

## Exploring influences on coffee liking: effect of samples and consumer characteristics

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### Abstract

Market surveys on coffee consumption are showing an increasing demand for high quality and specialty coffee. Therefore, the identification of factors that can guarantee a better and standardized quality assessment of coffee is desirable. The aim of this study was to determine the sensory and chemical characteristics of coffee's samples, and to investigate their potential relevance on consumer acceptability, also taking into account the different characteristics of the subjects. In fact, several studies have been demonstrated the effect of both physiological and psychological differences between subjects on sensory and hedonic responses. Sixteen samples of coffee bean (8 Arabica and 8 Robusta) were used to this end. The coffee beans were toasted at the same level using a pilot plant. The obtained coffee samples were characterized by aroma analysis using Gas Chromatography- Mass Spectrometry (GC-MS), chemical and physical analyses (caffeine, total phenol, color, density, humidity, etc.), hedonic and sensory evaluation by 90 consumers using a Check-All-That-Apply (CATA) questionnaire. On consumers involved in sensory evaluations the responsiveness to PROP and the density of fungiform papillae were measured. Consumers were also asked to complete a questionnaire on consumption habit regarding coffee. Therefore, the judges were grouped according to the similarity of their characteristics. The obtained data performed on ANOVA model highlighted the effect of sample and cultivar factors on both chemical and sensory and hedonic values. In order to better interpret the relationships between the different measured parameters, multivariate analyses were performed. For this purpose, the samples were ordered based on the satisfaction scores. Only significantly different samples were considered. Results allowed to identify key attributes that influence coffee liking in terms of chemical, aromatic and sensory markers. A significant effect of consumer characteristics, in terms of sensitivity to PROP and consumption habit was also found. Taken overall, results provided a solid basis for exploring influence on coffee liking, which may be used in both quality control and product development applications.

Future goal is to try to build up a predictive model of coffee liking.

### Biography:



Nicola Condelli has completed his PhD in Food Biotechnology at the University of Basilicata on 06 March 2006. He currently works as a researcher in Food Science and Technology at School of Agricultural, Forestry, Food and Environmental Sciences of University of Basilicata. He is specialized in sensory analysis, he is a member of the Italian Society in Sensory Science and possesses the professional qualification of "Sensory Project Manager". He has published more than 20 papers in reputed journals.

### Speaker Publications:

1. Functional properties and predicted glycemic index of gluten free cereal, pseudocereal and legume flours. *LEBENSMITTEL-WISSENSCHAFT + TECHNOLOGIE*, vol. 133, p. 1-7, ISSN: 0023-6438, doi: 10.1016/j.lwt.2020.109860
2. Gender, age, geographical area, food neophobia and their relationships with the adherence to the mediterranean diet: New insights from a large population cross-sectional study. *NUTRIENTS*, vol. 12, p. 1-14, ISSN: 2072-6643, doi: 10.3390/nu12061778
3. Microbiological Stability and Overall Quality of Ready-To-Heat Meals Based on Traditional Recipes of the Basilicata Region. *FOODS*, vol. 9, ISSN: 2304-8158, doi: 10.3390/foods9040406
4. Microencapsulation as a Tool for the Formulation of Functional Foods: The Phytosterols' Case Study. *FOODS*, vol. 9, p. 1-19, ISSN: 2304-8158, doi: 10.3390/foods9040470
5. Assay of healthful properties of wild blackberry and elderberry fruits grown in Mediterranean area. *JOURNAL OF FOOD MEASUREMENT AND CHARACTERIZATION*, vol. 13, p. 1591-1598, ISSN: 2193-4126, doi: 10.1007/s11694-019-00075-x

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