Sour is proving it’s not “just another ingredient.” Revolutionizing kitchens, menus, and product launches with layer upon layer of flavor, bringing balance and brightness. Next-level sour is taking a jump-off from lemon and balsamic acidities and diving into the deep end with stand-out flavors and ingredients like tigre de leche (tiger’s milk marinade), calamansi, sour orange, plum, and pickled and fermented foods.

**THEMES:** Sour Fruits • Vinegar Exploration • Global Sour
Sour Fruits

Sweet is often what comes to mind when you think of fruit; however, fruits can also pack a punch of sour. Of course, lemon, limes and oranges are recognized for their delectable sour flavor. Exploring citrus fruits beyond the familiar favorites, like yuzu and calamansi provide an opportunity for consumers to discover new tastes. The surprising sour of cherry, mango and other fruits can add complexity to many applications.

**TREND SPOTTED**

**+4.9%**

2023 to 2033 CAGR of global citrus flavor market.

*Future Market Insights*

**Sour Fruits to Explore**

**CITRUS**
- Bitter Orange
- Calamansi
- Grapefruit
- Pomelo
- Yuzu

**OTHER**
- Apricot
- Apple
- Cranberries
- Currant
- Gooseberries
- Green Mango
- Guava
- Passion Fruit
- Pineapple
- Tamarind
- Tart/Sour Cherry

**FROM OUR BENCH:**

**SWEET & SOUR TAMARIND BBQ**

Inspired by the sweet tangy profile of tamarind, Research Chef, Chris Matthews created a unique BBQ flavor base/marinade. The notes of caramelized shallot, chipotle and tamarind are blended with sweet brown sugar resulting in a sour and sweet taste. It is great for braised short ribs and other savory applications.

**FROM OUR CHEFS:**

**PASSION FRUIT POSSET WITH GUAVA JELLY**

A symphony of sour fruits, Chef Sarah Malphrus (US) developed a posset (custard) recipe which delivers a balanced, smooth bite among the tangy flavors of passion fruit, lime and lemon. It finishes with a jammy guava jelly and crispy pistachio cookie crumble. [Click here for the recipe.]

**EAT THE CHANGE ORGANIC COSMIC CHEWS: SOUR CHERRY BERRY** "Infused with real sour cherry juice along with berry flavor to give these a perfect sweet and sour punch!" US, Feb 2024

**ANNEX ALE PROJECT**

UNTOLD GLOW PASSION FRUIT, ORANGE, GUAVA CHATARINA SOUR BEER

Drawing inspiration from Catharina sours in Brazil, this beer is truly fruit-forward and its low bitterness is complimented by a clean lactic sourness, culminating in a carbonated juice-like finish. Canada, Jan 2024

Sources: eatthechange.com; www.annexales.com
VINEGAR EXPLORATION

With a rising interest in preserving (notice the uptick in launches with pickle flavors?!), vinegar is taking center stage for its flavor and function. An homage to simpler times, drinks like switchels and shrubs which are made with vinegar are being explored. Vinegar is acidic and sour; however, different types deliver differing notes like fruity, sweet or tart.

Vinegar Varieties to Explore
- Apple Cider
- Balsamic
- Black
- Coconut
- Malt
- Plum
- Red Wine
- Rice
- Sherry
- White Wine

TREND SPOTTED

FOOD52 PUBLISHED AN ARTICLE TITLED “THE NEW KITCHEN IT-GIRL IS...VINEGAR,” pointing to increasing experimentation with pickling and preserving in response to inflation. Link to article.

FROM OUR BENCH: SALT & BLACK VINEGAR SEASONING ON WONTON CHIPS

Inspired by chinkiang vinegar, commonly known as Chinese black vinegar, Brian Javier, Scientist, developed an elevated twist to a salt & vinegar snack seasoning. Along with a FlavorCap Garlic Natural flavor, it features a FlavorCap Black Vinegar FL Type Nat that delivers malty, fermented, umami fruity notes. The seasoning can be tweaked and altered for a respective base.

FROM OUR CHEFS:

BRAZILIAN LIMEADE SHERBET WITH COCONUT VINEGAR SYRUP

Noticing the Brazilian Lemonade trend from social media, Research Chef Tawinkarn Ariyavardhorns (Thailand) turned it into a creamy, refreshing sherbet. With a coconut vinegar syrup, it delivers depth and tang. Click here for the recipe.

ULIS GELATO STRAWBERRY BALSAMIC SORBET includes “swirl-in ribbons of house-made balsamic reduction, for a tart surprise to balance every bite.” US, Oct 2023

HARDBITE HANDCRAFTED STYLE CHIPS WITH APPLE CIDER VINEGAR FLAVOR is described as having “fresh tartness with a subtle apple finish.” Canada, Feb 2024

Sources: Food52; ulisgelato.com; hardbitechips.com
Condiments, dishes, and drinks with prominent sour flavors are found in cuisines across the globe. Replicating their real meal profile and delivering to product innovation allows consumers to experience new tastes.

“In other cultures, sour is depicted as the focal delivery of the dish - the more sour the better, as some would say. Now it is being used in various applications, and with it comes complexity and delivery of a new category of flavor.”

Brian Javier, PD Scientist I, US

FROM OUR CHEFS: TUNA CEVICHE TOSTADA

Ceviche is a Latin American dish of seafood marinated in lime juice and other bold ingredients. Hadar Cohen Aviram, Executive Chef (US) created a version that is refreshing and craveable with tangy lime juice, mango, ginger, garlic, chipotle and sesame oil. Click here for the recipe.

SOUR INGREDIENTS AND DISHES IN GLOBAL CUISINES

<table>
<thead>
<tr>
<th>Country</th>
<th>Ingredients/Dishes</th>
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| Indian   | · Achaar (oil-based preserves of fruits or vegetables)  
           · Chaat masala made with amchur (dried mango powder) |
| Peruvian | · Leche de Tigre (citrus based marinade used in ceviche, also a sauce and drink)  
           · Pisco Sour (white grape brandy cocktail with citrus) |
| Filipino | · Sinigang (sour soup)  
           · Adobo (meat stew made with soy sauce and vinegar) |
| Korean   | · Kimchi (fermented vegetables with chili powder)  
           · Gochujang (fermented chili paste) |
| Japanese | · Yuzu Kosho (condiment paste made with yuzu and fermented chilis)  
           · Umeboshi (pickled plum) |

TREND SPOTTED

+29%  
1-year growth of leche de tigre on menus.  
US Menus, 2023, Datassential

PERUVIAN AVOCADO TOAST
Creamy avocado, aji amarillo, leche de tigre, and garnished with fresh red onion and cilantro. My Ceviche, Miami, FL

MUTANTIS BREWERY LIMITED
RELEASE SOUR UMEBOSHI GOSE
Crisp lightly salty sour ale with plum puree.  
US, June 2023

WESTERN FAMILY BOOSTER BOWL WITH FILIPINO STYLE CHICKEN ADOBO
All white meat chicken in a garlic, vinegar and coconut milk adobo sauce with vegetables and a blend of quinoa, jasmine and brown rice.  
Canada, Sept 2023
Beyond mouth puckering candy, consumers are embracing sour flavors throughout their eating and drinking experiences. Pickled vegetables, sour fruits, and splashes of vinegar represent an opportunity to deliver unexpected tastes. The surprise of sour can also be found in global profiles like Peruvian leche de tigre and Japanese yuzu kosho. Utilize these flavors to tone down sweetness, balance spiciness, and add overall brightness to your innovation.

**THE TAKEAWAYS**

Snacks with bold, sour profiles, in particular lime, are popular among consumers. To create a more culinary forward option, Noelle Todd, Senior Scientist developed a Mojo Verde inspired seasoning for plantain chips. Made with Flavor Cap Lemon Lime, Flavor Cap Cilantro and Flavor Cap Garlic, it is sour and savory, with strong upfront notes of lime and cilantro.

**YOU DESERVE MORE. LET’S GET STARTED.**

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Let McCormick Flavor Solutions market insight and research experts get to work for you. Translate these trends into bold new ideas for your brand. Increase market share and get to your “what’s next.” Our technical flavor, seasoning and product development experts are also at your service to help meet the labeling and flavor profile needs for your products to capitalize on this consumer trend.

From concept to manufacturing, we’re here for you — every step of the way. Contact your sales representative or click here to chat us up.

Hungry for more? Click to check out all of the ‘Sour Power’ recipes.