

# The Trend of Cigarette Design and Tobacco Flavor System Development

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In light of addressing consumer health concern, coping with anti-tobacco movement, and promoting new product, tobacco industry is actively pursuing to make a new generation of cigarettes with low tar and nicotine deliveries, and less harmful substances. Low tar and low nicotine cigarettes increases their market shares dramatically world wide, especially in KTG, multinational tobacco companies, EU countries, even in China regulated by CNTC to set up yearly target to lower tar and nicotine deliveries. On the other hand, to design a new cigarette with reduced harmful substances begins to gain speed. The “modified Hoffmann list” publishes thirty plus substances in tobacco leaf and main smoke stream, which is the prime suspect causing health problems. Various ways and means are developed to reduce such components including new tobacco breeds, new curing method, tobacco leaf treatment before processing, selected filtration system, innovated casing system to reduce free radicals, as well as some non conventional cigarette products. In TSRC held this year, the main topic is related to reduce tobacco specific nitrosamines in tobacco leaf. The new generation of cigarette is in the horizon. It still needs a lot help to produce commercial products with satisfied taste and aroma characters.

The flavor industry is not regulated by many governments demanding which ingredients might or might not to for tobacco use. However, most of the cigarette companies self impose a list of ingredients to guide flavor suppliers to design

flavors. Unfortunately, the number of ingredients in those lists is getting shorter every year. It is understandable that the health is not the only reason. Some cigarette companies are playing safe to protect the company from potential lawsuit, while others are just copying from their competitors. Moreover, it is obvious that it needs more assistance from casings and flavors to design new generation of cigarettes with missing certain flavor components in tobacco leaf and main smoke stream. These flavor components are either non-existed or at lower level at new form of cured tobacco leaf or filtered in the main smoke stream along with reduced harmful substances. The use of carbon filters and other selected filtration system poses another tough task for flavor system design. Specific flavor components are missing from the smoke analysis data, which brings a notion of “carbon taste” and dryness of mouth feel. It is ever more demanded by cigarette industry to flavor suppliers to produce flavors as body enhancer, tobacco notes, salivating agents, harshness reducer, and various of aromatic notes provided they are safe to use. Another trend is that water based flavor or flavor with reduced ethanol as solvent is gaining popularity. It is preferred by some cigarette companies that the flavor is compounded with all natural ingredients or all ingredients should be GMO free.

The new generation of cigarettes demands many ways of new thinking process. It is also vital for tobacco industry. It reflects the real needs for the consumers that the cigarette product should be safe to use as well as bearing the taste and aroma characters smokers always enjoyed. An effective tobacco flavor system is definitely a part of the equation.