1. Introduction
In most cases, consumer liking is measured in so called “blind tests”, hence hiding the extrinsic, especially the brand-related information. “Problem” with such “blind tests” is the focus only on the “category element” of the respective products, meaning that consumers implicitly make a decision whether or not the blind tested samples are good or bad representatives of the category under research.

Not considered in blind tests and the later selection of key drivers is the “brand element” of a product. It might therefore be risky following optimization recommendations how to modify certain sensory properties when the link to the brand is missing.

2. Objectives
The current research approach aims to investigate the existence of certain sensory characteristics that are “typical” for specific brands and therefore enable immediate identification. This can also be seen as a set of “identity-giving” attributes that kind of constitute the “Sensory DNA” of products of a certain brand.

3. Methods
The first step included an objective sensory profiling to gather the perception dimension of four different cola brands. The descriptive data was collected via Ultra Flash Profiling by 12 trained experts in the isi Sensory Lab Munich. The second step focused on the consumer dimension and aimed to reveal whether the unique sensory profiles of the cola samples lead to a differentiated brand assignment. In a blinded test, a CATA survey was integrated in addition to measuring overall liking. The consumer test among 413 Cola heavy users was executed in the Sensory Lab of the University of Applied Sciences Nordhausen. Firstly, the respondents had to indicate the overall acceptance for each sample as well as the acceptance for different sensory dimensions. In the following task, participants had to assign suitable associations to the samples under time pressure. Additionally, they had to choose the brand they had just tested from a list with six cola brands (the four brands in figure 1 together with Sinalco Cola and Afri Cola).

This step provides additional information:
(1) The number of correct associations of blind tested cola samples to the right brand name compared with the guessing probability.
(2) Differentiating sensory characteristics identified by the consumers according to which were worked out by the panel.

Samples
The global brands Pepsi Cola and Coca-Cola as well as River Cola from the discount store ALDI served as test stimuli. The fourth tested brand, Vita Cola, was a brand which is particularly strong and popular in Thurcingia, the federal state in which the test took place (figure 1).

![Selected Cola brands for descriptive analysis and consumer test](image1)

Figure 1: Selected Cola brands for descriptive analysis and consumer test

4. Results
The results of the Ultra Flash Profiling indicate that there are many significant sensory differences between the samples. Whereas the two famous brands Coca Cola and Pepsi Cola have similar sensory profiles, Vita Cola is characterized by more specific sensory characteristics (figure 2). Concerning the dimension “taste” Vita Cola contrasts in the following attributes: higher overall intensity in flavor, higher lemon and orange taste intensity, no typical cola flavor, more sour in taste, less sweet in taste.

![Results of Ultra Flash Profiling for Cola brands](image2)

Figure 2: Results of Ultra Flash Profiling for Cola brands

Besides high overall acceptance, Vita Cola also gains a significantly higher rate of correct brand assignment after tasting the sample in that blind test. These results prove that Vita Cola with its sensory DNA distinguishes clearly from competing brands (figure 3). The CATA data even support this conclusion and confirm the previous findings of the descriptive analysis: Consumers assign sensory attributes like “lemon flavor” and “sour” significantly more often to the Vita Cola sample than to the other ones.

![Rate of correct assignments to cola brands](image3)

Figure 3: Rate of correct assignments to cola brands

5. Conclusion
This research proves the existence of typical sensory characteristics of a brand and hence requires taking this into account in all decisions of product optimization and product differentiation.

References