



Universidad
de Alcalá



SENSOGRAPH: FAST AND CHEAP METHOD FOR THE SENSORY FOOD POSITIONING

TECHNOLOGY OFFER

Code

AGR_UAH_11

Application areas

- Physics and Exact Sciences
- Agrofood Industries
- Other Industrial Technologies

Type of collaboration

- Commercial agreement with technical assistance
- Technical Cooperation

Main researches

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	1	2	3	4	5	6	7	8	9
1	.	20	13	46	81	15	15	21	16
2	20	.	28	80	15	12	16	70	15
3	13	28	.	12	35	34	66	27	50
4	46	80	12	.	34	16	16	51	16
5	81	15	35	34	.	28	23	19	26
6	15	12	34	16	28	.	58	18	46
7	15	16	66	16	23	58	.	22	50
8	21	70	27	51	19	18	22	.	26
9	16	15	50	16	26	46	50	26	.

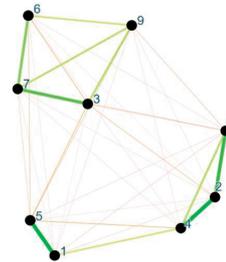


Imagen global de los nueve productos considerados, tras consultar a todos los catadores. Se observan claramente tres grupos, por un lado, el par 1-5, por otro lado, el grupo 2-4-8 (donde la conexión 4-8 es menos intensa), y finalmente el grupo 3-6-7-9.

Tabla con el número de conexiones entre cada par de muestras. Se observa que la conexión 1-5 aparece para 81 de los 100 usuarios totales, siendo el par de productos que más se identifican. Le sigue muy de cerca el par 2-4, considerados similares por 80 de los 100 usuarios.

ABSTRACT

Sensograph is a new method for sensory positioning based on the opinions of a group of untrained tasters and / or consumers, processed by software that uses geometric techniques rather than statistics.

The tasters training for conventional methods can be lengthy and costly. The technique proposed here only requires a group of tasters, not necessarily trained, and / or consumers who place the products on a sheet according to how similar they perceive them. Sensograph encodes the relative positions between the points using proximity graphs to identify the similarities that each taster has perceived among the different products offered. Finally, computational geometry techniques are used to fuse in one, all the mental images perceived by different tasters.

The software developed has proved its utility in multiple tastings, performed by experts in sensory analysis. They have shown the similarity of the results with those obtained by statistical techniques, as well as the quality/ price ratio of this method, compared to the training and coaching of a panel of expert tasters.

ADVANTAGES AND INNOVATIONS

Statistical techniques usually require specific knowledge for correct use. The method proposed here uses easily understandable geometric concepts, so it can be used by anyone with basic training, without the need for experience or training in the use of statistical techniques.

In addition, the characteristics of the method make it possible, without more tool than a simple smartphone, to perform the data capture and its processing in real time.