Sugar-free Confectionary

Candies, chewing gum and chocolate are well known and rank very high in the list when consumers are asked for how much they like them. Also, it is a fact that consumers want from time to time reduce their sugar intake.

Thus, it is not surprising that, e.g sugar-free chewing gum is more the standard then a niche product in today's market. The same can be reported from the candy market. A huge number of product launches of the recent years were formulated sugar free.

Key to success in pleasure-driven product categories is the taste.

Consequently, the consumer expectations are high and should define the taste profile when products are formulated. HYET Sweet assists the industry already for a long time in finding the desired sweetness profiles. Since the introduction of Aspartame and Acesulfame-K in the USA and Europe we are accompanying the development of the good tasting and sugar free confectionary products.

Together, We will make a Happier, Healthier and Sweeter life!

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CHEWING GUM

In chewing gum sweetness is an essential taste. Consumers desire a maximum duration of sweet taste. Modern chewing gum formulations use the technology of encapsulating a part of the added high intense sweeteners. Dual blends of Aspartame and Acesulfame-K are commonly used. Looking closer into the application, the dissolving properties of Aspartame deserve technologist's interest. Very quickly dissolving sweeteners like the potassium salt of Acesulfame will be washed out first when the gum is chewed. Aspartame's dipeptide structure is the reason that dissolving takes time. In chewing gum applications this effect can help to add some extra time of sweetness, as the crystalline particles will stay longer in the matrix and can't be washed out so easily. In addition to encapsulation techniques Aspartame itself is helpful to meet customers' expectations.

CANDIES

High intense sweeteners are used in candies to supply the top note of the sweetness in sugar free formulations. Replacing sugar is at first sight a task of finding the right bulking agent. Isomalt, Sorbitol, Maltitol, Xylitol or Polydextrose are commonly used either on their own or in combinations. They all supply a part of the sweetness, but do not fully fill up the gap the replaced sugar leaves. Therefore the use of intense sweeteners is recommended. Many producers add from 0,1% up to 0,25% of HIS to sugar free candies. It is recommend to keep the occasional bitter profile of intense sweeteners under control. As candies stay a relatively long time in the mouth it can happen that the bitter note of added sweeteners may get dominant. In general, a low dosage of individual sweeteners helps to control the unwanted off notes and leads to use mixes of different substances. Further, Aspartame can help to mask bitterness, as it does not add it by itself.

When formulating with Aspartame it should be considered to add it in the production process at the latest possible stage. Aspartame is made from 2 amino acids and can break to its (non-sweet) components when it is heated. Thus, the heating time has a direct impact on the remaining Aspartame. A good analogy to estimate the loss of Aspartame during the heating time is Vitamin C. Both substances degrade when heated. The less time and temperature is applied the more functional substance remains.

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