

## Reformulation Case-Study: The Coca-Cola Company

### Challenge: Meeting Consumers' desire for an Unsweetened Tea

#### Coca-Cola, China: *Authentic Tea House* – Natural, Sweet Tea that is Sugar-free

Tea drinking in China dates back to thousands of years ago. Catering to the solid sizable tea drinking population, Ready-To-Drink (RTD) Tea is the 3rd largest RTD beverage category in China.

RTD Tea market has traditionally been dominated by sweetened tea drinks. As consumers increasingly seek more healthy options, their concern over the heavily sweetened tea offerings has grown significantly.

Consumer research had shown that consumers shared concerns over the following issues:

1. High content level of sugar and additives.
2. Low or sub quality tea leaves. "Taste like brewed tea" is not good enough.
3. Consumers are happy to try unsweetened RTD Tea, but the bitter taste is a barrier for reformulation.

In 2018, Coca-Cola China launched its first unsweetened tea drink: *Authentic Tea House* that is sugar-free, bringing out the natural sweet flavour of high quality tea. Made of top quality tea leaves processed in the tradition honoured process of picking, steaming and brewed at a low temperature with no added sugar or sweetener.

*Authentic Tea House* offers three flavours: *Gyokuro* green tea, *Yunnan* black tea, and *TGY* Oolong tea. Low temperature brewing reduces the bitterness and astringency and keeps the natural aromatic flavour of tea.

#### Overcoming Challenges

Research has shown that tea polyphenols, caffeine and amino acids are the main substances influencing the taste profiles, contributing to the astringency, bitterness and a refreshing taste in tea drinks, respectively.

The ratio of tea polyphenols to amino acids is important in determining the flavour of tea drinks. The higher the ratio, the stronger the bitterness and astringency will be. Similarly, with a higher water temperature, the tea profile is affected.

#### Achievements

The ratio is 1.32 for *Gyokuro* Green Tea brewed at 55 degrees Celsius, lower than the ratio of 1.60 at 80 degrees Celsius. The ratio is 1.35 for *Yunnan* Black Tea brewed at 40 degrees Celsius, lower



than the ratio of 2.17 at 90 degrees Celsius. Low-temperature brewing has been adopted to effectively achieve the optimum mix of bitterness and astringency.