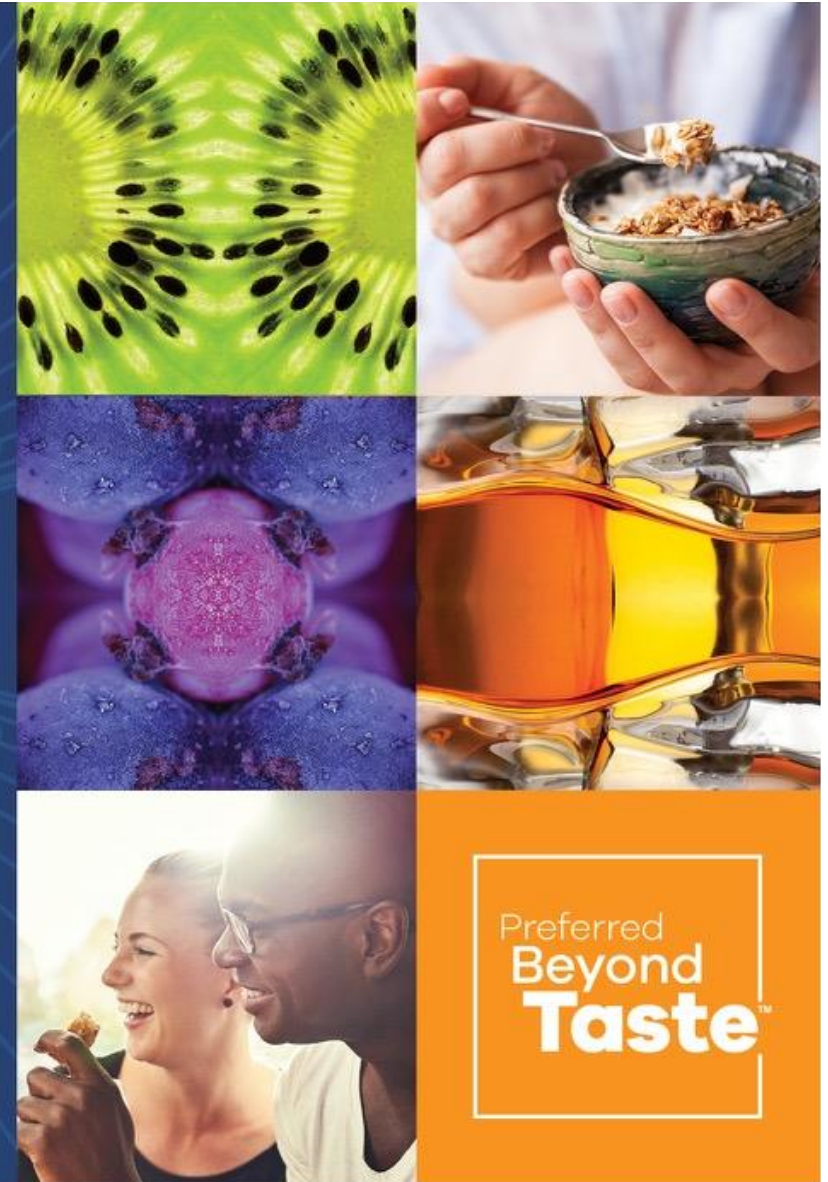


Eating With Your Eyes

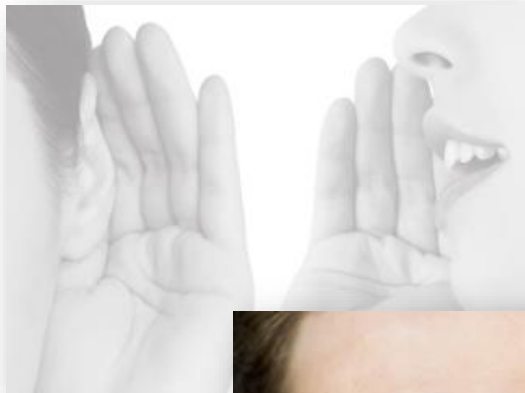
The Psychology of Color: Flavor and Emotions

Mikel Cirkus

Global Creative Director, Flavors



Driven By The Senses



PANTONE®



We have a passion for smell and taste.

Taste Pathways

The Way to The Cortex

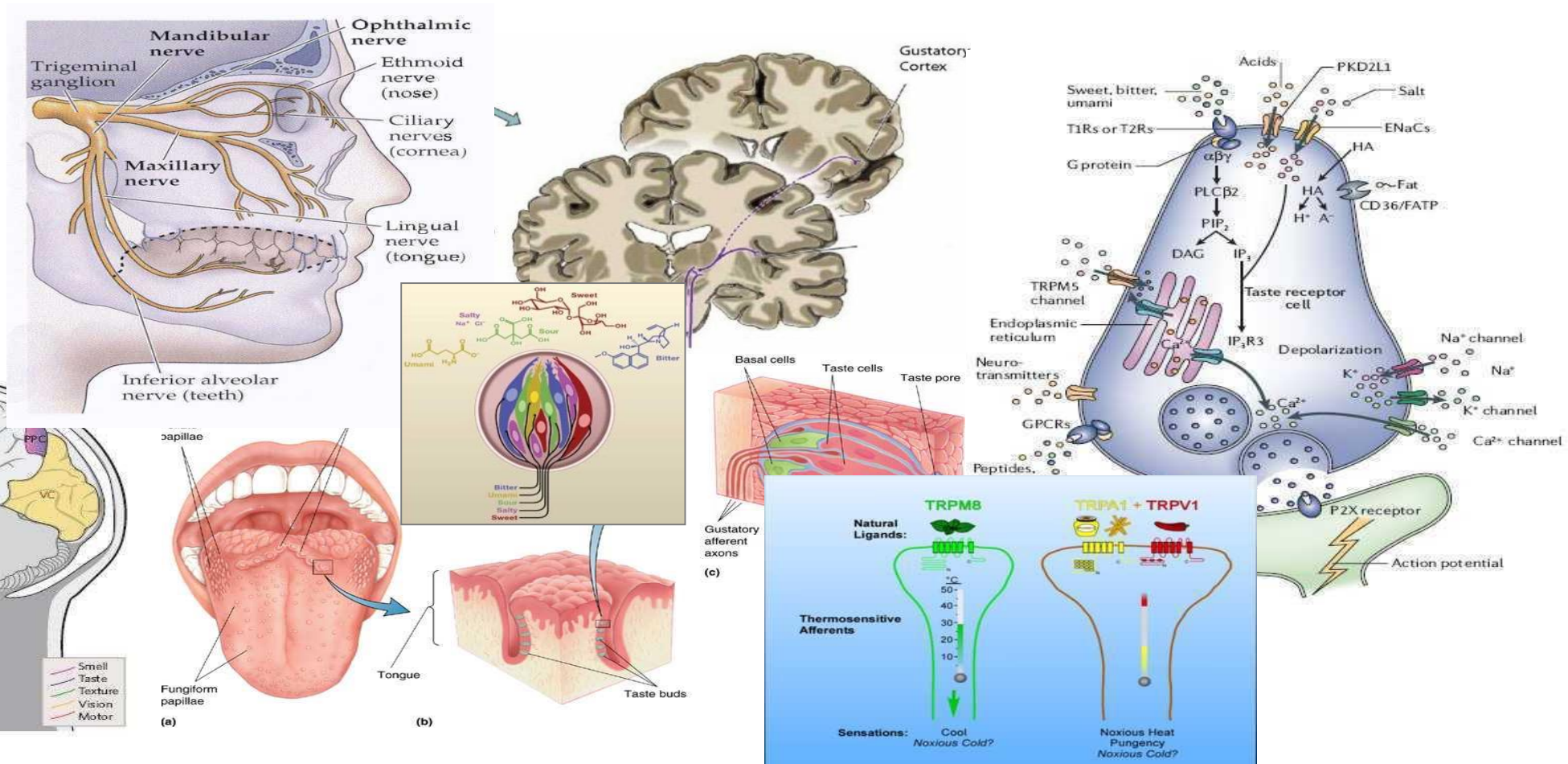
Peripheral Detection

Transduction

Trigeminal Sensation

Taste Coding

Pleasantness of the Stimulus



Flavor Perception



Stimulus/Application

Taste

Smell

Texture/viscosity
Temperature
Trigeminal

Visual

Sound



All these aspects contribute
to **create and modulate**
the flavor perception

Subject

Gender, Age

Internal State (sated, hungry)

Expectation

Context

Cultural & Religious Habits

Memory

Food-related pathologies (obesity, depression)

Flavors and Emotions

The role of flavors as vectors of emotions

- Intimately linked to the story of the product.
- Deliver satisfaction by bridging dreams and aspirations of a brand.
- Create a positive footprint in the consumer's mind.
- **Flavors are intimately linked with emotions**



Flavors and Emotions **EXCITEMENT**

DEFINITION		FLAVOR HIGHLIGHTS		TABLE OF FLAVORS
TOP 10 SPONTANEOUS ASS.	LINK	LIKING	DETAILS OF ASSOCIATION	
Chocolate	***	😊	it is very tasty and sweet, its texture is rich, smooth, full-bodied and melts in your mouth; dark chocolate is also mentioned, it is creamy and sweet, exotic tasting and satisfying.	
Cherry	***	😊	the fruit has a deep red color, a sweet, strong, tangy taste and a nice, ripe, crunchy texture; it is associated with nature, wild and summertime	
Hot	***	😊	it is associated with fire, spicy food, sex, hot climate, romance, exotic food, chilies	
Spice	***	😊	it is a nice sensation, hot and invigorating, surprising; it is associated with sex, mystery and heat	

Ice cream
Passion Fruit
Chili
Peppermint
BBQ
Seafood

DEFINITION	FLAVOR HIGHLIGHTS	TABLE OF FLAVORS
<p>In the USA, Exciting flavors are intense, sensorial and surprising, different.</p> <p>They need to stimulate the senses and the mind, be strong, even naughty; mixes of sensations, opposites, intensity are accepted.</p> <p>The most represented aromasphere families is 'Herbs&Spices', followed by 'Fruits'.</p> <p>Think of:</p> <ul style="list-style-type: none"> Flavors descriptors: tasty, sweet, exotic, satisfying, fiery, spicy, sensorial, hot, invigorating, , creamy, indulgent, fruity, different, unusual, tangy, strong, fresh, tingling. Textures: rich, smooth, full-bodied, melts in your mouth, creamy, ripe, crunchy, sensorial, unusual. Concepts: very tasty, exotic, satisfying, deep, intense, strong, wild, summertime, fire, sex, hot climate, romance, hot and invigorating, surprising, mystery, heat, indulgent, unusual, different, passion, travel, tropical, a special treat. Other Flavors mentioned: salt, melting butter. Colors: warm, deep, intense, red. 		

Flavors and Emotions **VITALITY**

DEFINITION		FLAVOR HIGHLIGHTS		TABLE OF FLAVORS
TOP 10 SPONTANEOUS ASS.	LINK	LIKING	DETAILS OF ASSOCIATION	
Grapefruit	***	😊	it is tart with little sweetness and has a juicy, fresh, pure citrusy refreshing taste; it has an invigorating smell, is healthy and full of sunshine	
Orange	***	😊	it is a simple fruit, packed with healthy benefits and full of energy and vitamins; it has a refreshing sweet and tart taste, with a zest and a bright color	
Peppermint	***	😊	it is energizing, breath taking, uplifting, it wakes you up and makes you alive; its taste is fresh, cool, spicy and tingling	
Apple	***	😊	it is crisp and fresh, with a crunchy texture, and is a naturally healthy fruit; it has many pleasant flavors that are sweet and acid and always refreshing	
Lemon				
Pepper				
Herbal				
Cranberry				
Chili				
Strawberry				

DEFINITION	FLAVOR HIGHLIGHTS	TABLE OF FLAVORS
<p>In the USA, Vitality is about natural ingredients with dynamic and sensorial effects.</p> <p>Ingredients are natural, their taste and smell have dynamic (e.g. invigorating, awakens the senses) and sensorial (e.g. juicy, tart, zesty, spicy) effects.</p> <p>This explains the presence of many citrus, fruits and spices.</p> <p>Healthy properties (vitamins and minerals) and benefits (e.g. good for the blood) are important but not necessary.</p> <p>The most represented aromasphere families are 'Fruits', followed by 'Herbs&Spices'.</p> <p>Think of:</p> <ul style="list-style-type: none">• Flavors descriptors: natural, tart, sweet, juicy, fresh, pure, invigorating, simple, zesty, spicy, cool, tingling, acid, clean, intense, slightly bitter, earthy, pungent.• Textures: juicy, crisp, crunchy, bursting, lively.• Concepts: refreshing, invigorating, healthy, sunshine, healthy benefits, full of energy and vitamins, bright colors, energizing, breath taking, uplifting, wakes you up, makes you alive, naturally healthy, a variety of flavors, lively, colling, gives power and vigor, awakens the senses, evokes excitement, cleans the blood system, motivation and energy, happiness, gives a kick, helps kill toxins.		

Living Languages How Color Speaks to Flavor

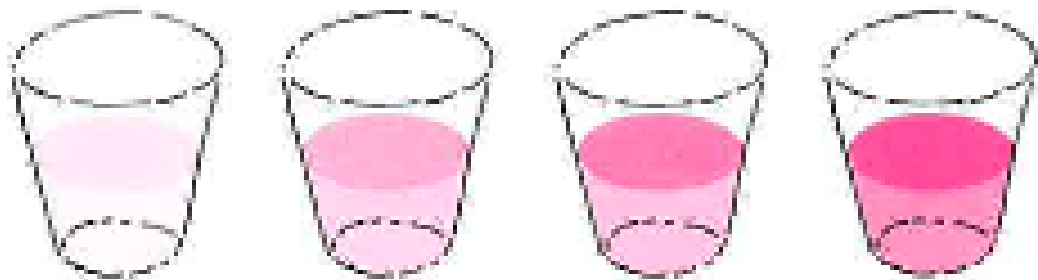
- **Stimulates** demand for flavor newness
- **Engages** with a brand's emotional positioning
- **Influences** food & beverage packaging
- **Evolves** advertising imagery
- **Distinguishes** flankers from originals
- **Drives** flavor ingredient call-outs
- **Inspires** culinary creativity
- **Informs** graphic design
- **Aligns** consumer expectations with taste experience



Taste is an experience.



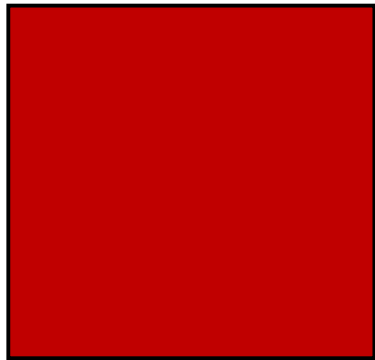
Which drink tastes sweeter?



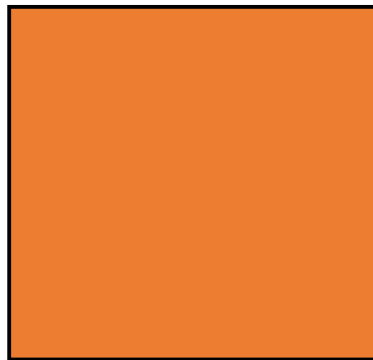
Which drink tastes like strawberry?



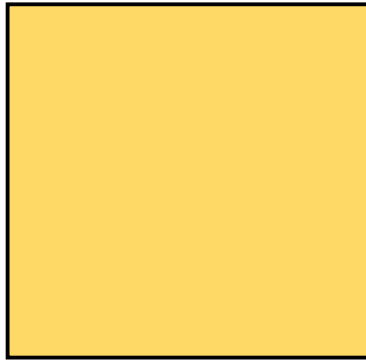
Flavor is perception.



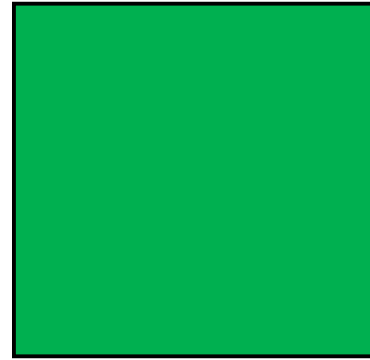
POMEGRANATE



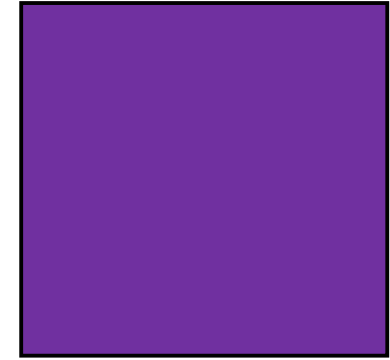
TURMERIC



GINGER



MATCHA

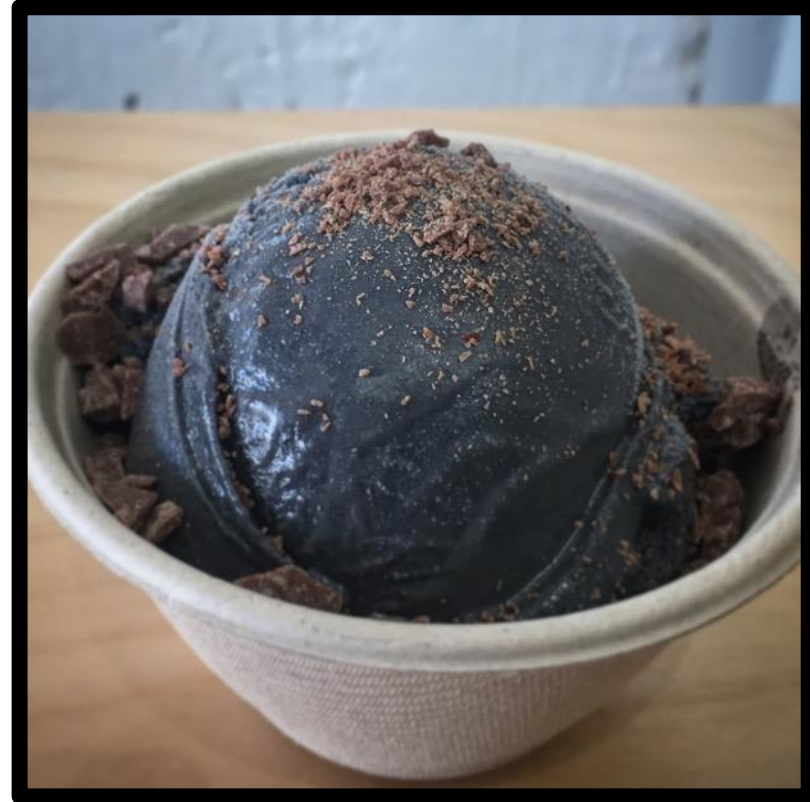


ACAI

Black Taste Test



Morgenstern's, NYC



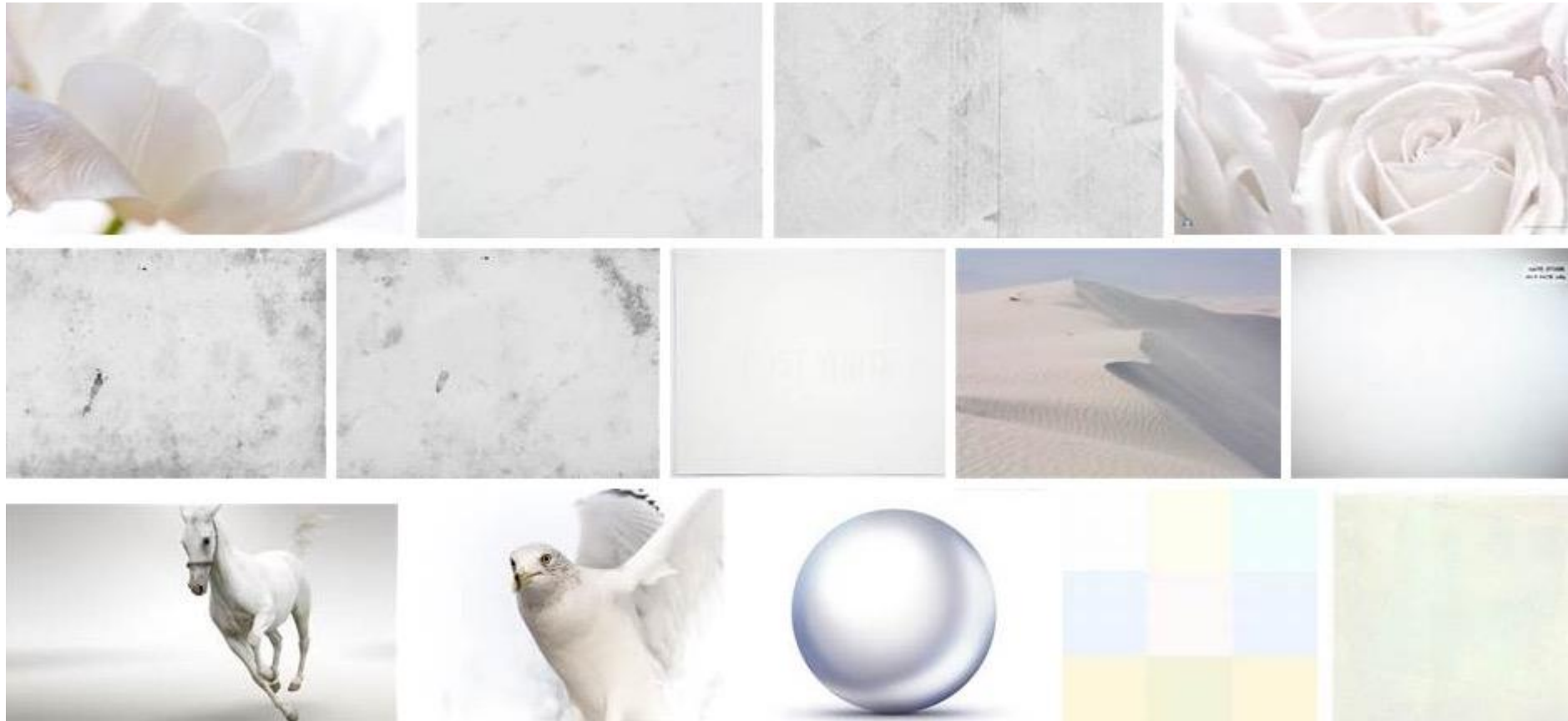
Dasher & Crank, Miami

Black

- Black is associated with power, elegance, formality, death, evil, and mystery.
- Black is associated with fear and the unknown (black holes).
- Black usually has a negative connotation (blacklist, black humor, 'black death').
- Black denotes strength and authority.
- Considered to be a very formal, elegant, and prestigious color (black tie)
- Black contrasts well with bright colors.



WHITE



Immaculate – Pure – Simple

WHITE Symbolic and Cultural Differences

- Associated with **light, goodness, innocence, purity, and virginity**.
- It is considered to be the color of **perfection**.
- White means **safety, purity, and cleanliness**. As opposed to black, white usually has a **positive** connotation.
- White can represent a successful beginning.
- In advertising, white is associated with **coolness and cleanliness** because it's the color of snow.
- White is often associated with **low weight, low-fat food, and dairy** products.

- **Western:** Brides, angels, peace (white dove) hospitals, doctors.
- For Bedouin and other pastoral cultures, there is a strong connection between milk and white, which is considered the color of gratitude, esteem, joy, good fortune and fertility
- **Eastern:** Yang (Bright, Sun, Masculine)
Often associated to funerals but also, children, marriage, peace, travel

China: Death, mourning

Japan: White carnation symbolizes death.

India: Unhappiness. It is the color of purity, divinity, detachment and serenity.



WHITE Food & Beverage Implications

Key Ingredients

- Dairy products (yoghurt, cream, ricotta)
- Coconut water
- White tea
- White chocolate
- Vanilla
- Mangosteen
- Litchi
- Rice, Oats
- Almonds
- Jasmine
- Elderflower
- Marshmallow



Conceptual Links

- Pure
- Simple
- High-quality/ Elegant
- Light (zero)
- Transparent (nude)
- Peaceful, innocent
- Soft
- Frost, Cold

Product Illustration



RED



Primitive Power – Raw Energy - Spark of Action

RED Symbolic and Cultural Differences

- Associated with war, danger, strength, power, determination as well as passion, desire, and love.
- Red is a **very emotionally intense color**. It enhances human metabolism, increases respiration rate, and raises blood pressure. It has very **high visibility** (ie: stop signs, stoplights, and fire equipment).
- In advertising, Red is often used to evoke **erotic feelings** (red lips, red nails, red-light districts, etc.).
- Red is widely used to indicate **danger** (high voltage signs, traffic lights). This color is also commonly associated with **energy**, so you can use it when promoting energy drinks, games, cars, items related to sports and high physical activity.

- **Western:** Excitement, danger, love, passion, stop, Christmas, Valentine's Day
- **Eastern:** Worn by brides, happiness and prosperity
- China: Good luck, celebration.
- **Australian Aboriginals:** Land, earth
- **India:** Purity
- **South Africa:** Color of mourning



RED Food & Beverage Implications

Key Ingredients

- Spices (e.g. paprika, cinnamon)
- Chili
- Guarana
- Red Apple
- Strawberry
- Cherry
- Grenadine
- Cranberry
- Pomegranate
- Redcurrant
- Hibiscus
- Tomato
- Red Wine
- Rooibos
- Red Meat/bacon



Conceptual Links

- Spicy
- Stimulating
- Fiery
- Expressive
- Exotic
- Passionate
- Rebel
- Concentrated
- Fun
- Active

Product Illustration



YELLOW



Solar – Optimistic- Attentive

YELLOW Symbolic and Cultural Differences

- The color of sunshine. It's associated with **joy, happiness, intellect, and energy**.
- Yellow produces a **warming** effect, arouses cheerfulness, stimulates mental activity, and generates muscle energy.
- Yellow is often associated with **food**.
- Use yellow to **evoke pleasant, cheerful feelings**.
- You can choose yellow to promote **children's** products and items related to **leisure**.
- Yellow is very effective for **attracting attention**, use it to highlight the most important elements of your design.
- Yellow is an unstable and spontaneous color, so avoid using yellow if you want to suggest stability and safety.

- **Western:** Hope, Happiness.
- **Eastern:** Proof against evil, for the dead, sacred, imperial
 - China: Nourishing, royalty.
 - Korea: symbolised aspects of nature, pride, safety and accomplishment
- **India:** color of the Vaisya caste, or farmers; Hindus wear it to celebrate the Festival of Spring.
- **Egypt:** :In ancient times, immortality. Today it's the color of mourning



YELLOW Food & Beverage Implications

Key Ingredients

- Lemon
- Pineapple
- Tropical mix
- Starfruit
- Ginger
- Curry
- Corn
- Banana
- Mustard



Conceptual Links

- Energy
- Life /Active life
- Sunshine
- Happy, Optimism
- Vitality (positive wellbeing)
- Summer
- Holidays

Product Illustration



GREEN



Harmony – Natural Balance - Growth

GREEN Symbolic and Cultural Differences

- The color directly related to **nature**. It symbolizes growth, harmony, freshness, and fertility.
- Green has strong emotional correspondence with **safety**. (drug / medical products)
- Dark green is also commonly associated with **money**.
- Green has great **healing** power. It is the most restful color for the human eye.
- Green suggests **stability and endurance**.
- Sometimes green denotes lack of experience; for example, a 'greenhorn' is a novice.

- **Western:** Spring, new birth, money / Means “go.”

When “all systems are green ” it means everything is in order.

Ireland: Symbol of the entire country

- **Eastern :** Eternity, family, health, prosperity, peace

China: Green hats are associated with infidelity

Japan: Life

- **Islamic:** Perfect faith, nature and life.



GREEN Food and Beverage Implications

Key Ingredients

- Herbs: Basil, Mint, Dill, Thyme, Parsley, Cilantro
- Green Tea, Matcha
- Wheatgrass
- Lime > Mojito
- Cucumber
- Aloe
- Green Apple
- Avocado
- Kiwi
- Vegetables: kale, broccoli, bamboo, spinach, edamame
- Wasabi
- Stevia

Conceptual Links

- Natural/ Natural energy
- Bio
- Sustainable/Ecological
- Healthy, good for you
- Refreshing
- Clean
- Detox
- Vegetarian/Vegan
- Living / Life



Product Illustration



BLUE



Stability – Strength – Calm - Loyalty

BLUE Symbolic and Cultural Differences

- The color of the sky and sea. It is often associated with **depth and stability**.
- It symbolizes **trust, loyalty, wisdom, confidence, intelligence, faith, truth, and heaven**.
- Blue is considered beneficial to the mind and body. It slows human metabolism and produces a calming effect.
- Blue is strongly associated with **tranquility and calmness**.
- You can use blue to promote products and services related to **cleanliness**
- Blue is a masculine color; according to studies, it is highly accepted among males.
- Avoid using blue when promoting food and cooking, because blue suppresses appetite.

- **Western:** Conservative, corporate; "something blue" bridal tradition.
- **Eastern:** Wealth, self-cultivation
 - China: Immortality
 - Japan: Courage
- **India:** In Hinduism, deities are shown as having blue or dusky skin
- **Iran:** Color of heaven and spirituality



BLUE Food and Beverage Implications

Key Ingredients

- Mint/Menthol
- Water
- Seaweed
- Mixed Berries
- Blueberry
- Blue Raspberry
- Fantasy tonalities
- Vanilla



Conceptual Links

- Cold/cooling
- Fresh
- Ice/ Frost
- Lean/light
- Well-being: relaxed, harmony
- Marine
- Hydrating/Watery
- Cosmic
- Clean

Product Illustration



When Blue and Green Become One



Many languages do not differentiate between certain colors on the visible spectrum and do not have separate terms for blue and green.

The Japanese word **ao**, can refer to either blue or green depending on the situation.

PURPLE



Universal Flow - Wisdom - Dignity

PURPLE Symbolic and Cultural Differences

- Purple combines the stability of blue and the energy of red.
- Purple is associated with **royalty**. It symbolizes **power, nobility, luxury, and ambition**. It conveys **wealth and extravagance**.
- Purple is associated with **wisdom, dignity, independence, creativity, mystery, and magic**.
- According to surveys, almost 75% of pre-adolescent children prefer purple to all other colors.
- Purple is a very rare color in nature; some people consider it to be **artificial**.

- **Western:** Royalty, Luxury, Justice
'Purple Haze' refers to a state of drug-induced euphoria
- **Eastern Wealth**
 - Japan: Violet signifies wealth and power
 - Tibet: Amethyst is considered sacred to Buddha
 - Thailand: Mourning, widows



PURPLE Food and Beverage Implications

Key Ingredients

- Blackberry
- Grape
- Fig
- Mangosteen
- Violet
- Lavender
- Açaí
- Purple Vegetables:
Red onion, Beetroot,
Eggplant



Conceptual Links

- Antioxidants
- Superfruits
- Well-being: Relaxing
- Premium
- Sophisticated
- Rare/Unique
- Magical
- Spiritual
- Cosmic
- Funky

Product Illustration



ORANGE

- Associated with **joy, sunshine, and the tropics**.
- Orange represents **enthusiasm, fascination, happiness, creativity, determination, attraction, success, encouragement, and stimulation**.
- To the human eye, orange is a very hot color, so it gives the sensation of heat. Nevertheless, orange is not as aggressive as red.
- Orange increases oxygen supply to the brain, produces an invigorating effect, and stimulates mental activity.
- It is highly accepted among young people.
- As a citrus color, orange is associated with **healthy food** and **stimulates appetite**.
- Orange is the color of **fall and harvest**.
- Orange is very effective for promoting **food products and toys**.



Firmenich

ORANGE Flavor and Emotion

Emotion

VITALITY

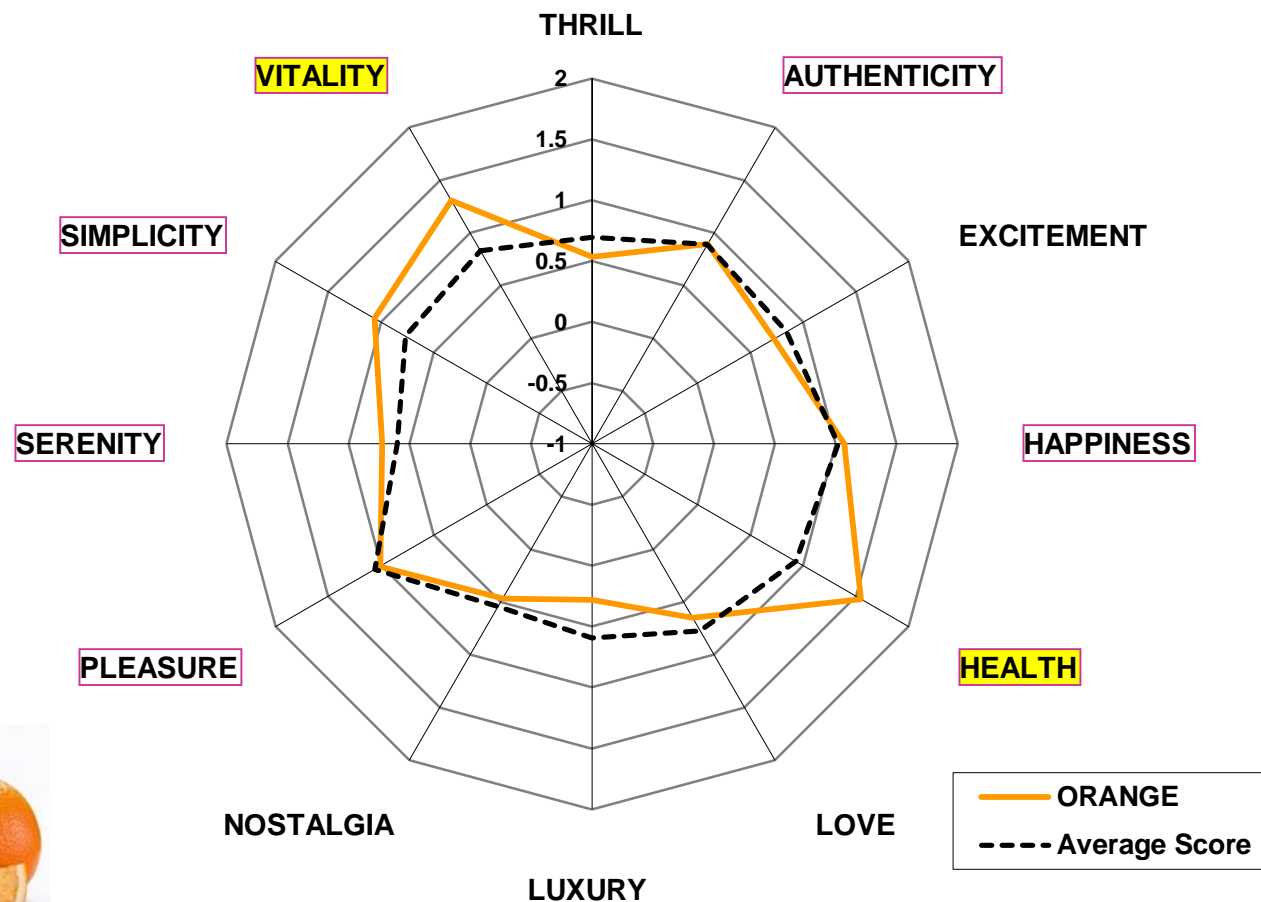
Relationship to the Emotion

Respondents associated the energizing and refreshing, zesty aspects of the Orange with Vitality.

They also mentioned the bright color, and sweet tartness as relevant to Vitality.

HEALTH

The Orange's famed richness in Vitamin C was strongly associated with Health. It was described as "packed with healthy benefits," crisp clean and sweet, often associated with orange juice.



ORANGE Food and Beverage Implications

Key Ingredients

- Citrus
- Mango
- Apricot
- Passionfruit
- Melon
- Ginger
- Carrot
- Pumpkin
- Bell pepper



Conceptual Links

- Energy
- Sunshine
- Happy, fun
- Vitality (positive well-being)
- Crisp, tangy
- Vivacious
- Bold
- Fruits and juices
- Summer

Product Illustration



ORANGE



Apricot Orange PANTONE 138	Candlelight Orange PANTONE 137	Sunrise Orange PANTONE 1375	Amber Orange PANTONE 1385
Macaroni and Cheese Orange PANTONE 157	Pumpkin Orange PANTONE 158	Orangutan Orange PANTONE 159	Sherbert Orange PANTONE 1575
Goldfish Orange PANTONE 166	Monarch Orange PANTONE 165	Ginger Orange PANTONE 164	Carrot Orange PANTONE 1665
Tangerine Orange PANTONE 1655	Melon Orange PANTONE 1645	Basketball Orange PANTONE 173	Papaya Orange PANTONE 172

PANTONE®

Which of these
are not a Flavor or
a Fragrance?

Multisensory Design

- What message do you want to convey?
- Who is the consumer?
- Can a unique color be developed to support the brand? Or can the brand's signature shade be combined with another hue to achieve distinction?
- Where do trends in color fit in? Do you have all of the information you need to make your color decisions?
- With so many products in the market, will the colors you have chosen separate you from your competition?
- **BE UNIQUE!**



Thank You!

Mikel Cirkus

Global Creative Director, Flavors

mikel.cirkus@firmenich.com



@MCirkus

#mikelcirkus

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