Orange

## Results

Color intensity had no effect on perceived flavor intensity  
Addition of inappropriate color highly impaired flavor identity response  
Participants are unable to ignore color; even when prompted

# Is your product conveying the message?



## Attractive Appearance

- On-Shelf
- On the Plate



## Complementing Taste

- Match Color to Flavor



## Social Media Worthy

- Sharing Novel Experiences



# **Millennials and Gen Z are largest consumer groups living digital food lives**

44% of Millennial consumers and 37% of Gen Z consumers said they took pictures of their food and drink and shared them online at least once a week

43% of Millennials consumers and 40% of Gen Z consumers actively shared their opinions regarding food on social media

# Capture the consumers attention

- Food and beverage manufacturers must do more to capture the attention of consumers
  - 72% of purchasers still make impulse decisions on snack purchases
  - This is why color (packaging & food) is still very important

Source: IRI April 2020







Color is the single most important product-intrinsic sensory cue, when it comes to setting people's expectations regarding the likely taste and flavor of food and drink.

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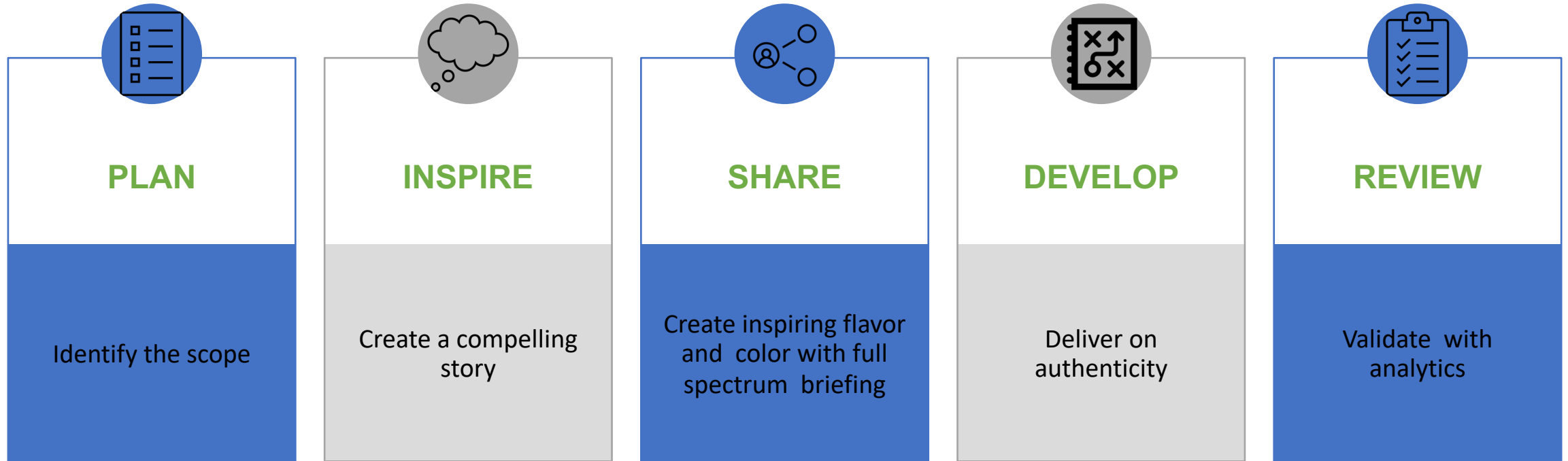
Spence, Charles. "On the psychological impact of food colour." *Flavour* 4.1 (2015): 1-16.

**How Do I  
Ensure I'm  
Doing It Right?**





# Have a systematic approach to delivering the concept





# Project Planning



What is the project ambition?

Target Consumer

Context of the new color/flavor

Needs to deliver



Internal collaboration

Map the needs to the wants

Can you solve an “Emotional Dilemma”





# Inspire through story

Use target consumer and consumer dilemma to deliver a story line.



A compelling story drives:

Inspiration

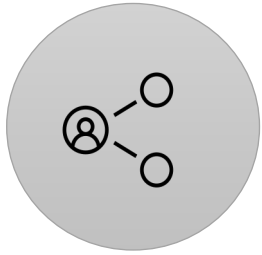
Builds on a Memory

Takes Consumer on  
Journey



**Deliver  
Color + Flavor  
Brief to Your  
Partners**





# Project Brief



What are must haves for this project? Non-Negotiables?

Natural vs Artificial

Claims: Non-GMO, Organic, Free From, Kosher, etc.



Do we have strategic partners identified?

May be specific to your company

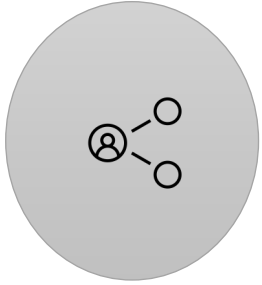
Color and/or Flavor suppliers that are primary sources



Are there potential partners that are best in category?

Best known for natural colors/ flavors

Leaders in certain pigments/ flavor types



# Project Brief



## Background Information

Concept Description

Flavor Profile

Color Profile



## Technical Considerations

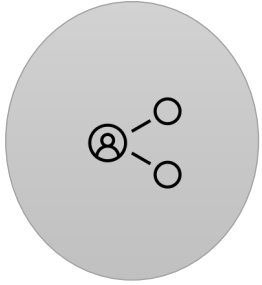
Processing Temperatures & Hold Time

Shelf-Life Needs

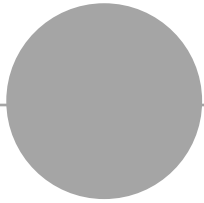
Physio-chemical Properties

Packaging Goals



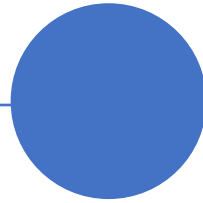


# Background Information



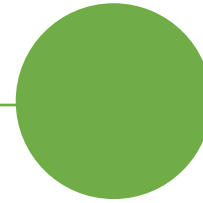
## CONCEPT DESCRIPTION

- Additional information about the food matrix to support the concept story



## FLAVOR PROFILE

- Descriptors of the flavor; going beyond saying, “apple flavor”
- When do you want certain flavors to come out in the tasting experience

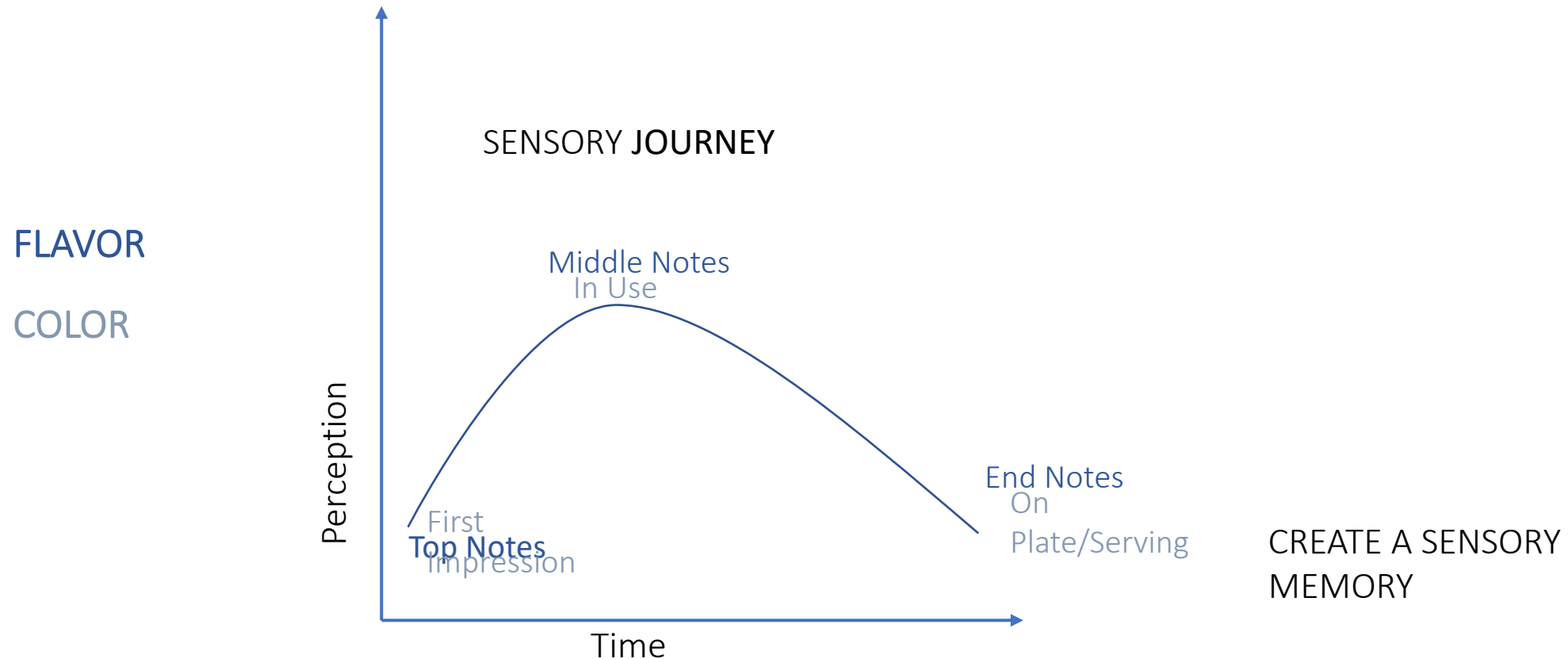


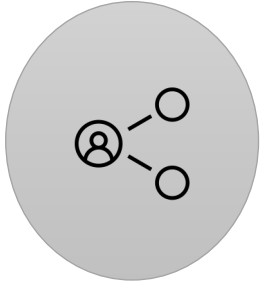
## COLOR PROFILE

- Provide a visual representation is possible
- Describe special needs from the color, i.e. red in package and brown when cooked.

# Bringing it together in a sensory journey

- Balance familiarity with innovation
- Consider a timing sequence of color/flavor delivery

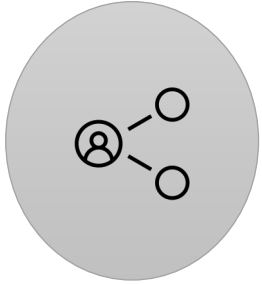




# Technical Consideration

- Commercial Processing
  - Color application technique
  - Thermal Processing
  - Pre-mixing consideration (interaction effects)
- Shelf-Life Stability Needs
  - Warehousing concerns
  - Packaging (O<sub>2</sub>, H<sub>2</sub>O permeability and light)
- Physio-chemical Properties
  - pH
  - Solubility Needs





# Project Sharing

- Work with all technical teams to deliver a uniform messaging
  - Internal
  - Color
  - Flavor
- When possible, deliver message of concept and project brief at the same time
  - Eliminates redundancy
  - Clear messaging; efficiency of task



Case Study- Plant Based Salmon

# Color and Plant-Based

73%

**CONSIDER THE COLOR  
AND APPEARANCE OF  
PLANT-BASED FOOD AND  
DRINK TO BE IMPORTANT**

81%

**OF THESE SHOPPERS SAY  
COLOR SETS EXPECTATION  
ON FLAVOR**

82%

**EXPECT PLANT-BASED  
PRODUCTS TO BE MADE  
WITH COLORS FROM  
FRUITS, VEGETABLES, AND  
PLANTS**



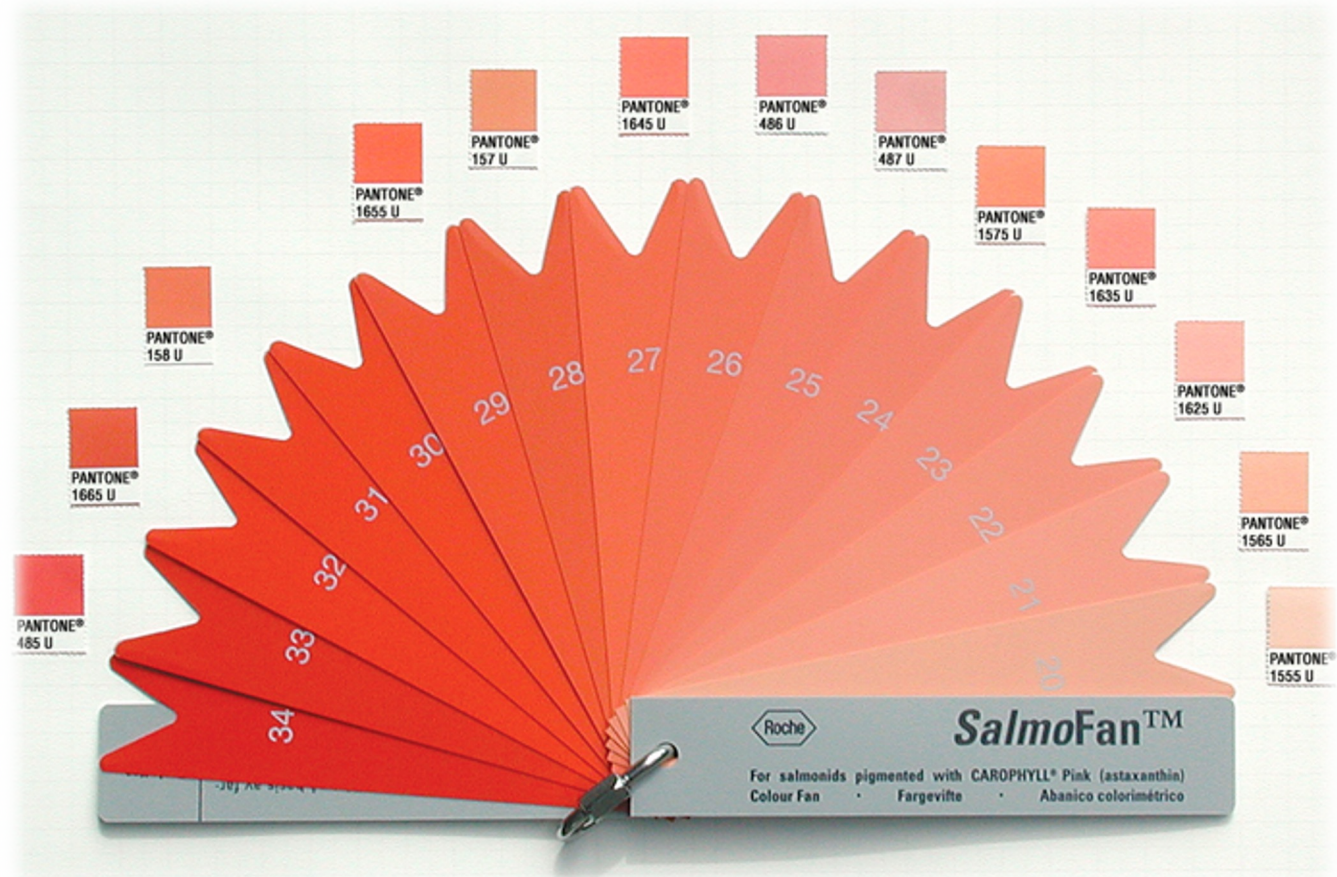
# Describing Colors

- Best reference is typically to identify a Pantone color that is desirable
  - Understanding of hue and L, a, b values are very helpful
- Alternative references can be just as helpful but often limiting
  - Varietal difference makes the process limiting.



# Describing the Color Experience

- There are layers to the consumers color experience
  - Grocery store
  - Cooking
  - Eating





# Bringing it together in a sensory journey (Color)

- Cooking process can change the final look of the product
  - Process considerations
    - How will you apply color?
    - Specialty Color (grill/char)
  - In-home cooking considerations
    - How will consumer prepare?



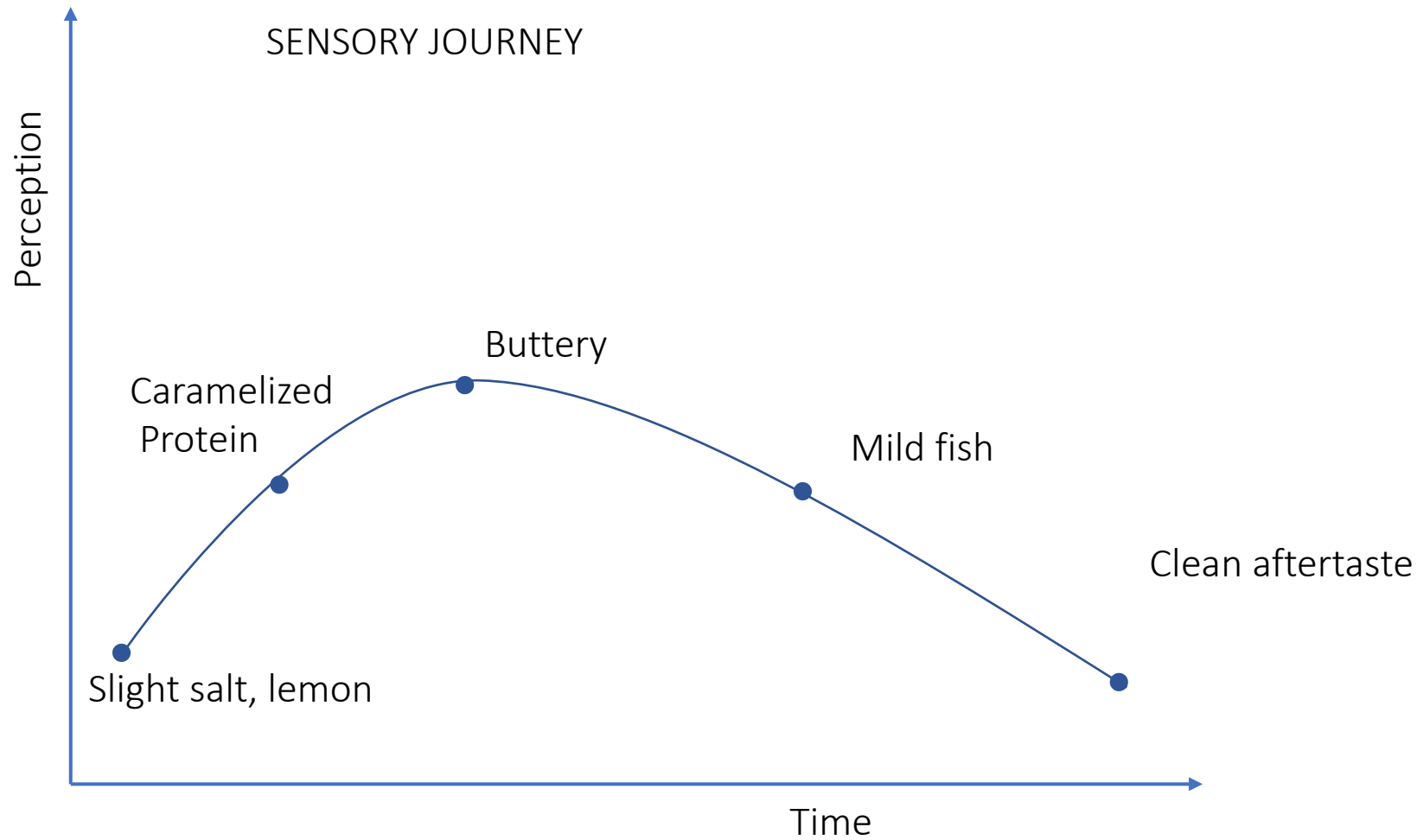


# Describing the Flavor Experience

- What attributes are important to delivering the full experience of a plant-based meat?



# Bringing it together in a sensory journey (Flavor)



**Don't be afraid to use color in  
your product's sensory  
journey!**





# Thank You

## IACM 2022

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