

Vitalize “New Age Beverages” with Bartek Malic Acid

New Age Beverages are refreshing in character. What is old, is new again—flavoured iced teas, sports, herbal, fibre, and fortified drinks; exotic fruit juice blends and flavoured spring waters.

Bartek Malic Acid gives beverages new vitality because it:

- imparts tartness and adds a subtle character to the overall flavour of the beverage making it taste more natural,
- intensifies the flavours used in the beverage, often reducing the amount of flavours needed,
- has blending capabilities that produce uniform taste effects from unrelated flavours, creating a well balanced taste sensation,
- prolongs sourness and extends other flavours in the beverage to mask undesirable aftertaste such as intense sweeteners, proteins, vitamins or minerals,
- provides tartness that complements and enhances fruit flavours without imparting its own characteristic flavour, and
- gives protection against microbial spoilage.

Acid Blending Gives Flavour Balance

In nature, Malic and citric acids usually co-exist, giving fruits and vegetables a well balanced sweet and tart taste. Using only citric acid limits taste potential in beverages because the distinct flavour notes offered by Malic, tartaric or lactic acid are missing.

Bartek Malic Acid helps blend flavours and other fruit acids when creating New Age Beverages with subtle flavour notes.

The global trend of “**flavour the flavoured**”¹ or **blending flavour notes**—e.g. *Apple & Passion, Pear & Passion, Kiwi Strawberry, Pineapple Papaya, Orange-Strawberry-Banana or Peach-Vanilla-Orange* means that Bartek Malic Acid combined with other organic acids will give multi-faceted beverages more naturally balanced sweet and tart tastes.

With 3,000 different species of fruit², New Age Beverage consumers have limitless taste choices.

Iced Tea

Emperors and explorers, sailors and scholars, athletes and adventurers, have been drinking tea for more than 4,000 years. When Neil Armstrong, U.S. astronaut, stepped onto the moon, one of the first things he said was, “*I’d like a glass of iced tea.*”³

From 1990-94, worldwide iced tea consumption grew over 200% in volume.⁴ In the US, from 1992-93, the sale of bottled iced teas leaped 180% to US \$177 million⁵ and from 1993-94, US sales grew 61% to US \$322 million.⁶

Iced Tea Consumption in Europe—1994 ⁷		
Country	% by volume	Litres/Capita
Switzerland	27	28
Italy	43	5
Germany	13	1
Belgium	5	4
France	5	0.6
Others	7	

Hot packing revolutionized the iced tea industry, as this process gives iced tea a brewed tea taste.

Besides hot packing iced tea, Snapple™ in 1988 gave this “old” drink new life by blending brewed tea with real fruit juice.⁸

In Switzerland, it was Migros (a giant supermarket chain and food processor) who launched and aggressively marketed powdered iced tea in 1983 which created the large Swiss iced tea market.

Bartek Malic Acid in Iced Teas

Iced tea has evolved to fruit-flavoured, herbal or sugarfree iced teas. Malic Acid helps preserve the unique tea taste while enhancing the subtle flavour notes giving flavoured black, green or herbal iced teas a balanced refreshing clean taste.

Sports Beverages

Sports and activity drinks meet new consumer needs. Sports drinks evolved from specialty drinks for a select group of competitive athletes to a mass market of refreshing beverages for adults.

There are three major types of sports drinks: isotonics, carbohydrate drinks and protein and amino acid drinks.⁹

Isotonic drinks are designed to prevent dehydration during vigorous exercise and *carbohydrate drinks* to give quick energy burst. Isotonic beverages have the same osmotic pressure as human blood to allow for rapid intestinal absorption.¹⁰

Per Capita Consumption of Sports Drinks ^{11,12}			
Country	World Rank	European Community Rank	Litres/ Capita
Japan	1	—	14
USA	2	—	7
Germany	3	1 (36%)	1.9
Italy	—	2 (19%)	0.7
UK	—	3 (11%)	0.5
France	—	—	0.2
Europe	—	—	0.8

The US sports drinks market in 1994 was nearly US \$1 billion and climbed to US \$1.2 billion in 1995. Gatorade™, launched in 1967, controls about 80% of this category.¹³

Flavour Challenge in Sports Drinks

Activity drink ingredients include salts, mainly sodium and potassium, to replace electrolytes lost during exercise and carbohydrates (fructose, glucose or sucrose) for energy. Protein drinks contain amino acids or whey proteins. Flavours have to work extra hard to mask the taste of the salts or amino acids and still deliver clean, refreshing beverages that are drinkable in large amounts.

Bartek Malic Acid meets the flavour challenge by enhancing flavour notes in sports drinks while masking the aftertaste of the salts or proteins. This is important as more sports drinks are consumed by recreational athletes who want better tasting and palatable beverages with less sodium and fewer carbohydrates.

Bartek Malic Acid's prolonged tart taste enhances flavours like grape, mixed berry, fruit punch, passionfruit, or citrus blends. Perhaps the "lighter" sports drinks can be formulated with lower levels of fructose¹⁴, and Malic Acid can be used to improve flavour.

References:

- 1) Sinki, G. 1994. Soft drink flavor preferences. *Perfumer & Flavorist*. 19(6):19-23.
- 2) Farr, S. 1994. 2001 A soft drinks odyssey. *Food Manufacture*. 69(3):29-30
- 3) Tea Council of Canada. 1982. The world of tea. P.5
- 4) Cave, S. 1995. Soft drinks find a niche. *Food Manufacture*. 70(3):37,39-40.
- 5) Dornblaser, L. and K. Charlet. 1994. Beverages turn icy...and steamy. *Prepared Foods*. 163(5):61-62, 64.
- 6) Hollingsworth, P. 1995. Pouring it on. *Food Tech*. 49(6):42, 44-47.
- 7) Sinki, G. 1994. Soft drink flavor preferences. *Perfumer & Flavorist*. 19(6):19-23.
- 8) Frank, J.N. 1993. The Kings of new age. *Beverage Industry*. 84(3):30-35, 38-41.
- 9) Giese, J. 1995. Developments in beverage additives. *Food Tech*. 49(9):64-65, 68-70, 72.
- 10) Giese, J.H. 1992. Hitting the spot: Beverage and beverage technology. *Food Tech*. 46(7):70-72, 74-75, 78-80.
- 11) Willman, M.L. 1993. Hot spots: New sports drink challengers step into the ring with champ. 84(3):42, 44-45.
- 12) Saiji, J. 1994. Foods for the future. *Food Science & Technology Today*. 8(3):139-143.
- 13) Anon. 1995. Marketwatch: European sports drinks per person, 1994. *Beverage World International*. 13(2):6.
- 14) Mohr, B. 1993. Gatorade takes on all comers. *Prepared Foods*. 162(9):13-14, 16.