Press Release

Reduction of added sugars in solid foods: New issue and technological challenge for food companies

With the aim of improving public health, many national and international bodies are asking companies to limit the sugar intake of adults and children, encouraging them to reduce the quantity of added sugar, not only in drinks but also in solid foods. Alcimed, consultants in innovation and development of new markets, analyses the ability of the food-processing industry to face up to this issue.

Brussels, 29 March 2016 – After sugary drinks, the finger is pointed at added sugars in solid foods. In fact, an American study[1] carried out as part of a proposal to change the Nutrition Facts Label in the United States has shown that nearly **60% of added sugar consumed in the country comes from solid foods**. This study, as well as the latest recommendation from the WHO[2] demanding that **sugar intake of adults and children should be limited to 10% to total energy ration**, shows growing awareness of these added sugars.

Given its properties, sugar reduction is a technological challenge

The increasing number of recommendations to consumers may be seen as a sign of limitations imposed on companies in the longer term. However, their ability to **reduce the quantity of added sugars in their products raises a question now**.

"To reduce the quantity of sugar by a few percent may seem derisory compared to the target 20% salt reduction set ten years ago; a target easily reached by a gradual reduction over years. And yet, this is a technically more ambitious issue for sugar: beyond the contribution to taste, sugar has a role in texture, structure, as preservative and more, ultimately many more properties than salt", says Anne-Charlotte Pupin, Alcimed Project Director.

This, a simple reduction is only possible for small quantities, and will therefore not be enough to meet future regulations.

Numerous factors make reformulation still difficult

The most appropriate solution appears to be to reformulate products, with sweeteners and fillers; this is where the matter gets complicated.

Firstly, **sweeteners are controversial** and therefore difficult to label due to their image among consumers. They are no longer permitted for all products, particularly cakes, biscuits and chocolate.
In addition, the **properties of fillers no longer meet the companies' needs**: they have to combine several ingredients to compensate for the technical properties of sugar, and mixtures used for products such as brioche, cake and ice cream are not perfected to provide an equivalent texture and appearance. These fillers are also **very expensive**: you have to allow 2 to 4 dollars per kilogram for

[1] Drewnowski A, Rehm CD. 'Consumption of added sugars among US children and adults by food purchase location and food source'. *The American Journal of Clinical Nutrition*. 2014
[2] 'WHO calls on countries to reduce sugars intake among adults and children', WHO, 2015 Link

inulin[3] and 2 dollars for polydextrose, compared to 40 cents for sugar. Reformulating within a set cost is therefore a real challenge.

Finally, the question arises regarding the **suitability of fillers** to meet public health issues: what is the advantage of replacing glucose by fructose, or sugar by a more calorific filler? The long-term health benefit of such substitutions has not been shown to date and is already a cause for debate among the scientific community. Furthermore, this limit leads to exploring alternatives based on adapting the process and not the formulation, as part of European projects (Terifiq, Pleasure).
So the problem is complex and extends beyond the simple objective of reducing the quantity of added sugar.

Commentaire [SI1]: For information, this is dangerous. The human body can metabolise glucose for energy, but cannot metabolise fructose, except to convert it directly to fat. That is why sugary drinks and foods made with High Fructose Corn Syrup (HFCS) are so dangerous. They taste sweet, but it's all converted into FAT. But currently, especially in the USA, the fructose processing industry has more economic and political power than the health lobby.

The increasing awareness of consumers and healthcare bodies is now driving companies to innovate to respond to this issue

Not long ago, the subject was not an R&D priority for companies, as consumers were relatively insensitive to 'low sugar' solid foods. Nonetheless, the WHO recommendation and threat of potential future regulations have raised the importance of this matter. For a little while, companies have been looking into the question across the entire value chain, as Nestlé recently explained to the World Food Innovate Conference in London, and their great ability to innovate and collaborate should enable them to confront this issue. In this way they will be able to contribute, with the competent authorities, to amending the regulations consistently and better understand this health issue.

ABOUT ALCIMED
Alcimed (www.alcimed.com) is a consultancy company in innovation and development of new markets, specialised in life sciences (healthcare, biotech, food processing), chemistry, materials and energy, as well as aeronautics, aerospace, defence and Public Policy. Alcimed counts on a team of 180 employees, sub-divided by sector and able to handle extremely varied missions from marketing & sales subjects (market surveys, targeting new needs, positioning a new product, etc.) to strategic issues (development strategy, research & assessment of acquisition targets, organisation of an activity, design/assessment/deployment of public policies, etc.). The company's head office is in Paris and it also has offices in Lyon and Toulouse, as well as in Germany, Belgium, Switzerland, England and the United States.

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[3] Orders of magnitude established by comparison of prices from different wholesalers