You Eat with Your Eyes

An infinite number of colours surround us in our everyday lives. We all take colour pretty much for granted, but it has a wide range of roles in our daily lives: Not only does it influence our tastes but even more our purchasing decisions as consumers of foods and beverages. Even though colours affect us so much, our knowledge of colour and its control is often insufficient, leading to a variety of issues in deciding and objectively controlling colour throughout the process chain, starting from raw materials and ingredients through to the final product presented at the Point of Sale.

“Konica Minolta Sensing has for more than 30 years been a leading provider of colour management solutions to the food, ingredients and beverage industry supplying state of the Art instruments and solutions to assure objective and reliable colour control”.
-Mr Andreas Ullrich, Marketing Manager Konica Minolta Sensing Europe B.V.

Compared to the variety of other parameters which require accurate analytical monitoring in a food laboratory, the fresh, appealing and appetizing colour of foods and beverages represent the only and immediately perceptive “quality” aspect. It therefore deserves the appropriate attention through objective and repeatable measurement methods from raw materials, ingredients down to the final product.

Nevertheless, one has to consider, that the term “colour in food” often carries negative associations, especially with the growing awareness of consumers and associated institutions for topics such as Natural, Healthy, Genetically modified food and the general fear of what is called “Techno Food”. On the other side, in parallel with the changes in society, eating culture and habits have drastically changed. This is well proven by the ever increasing space so called “convenience food” occupies in the shelf of today’s food super markets. The consequences are that increasingly processed foods require accurate analysis and monitoring of colour change throughout the process such as cooking, baking and frying, roasting or deep freezing. Furthermore, the replacements of synthetic by organic (natural) colours, especially for dairy products, with decreased colour stability over time and/or temperature change, make accurate colour control essential. Whether we talk about checking the degree of ripeness of fruit and vegetables, the appetizing colour of a “ready to use" tomato sauce or the perfect colour of a chocolate, the eyes of the consumer will make a decision.

Because of this in recent years, colour instruments have become widely used for colour control of various foods and beverages, including for example, snacks, dairy products, seasonings, noodles, fish paste, jams and many others. Products which are displayed in large numbers on supermarket shelves, in particular, are strictly managed using colour instruments. In addition, colour instruments are used to monitor consumer preference surveys or for R&D work to improve processing methods.
In the agricultural, farming and fishing industry, portable instruments are replacing historically used grade scales (for example Meat classification, Salmon colour, Egg Yolk colour) based on non-subjective visual assessment by objective colour measurement. Konica Minolta Sensing has for more than 30 years, been a leading provider of colour management solutions to the food, ingredients and beverage industry supplying state of the Art instruments and solutions to assure objective and reliable colour control. Either for portable use in the field or daily routine measurements in the laboratory, Konica Minolta offers a wide range of products that suits the needs.

**Chroma-Meter: The food industry standard**

Back in the early 80’s, Konica Minolta introduced the Chroma-Meters series; the first portable colour measurement instruments which suddenly made colour control, even for small and medium sized companies, possible and affordable, and thus became the global pioneer for portable colour measuring equipment. Since then, the Chroma-Meter series became a “defacto standard”, especially in the food and ingredients industry with thousands of application references around the globe. Today, the CR-400 series continuous this heritage through its still unmatched simple operation, portability, high durability and reliability as well as total flexibility in terms of sample forms, from solids, paste, powder and granules to liquids. To make the handling of various sample forms easy and even more important with a minimum of preparation time, a large range of dedicated optional accessories such as glass cells, Petri-dish’s and sample holders are available. Other reasons for the popularity of the Konica Minolta Chroma-Meter’s is their portability enabling measurements “in the field” as well as their robustness and reliability to sustain even harsh operational conditions.

**Next generation Spectrophotometer: Konica Minolta CM-5**

The recently launched CM-5 marks a new generation of colour measuring instrument for the laboratory, which will set new standards in terms of total application flexibility and a design concept which enhances user friendliness to unprecedented levels. “The CM-5’s was designed and realised based on the experience and requirements of customers in the food, pharmaceutical and chemical industry in respect to the vast variety of samples, to create an instrument which will be renown for it’s usability and reliability” states Marketing Director Mr. Andreas Ullrich.
“With this new instrument, the user will profit in terms of higher productivity through fast and easy colour control for almost any kind of samples and applications”. In fact, the top port alignment allows the reflectance measurement of samples whether they come in solid, powder, granule, paste or liquid form. Special attention was brought to achieve maximum ease of use for daily routine measurements and thus avoiding operational mistakes in a laboratory environment with multiple users having to measure samples in various forms such as solids, paste, powders, granules as well as opaque and transparent liquids.

The result is a compact and well designed “stand alone” table top spectrophotometer to perform accurate colour measurement of almost any kind of samples. The large colour display and built in firmware, which can display results in seven languages, controls all functions in a comprehensive way. Measurements can either be taken in Reflectance mode for all solid and non transparent specimens or in Transmission mode for transparent liquid and solid samples.