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# The right juice for every taste

Sensory Marketing

Dr. Martin Kern, Dr. Paolo Tamagni, Sven Henneberg

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# SENSORY MARKETING: THE RIGHT JUICE FOR EVERY TASTE

Dr Martin Kern  
Dr Paolo Tamagni  
Sven Henneberg

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The success of a fruit juice or a soft drink is, like any other product, influenced by the configuration of the marketing mix. Where product presentation (brand-name, packaging, price, etc.) is the leading enticement for the consumer's initial purchase, the product's intrinsic, sensory properties are the key drivers for a repeat purchase. Sensory properties ensure long-term consumer loyalty. Sensory marketing allows manufacturers to customize the marketing-mix elements to fit specific target-group needs. The case study on orange juice for the French market as well as the case study on orange soda in Germany show how it is done.

Only elevated levels of consumer satisfaction will ensure long-lasting product success. Sensory marketing ascertains the specific needs of the various target groups. It analyses the key drivers of product popularity, defines how the product and its marketing mix may be optimised, and provides an actionable basis to design a strategy. Thus sensory marketing may turn products into "sensory benchmarks", i.e. the best tasting and valuable product of its category. In consumer research, product quality is based on "intrinsic factors". It is more precisely determined by consumer insight than by product category experts, e.g. oenologist, technologists.

However, there are other elements that will influence a consumer's (subjective) perception of quality and decision-making process. They are the "extrinsic factors", brand, packaging, product positioning, price, etc.

These factors not only influence the initial purchase decision. They also play a key role in the subjective product assessment after consumption. For instance: Warsteiner beer's positive brand image secures the product better ratings when tasted branded than in blind tests. A successful marketing concept entails optimized intrinsic and extrinsic factors designed along the needs of a specific target group.

## THE IDEAL MARKETING MIX FOR ORANGE JUICE FOR THE FRENCH MARKET

The case study on orange juice by SAM Sensory and Marketing aimed to understand consumer preferences. Its results would allow to design the ideal orange juice for the French market, i.e. optimum product design – understood as a combination of intrinsic factors to maximize consumer liking, and extrinsic factors to maximize purchase intention.

As a first step, a product optimisation approach (PROP®) was used. Ideal product profiles for specific target groups were determined. The second step aimed to identify the best marketing mix for the product category through a Marketing Mix Assessment (MMA) of the elements: "product type", "packaging material", "product placement" and "brand". Also, it involved a launch simulation to estimate what impact a new product entry would have on existing market shares.

## PRODUCT OPTIMISATION – PROP®

Product liking can be maximized within a specific target group (cluster). For instance, a successful product optimisation may dramatically improve, as much as 1 point (on a 9 point scale), the score of liking, thus providing a sustainable gain on repeat purchase, an increase in sales and market share.

This systematic approach will allow even a poorly performing product to become the sensory market-leader, and benchmark of its category. This analysis is essential to identify and quantify the key product attributes that maximize consumer liking. The analysis is also complementary to other investigations on brand positioning and market share trends.

Objective and descriptive product profiling data (QDA®: quantitative descriptive analysis) is collected separately. It is measured by expert panelists from naive consumer liking data, and then both data sets are correlated by multivariate data analysis. As a result, the most important causative liking attributes (drivers) can be identified and quantified, and their respective ideal values can be calculated. These values are then portrayed as ideal product profile, and show how to maximise consumer liking.

In the case study, 150 European orange juices were screened. Eighteen of them were selected and profiled by descriptive analysis. Figure 1 shows the most important sensory product attributes on a principal component analysis (PCA) map. The attributes, "concentrate", "citrus", "sour", "artificial", "sweet", "exotic fruit", "orange", "peel" and "fruit pulp", represent the extremes of the multi sensory dimensions of the map.

At the same time, a representative sampling of consumers (N=152) scored, in a blind test, the liking of the 18 products on a 9 point scale. The thus determined overall product liking ranged from 5.6 to 7.8 (figure 2).

An additional analysis of the liking data (cluster analysis) identified two sub-groups of consumers with almost opposite reasons for liking: cluster 1 – 29 % of the sampling – liked orange juice types with a concentrate and exotic flavour taste. They rejected juices containing orange pulp. Cluster 2 – 71 % of the sampling – liked juices with "fresh orange" taste and a pulpy texture. In figure 1, the graphical representation (preference mapping) shows a superposition of the consumer product liking for every cluster upon the sensory mapping data.

Considering the economic importance of cluster 2, which covers 71%

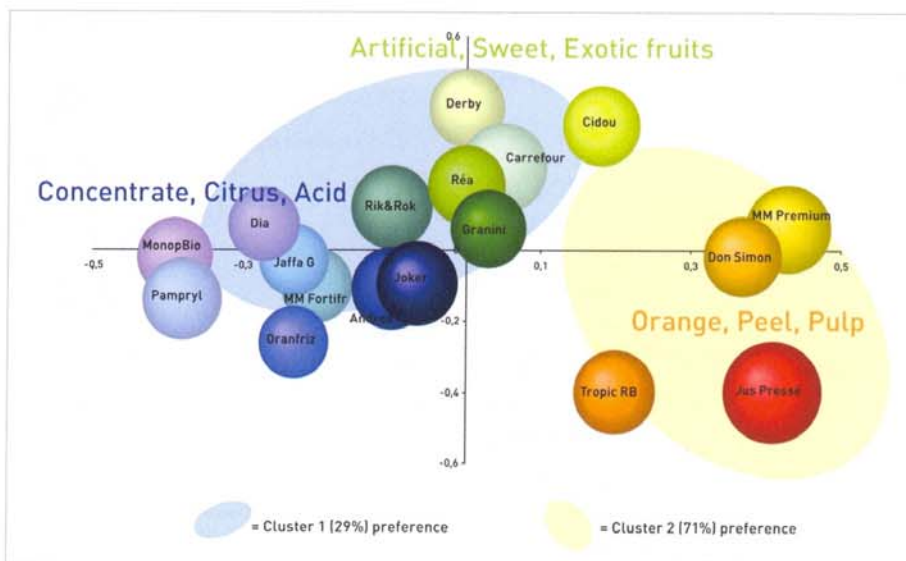


Fig. 1: Sensory and Preference Mapping of the Orange Juices

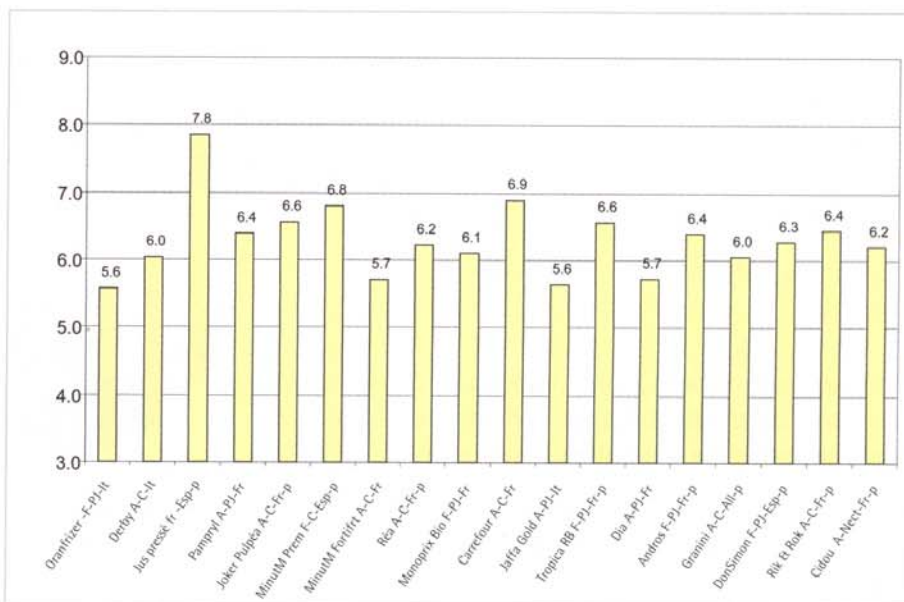


Fig. 2: Product Liking Scores of the Orange Juices

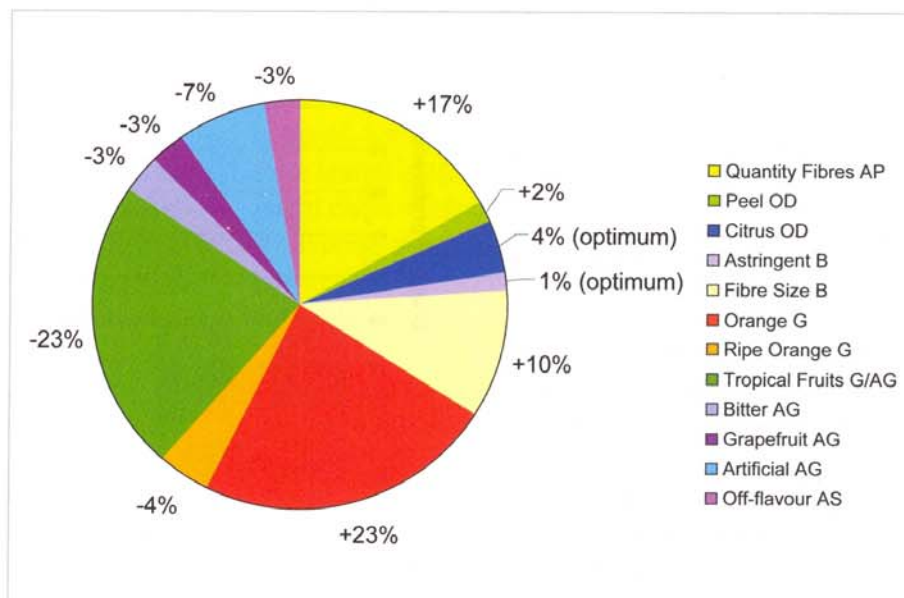


Fig. 3: Modelling: Sensory Drivers explaining Consumer Liking in Cluster 2

of consumer preferences, an ideal product profile was calculated, using a mathematical model.

Four key drivers (positive drivers: "pulp quantity" 17 %, "pulp size" 10%, "orange taste" 23 %, and negative driver: "exotic fruit taste and aftertaste" 23 %) already explain more than 70% of the overall liking of cluster 2 (Fig. 3). An ideal product profile for consumer liking of cluster 2 is displayed in figure 4. Quantified and actionable product development recommendations may be obtained by comparing the ideal product profile with the profiles of underperforming products and or prototypes (Fig. 4).

MARKETING MIX ASSESSMENT

Ideally, a successful marketing strategy will optimize sequentially intrinsic product factors and marketing-mix elements.

The case study on orange juice is based on a combined analysis-approach of four marketing mix attributes:

- brand – six levels (Tropicana, Pampyrl, Rea, Andros, Minute Maid, and Joker),
- product display on the shelf – two levels (chilled and ambient),
- packaging material – four levels (glass, PET transparent, PET opaque, and cardboard) and
- type of juice – three levels (concentrate, direct juice, and orange nectar).

This investigation approach aimed to answer the following strategic marketing questions:

- What is the concept with the optimum combination of features?
- How does each feature and level interact and contribute to the overall evaluation of the concept?
- How can the estimates of the purchaser be used to predict preferences for any of the concepts with different sets of features?

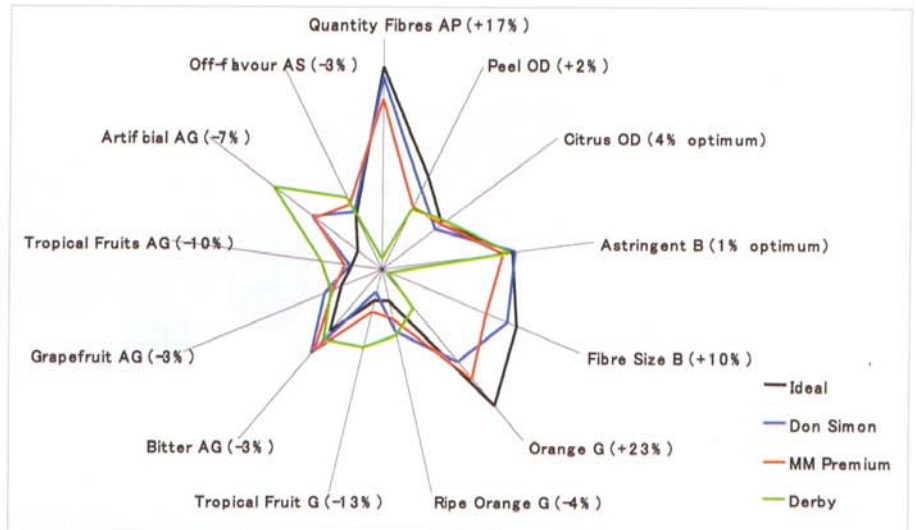


Fig. 4: Comparison between the Ideal Product Profile for Cluster 2 and some product profiles to be improved

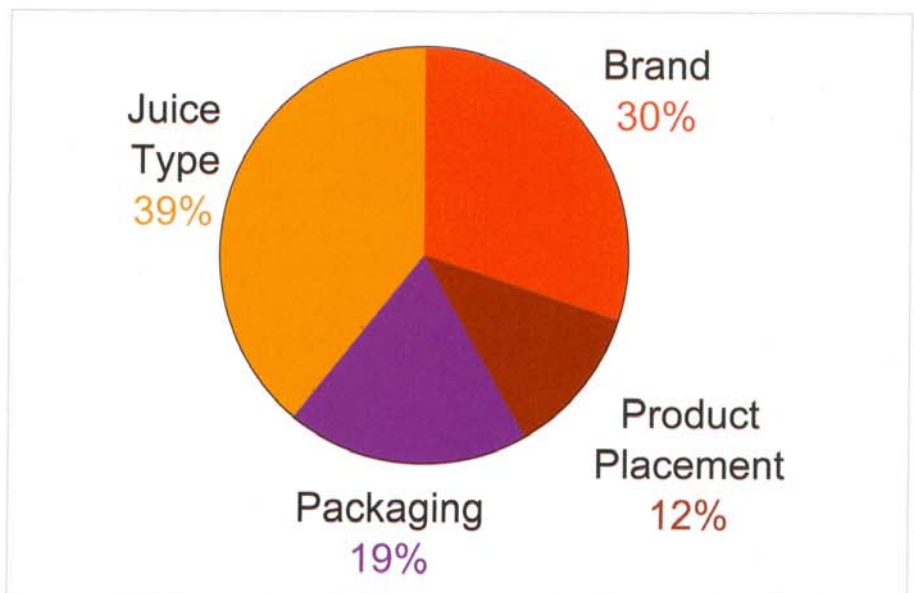


Fig. 5: Impact of the Marketing-Mix Elements on Purchase Intention

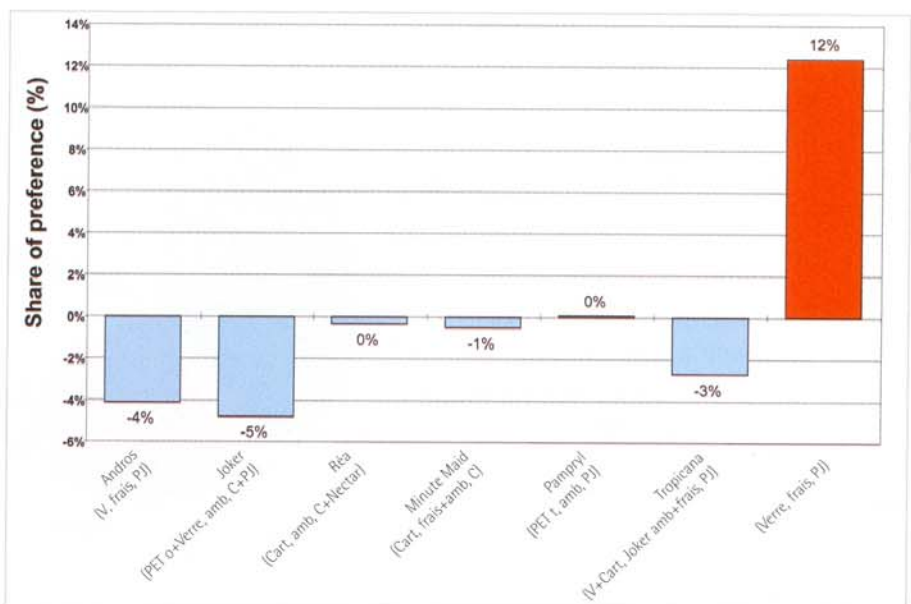


Fig. 6: Estimation of the Potential of a New Marketing-Mix Concept on Market Shares

- How can a group of potential consumers be isolated, who place different importance on the features?
- How can high and low potential segments be defined?
- How can marketing opportunities be identified by exploring the market potential for future combinations not currently available?

The essence of this approach is to expose the respondent to specifically selected concept scenarios (choice tasks), and to portray consumer decisions realistically, like „in everyday life“. There are various possible presentations of the choice tasks depending on research objective and context. A full-profile, pair-wise comparison method was chosen. This method is based on the presentation and comparison of two scenarios at the same time. The respondent, using a rating scale for purchase intention, has to indicate the preference for one scenario over the other.

Thanks to a specific scenario presentation-design, respondents could not ascertain the purpose of the market research. That is why this category research provided a valuable understanding of the consumer's decision-making process. The impact of every marketing mix element on the purchase intention was calculated. The results are presented in figure 5:

According to figure 5, "type of juice" had the most important influence, 39 %, on the purchase intention. It is followed by "brand", 30 %, "packaging", 19 %, and "product display", 12 %. It is also very interesting that within "packaging material", the French consumer clearly preferred the feature "glass".

This approach, exposing the consumer to specific concept scenarios, provides valuable consumer insight information as database. It is used to estimate the success of new product launches with future sets not currently available. The new market-entry potential can be simulated and estimated.

As an example in the case study, the introduction of a new marketing mix concept could achieve a 12 % gain of market share, which is partly taken from its competitors as shown in figure 6.

This market trend simulation allows the marketing success, and the influence on market-share changes to be

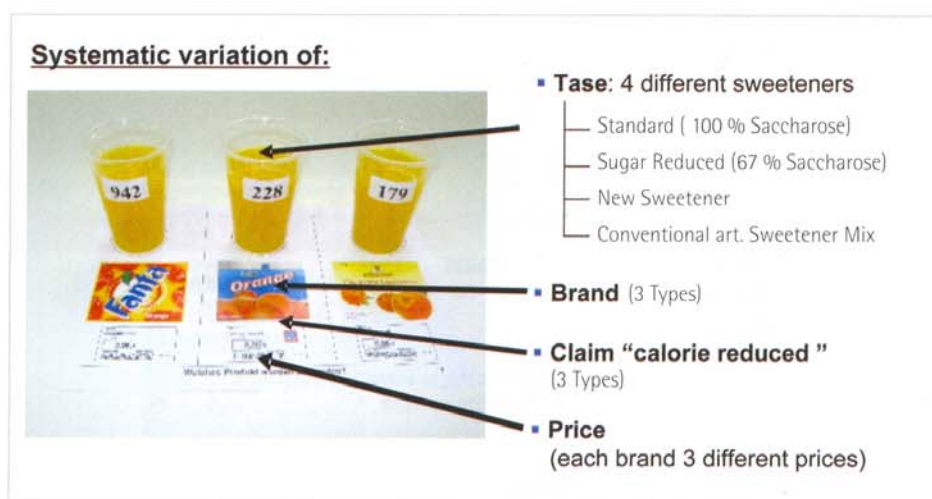


Fig. 7: Test Design of the Orange-Soda Conjoint-Study

predicted. This simulation also presents important effective information related to the investment calculations for line-extensions and innovations.

#### MARKET OPPORTUNITIES FOR DIET ORANGE-SODA

In a further case study, SAM Sensory and Marketing investigated the marketing potential of diet orange-soda in comparison with traditionally sweetened orange sodas. In this case, a choice-based conjoint analysis method was used. For the very first time, a product-tasting phase was integrated into the classical choice task approach. The following questions were answered by a single test design:

- What are the market opportunities of the diet orange-soda?
- How do consumers judge a new sweetener?
- Which brand fits the concept of a diet-soda best?
- How much can it cost?

There were three different brands to choose from (Fanta, national brand; Minerva, regional brand; Flirt Orange; store brand) in three different price ranges, and three different claim levels of calorie reduction (no claim, claim in small print, claim in large print), as well as four different sweeteners (sucrose, reduced level of sucrose (67 %), conventional/artificial sweetener mix, and Diet Sweet Up™ – a newly developed artificial sweetener). A total of 621 consumers were interviewed. The variations in the test conditions are shown in figure 7.

As expected, throughout the entire sampling of the three brands, sucrose was preferred over all other sweeteners. Even so, the test permitted a differentiation of the results for calorie-aware customers, 34 % of the respective group. Amazingly, the sampling in this segment showed

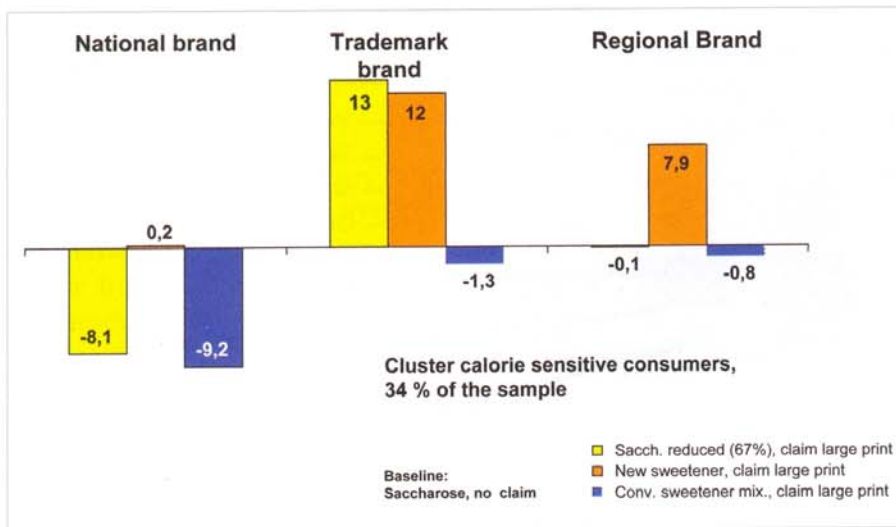


Fig. 8: Growth of Purchase Readiness for the Segment "Calorie-Aware Consumer" through the use of Alternative Aweeteners in comparison to Cucrose.

In the example orange-soda, the target consumer was reached only via the clear label "fewer (reduced) calories". He consequently responded with increased product satisfaction after tasting. Matching consumer expectations aroused at the point of sale with the corresponding product properties during consumption is a concrete example of a "winning marketing mix" for long-lasting product success. A "global product fit" can result in a turnover increase of up to 12 % in the target-group consumers. They represent 34 % of the market potential of a trademark brand with national distribution.

that the preferences for the different brands of sweeteners were reversed. For the first time, sucrose was chosen less often than the other sweeteners, and therefore had reduced market potential. As a result, in the segment "calorie-aware consumers", from the point of view of taste, sucrose was no longer king of the sweeteners.

These results have a significant impact, when one includes the extrinsic factors of "brand-name" and "product claim". Calorie-aware consumers make a purchase decision in favour of the new sweetener in regional brands (+ 7.6%), as well as in trademark brands (+ 12%). They decide against the brands with sucrose when the information "less calories" is most clearly visible on the label. The results are shown figure 8.

### CONCLUSION

Both studies show that the standard definition of product quality by itself is no longer sufficient for a product to be successful in today's demandingly competitive marketplace. An undifferentiated strategy loses valuable market potential because more specific consumer needs are not met. It is essential for a long-lasting product success to combine an intrinsic product optimisation with an optimum marketing-mix strategy.

This shows the strength of the Sensory Marketing Approach. The method not only reveals the importance of individual elements but also shows the importance of their interaction, uncovers market potential, and identifies the direction towards successful general concepts. Sensory Marketing points the way towards all product-relevant criteria, e.g. sensory properties, packaging, layout, price, product claims, etc. In this way, marketing strategies will be more efficient and prevent consumer confusion. Product development becomes a systematic and innovative approach. It ensures effective development with more long-lasting success.

#### AUTHOR

Dr Martin Kern  
Chief Executive Officer

Dr Paolo Tamagni  
Senior Vice President Marketing

SAM Sensory and Marketing International AG  
CH - 6330 Cham/Switzerland

Sven Henneberg  
Senior Vice President

SAM ASAP Sensory and Marketing Germany GmbH  
D-68168 Mannheim/Germany

www.samresearch.com

## Publications available at SAM-Group

- **Das Unbeschreibbare fassbar machen – Sensory Marketing sichert Markterfolg**  
Kern M; Marketing Journal, Ausgabe 3, p. 20-27, März 2007
- **Gute Marketer arbeiten mit allen Sinnen**  
Kern M, Tamagni P; Absatzwirtschaft online, www.absatzwirtschaft.de, 25. Januar 2007
- **How important intrinsic and extrinsic product attributes affect purchase decision**  
Enneking U, Neumann C, Henneberg S; Food Quality and Preference, 18, p. 133-138, 2007
- **Sensory Marketing: Der richtige Saft für jeden Geschmack**  
Kern M, Tamagni P, Henneberg S; Flüssiges Obst Ausgabe 12, p. 618-622, 2006
- **The right juice for every taste**  
Kern M, Tamagni P, Henneberg S; Fruit Processing International Journal, Volume 6, p. 386-390, November 2006
- **Ice cream brand versus discount brand**  
Henneberg S, Biedekarken O; Food Engineering & Ingredients, Vol 31(3), p. 24-26, Sept. 2006
- **Was schmeckt den Deutschen Pils oder Mild?**  
Biedekarken O; DLG Test Lebensmittel, Ausgabe 4, p. 22-23, 2006
- **Les vins espagnols lorgnent le Nouveau Monde**  
Karine E, Deniau C; Rayon Boissons, p. 88-89, Février 2006
- **Erfolgsprodukte mit Sensory Marketing**  
Quadt A; Food Design, Ausgabe 2, S. 48-50, 2006
- **Geschmack gezielt gestalten**  
Kern M, Quadt A; Wein + Markt das Wirtschaftsmagazin, Ausgabe November, p. 30-33, 2005
- **Pourquoi faire appel au marketing sensoriel?**  
Ermenier K; Rayon Boissons, p. 36, Mai 2005
- **Mapping the taste of beer**  
Rummel C; Scandinavian Brewers' Review, Volume 61, No 2, p. 20-21, 2004
- **Geschmacksache, moderne Sensorik unterstützt konsumentenbezogene Produktentwicklung**  
Rummel C, Bomio M; Brau Industrie, Ausgabe 3, p. 30-32, 2003
- **Das schmeckt wie hellblauer Spiralnebel, wer trinkt welches Bier in Europa?**  
Tenzer E; Die Zeit, Ausgabe 45/2003
- **Le marketing sensoriel selon SAM**  
Nadège C, Process, No 1180, Mars 2002
- **Zwischen den Fronten**  
Biedekarken O; Lebensmitteltechnik, Ausgabe 9, p. 73, 2002
- **Und, schmeckt's?**  
Röbke T; die Zeit, Ausgabe 43/2002
- **Welche Skala ist besser? Ein Methodenexperiment zur Sensorikforschung Teil 1+2**  
Benz K. H, Henneberg S; Lebensmitteltechnik, Ausgabe 1-2, p. 66, Ausgabe 3, p. 69, 2002
- **Neue Wege der Sensorik**  
Köster E P; Lebensmitteltechnik, Ausgabe 7-8, p. 53, 2002
- **The influence of Early Experience with Vanillin on Food Preference Later in Life**  
Haller R, Rummel C, Henneberg S, Pollmer U, Köster E P; Chem. Senses 24, p. 465-467, 1999

Switzerland	Germany	Italy	France
<b>SAM Sensory and Marketing International AG</b> Seeblick 1 CH - 6330 Cham Phone: + 41 44 439 70 40	<b>SAM ASAP Sensory and Marketing Germany GmbH</b> Oetztaler Strasse 1 D - 81373 München Phone: + 49 89 743 76 70	<b>SAM Sensory and Marketing Italy s.r.l.</b> Viale Monza, 270 I - 20128 Milano Phone: + 39 02 27 00 70 19  Via Santi 5 I - 43040 Lemignano di Collecchio (PR) Phone: + 39 05 21 80 45 35  infoit@samresearch.com	<b>SAM Sensory and Marketing France S.A.R.L.</b> 16, rue Martel F - 75010 Paris Phone: +33 1 48 24 61 00 infofra@samresearch.com
<b>SAM Sensory and Marketing Switzerland AG</b> Albulastrasse 57 CH - 8048 Zürich Phone: + 41 44 439 70 40 info@samresearch.com	Brandstwiete 1 D - 20457 Hamburg Phone: + 49 40 32 50 83 60  samger@samresearch.com	infoit@samresearch.com	<b>Spain</b> <b>SAM Sensory and Marketing Spain, S.L.</b> Aragón, 270, 03 - 01 E - 08007 Barcelona Phone: +34 93 467 64 60 infospain@samresearch.com