

APPENDIXES

Appendix A: Characteristics of respondents and their companies n=345

Characteristics	Options	%
Please choose which option best describes your main current job function?	Production/ Manufacturing	15
	Quality Assurance	43
	Research & Development	27
	Sales/ Marketing	6
	Others	9
Please choose which option best describes your current job level?	Entry	19
	Intermediate	25
	Management	50
	Owner	6
In which country is the company where you work located? (A relevant list of countries is provided)	South Africa	52
	Nigeria	35
	Others	13
What is the total number of employees in the company where you work?	Micro (1 to 10)	11
	Small (11 to 49)	15
	Medium (50 to 249)	28
	Large (250 and above)	46
Is the company where you work part of another larger company (i.e. a subsidiary)?	No	53
	Yes	47
Do you have a quality department at the company where you work?	No	7
	Yes	93
Have you heard of sensory evaluation before this study?	No	7
	Yes	93
How often were there complaint/s or reprocessing of product/s due to unacceptable sensory quality in the last 12 months?	I don't know	13
	Never	43
	Rarely	18
	Occasionally	19
	Often	6
What were the likely causes of unacceptable sensory quality? (Where respondent reported a customer complaint, respondents could select more than one option)	All the time	1
	Ingredients	26
	Processing	40
	Quality control	33
	Storage and distribution	51
Which of the following sensory related functions are you involved in? (Respondents could select all or none of the options)	Others	5
	None	14
	I request sensory tests	20
	I plan sensory tests	28
	I participate in sensory tests	58
	I analyse sensory test data and/or write reports	40
	I make decisions based on sensory tests	41
How much sensory related experience do you have?	None	6
	Less than 1 year	17

Characteristics	Options	%
Have you received any sensory evaluation training? (Respondents could select all or none of the options)	1 to 5 years	46
	6 to 10 years	13
	More than 10 years	18
	No	14
	Yes, in house training	44
	Yes, training at an academic institution	49
	Yes, Other training	5

Appendix 2: Sensory quality control knowledge, attitudes, and practices questionnaire

Identifier	Question
	<p>Knowledge Section</p> <p><i>Options, correct answers are shown in bold</i></p>
K1	<p>Can a person smell a food while chewing it in the mouth?</p> <p>1) Yes 2) No 3) I don't know</p>
K2	<p>Is vanilla (other options for this question- sweet, salty, bitter, sour, umami, fruity) one of the basic tastes?</p> <p>1) Yes 2) No 3) I don't know</p>
K3	<p>Does the sense of hearing contribute to the evaluation of texture when eating an apple?</p> <p>1) Yes 2) No 3) I don't know</p>
K4	<p>Which one of these relates to the perception of sight?</p> <p>1) Rods 2) Triangles 3) Squares 4) I don't know</p>
K5	<p>Which one of these does trigeminal sensation relate to?</p> <p>1) Visual perception 2) Auditory perception 3) Flavor perception 4) I don't know</p>
K6	<p>Which one of these is perceived on the tongue?</p> <p>1) Volatile food compounds 2) Water soluble compounds 3) Bud binding compounds 4) I don't know</p>
K7	<p>Is palate cleansing (e.g., rinsing mouth with water) between tasting different samples a good sensory practice?</p> <p>1) Yes 2) No 3) I don't know</p>
K8	<p>Should sensory quality panelists be informed of allergens in the food they will be tasting?</p> <p>1) Yes 2) No 3) I don't know</p>
K9	<p>Should product liking questions be asked during sensory quality control?</p> <p>1) Yes 2) No 3) I don't know</p>
K10	<p>How do you reduce carry over effects from one sample to the next when evaluating many samples?</p> <p>1) By evaluating samples under red light 2) By taking rest periods between samples 3) By switching sides (left then right) in the mouth during chewing 4) I don't know</p>
K11	<p>Which one of these can be ignored when recruiting panelists for sensory quality control of dairy products?</p> <p>1) Their availability for product evaluation 2) Their interest in sensory quality control 3) Their level of liking of dairy products 4) I don't know</p>
K12	<p>Should a panelist be asked to judge the flavor of products if he/she has a cold or the flu?</p> <p>1) Yes 2) No 3) I don't know</p>
K13	<p>Should employees with no sensory evaluation training be used for sensory quality control of products?</p> <p>1) Yes 2) No 3) I don't know</p>
K14	<p>A trained sensory panel has been carrying out sensory quality testing of bread for the past seven months. Which of the following is a way to check the panel performance?</p> <p>1) Monitoring the scores for samples from different batches 2) Monitoring the scores for control samples 3) Monitoring the time used for product evaluation 4) I don't know</p>
K15	<p>Which one of these tasks must be completed individually by members of a sensory quality panel?</p> <p>1) Identification of reference standards for sensory descriptors 2) Selection of sensory descriptors for quality control purposes 3) Evaluation of product samples for quality control purposes 4) I don't know</p>

Identifier	Question
K16	A product sensory specification is...? 1) A list of ingredients that affect the sensory quality of the product 2) The description of the target sensory properties of the product 3) The description of the method used to evaluate the product 4) I don't know
K17	The decision to reject/accept a product for release to the market based on its sensory quality depends on ...? 1) The results of the most senior panelist 2) The results of the most experienced panelist 3) The results of all the panelists 4) I don't know
K18	In which order should product sensory attributes be evaluated during sensory quality control? 1) The order of sensory attributes should be varied from one sample to another 2) The order of sensory attributes should be the same from one sample to another 3) The order in which sensory attributes are evaluated does not matter 4) I don't know
K19	Is a paired comparison test a descriptive sensory method? 1) Yes 2) No 3) I don't know
K20	Which one of the following is suitable for testing whether two samples are different? 1) Triangle test 2) Quad test 3) Square test 4) I don't know
K21	Can a t-test be used to compare the sweetness ratings of two products? 1) Yes 2) No 3) I don't know
K22	Company Z's policy states that white bread that differs from the product specification ($p < 0.01$) should be rejected. The sensory quality of Sample X differs from the product specification ($p = 0.05$), should it be rejected? 1) Yes 2) No 3) I don't know
K23	Which of the following is the most suitable number of panelists for descriptive sensory evaluation? 1) 3 2) 5 3) 10 4) I don't know
K24	Which of the following tests would be suitable to determine the nature of differences between two brands of apple juice? 1) Duo- trio test 2) Paired preference test 3) Descriptive analysis 4) I don't know

Attitudes Section

Options: Strongly disagree to Strongly agree- 1 to 5, (R)- scores to be reversed

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|----|--|
| A1 | Sensory quality of products is important to consumers |
| A2 | Sensory quality control is not reliable (R) |
| A3 | Employees are responsible for maintaining consistent sensory quality of products |
| A4 | Sensory quality control is a waste of time (R) |
| A5 | Sensory quality control is important |
| A6 | Employees do not need training on the sensory quality of products (R) |
| A7 | My company maintains that consumer satisfaction depends on the sensory quality of products |
| A8 | My company provides the resources needed to make products of good sensory quality |

Identifier	Question
A9	My company maintains that sensory quality control hinders production (R)
A10	My company regards sensory evaluation training as unnecessary (R)
A11	My company is reluctant to change operations to improve product sensory quality (R)
A12	My company produces products of consistent sensory quality

Practices Section

Options (Scored 1 to 3 for worst to best practice)

P1	How often is sensory evaluation training carried out for company staff? <i>1. Never 2. Once a year 3. More than once a year</i>
P2	When is sensory quality testing carried out for your company's products? <i>1. Anytime 2. Based on requests 3. Based on planned schedule</i>
P3	How does your company define the target sensory quality of products for quality control purposes? <i>1. There is no defined standard/ specification 2. It is based on a memorized standard/ specification 3. The standard/specification is documented and readily available</i>
P4	Who manages sensory quality control at your company? <i>1. Company staff with no sensory training 2. Company staff with some sensory training 3. Company staff with good sensory training and experience</i>
P5	Who evaluates the products for sensory quality control? <i>1. Panelist with no sensory training 2. Panelist with some sensory training 3. Panelist with product specific sensory training</i>
P6	What materials/products are evaluated as part of sensory quality control in your company? (Please choose from the list below, you can choose more than one option) <i>1. Raw materials 2. In-process materials 3. Finished products</i>
P7	Where is product sensory quality testing carried out? <i>1. No specific area (Anywhere that is comfortable) 2. A Specified test area 3. Company's sensory laboratory</i>
P8	How are products of unsatisfactory sensory quality handled at your company? <i>1. No specific procedure 2. Based on a documented procedure 3. Based on a documented procedure with trend analysis</i>
P9	Does your company check product sensory quality before releasing products to the market? <i>1. No 2. Yes, sometimes 3. Yes, always</i>