

**Overview of strategies for reducing salt, sugar and fat in foods:
towards new indicators and protocols to assess saltiness and
sweetness of foods**

WP1 : ONIRIS Coordinator

One form per Work Package

Work package number ⁵³	WP1	Type of activity ⁵⁴	RTD
Work package title	Materials, Methods and Legislation requirements		
Start month	1		
End month	36		
Lead beneficiary number ⁵⁵	14		



THE CHALLENGE OF NUTRITION CLAIMS

NUTRITION CLAIMS

CONTENT BASED on 100 ml or on 100 g DM

“SUGAR”: All mono and disaccharides (all soluble sugars) + FOS

“SALT”: Na content

Directive 2000/13/EC

Regulation (EC) 1924/2006

(16) It is important that claims on foods can be understood by the consumer and it is appropriate to protect all consumers from misleading claims.

- Article 8 restricts salt claims to those listed in the Annex to the [Regulation](#) and relevant claims and conditions of use are as follows;

REDUCED [SODIUM/SALT]:

Where a **25% reduction** in the content of compared to a similar product

LOW SODIUM/SALT:

product contains no more than **0.12g** of sodium, or the equivalent value for salt **[0.3g] per 100g** or per 100ml.

VERY LOW SODIUM/SALT:

0.04g of sodium, or the equivalent value for **salt [0.1g] per 100g** or per 100ml.

SODIUM FREE or SALT FREE:

where the product contains no more than 0.005g of sodium, or the equivalent value for **salt [0.0125g], per 100g**.

NUTRITION CLAIMS : SALT

Directive 2000/13/EC

Regulation (EC) 1924/2006

(16) It is important that claims on foods can be understood by the consumer and it is appropriate to protect all consumers from misleading claims.

	"FREE"	"VERY LOW"	"LOW"	"REDUCED IN"
SALT	0.005g Na/100g	0.04 g Na/100g	0.12 g Na/100g	"-25% vs ref."
SUGAR	0.5g Sugar/ 100g	NOT DESCRIBED	5g Sugar/100g	"-30% vs ref."

	"FREE"	"LOW FAT"	"LOW SAT FAT"	"REDUCED IN"
FAT	0,5g/100g	3g/100g	1,5g/100g	"-30% vs ref."

NUTRITION CLAIMS : SALT

QUESTION; What is the similar product (control)

Article 9

Without prejudice to Directive 84/450/EEC, a comparison may only be made between foods of the same category, taking into consideration a range of foods of that category. The difference in the quantity of a nutrient and/or the energy value shall be stated and the comparison shall relate to the same quantity of food.

Comparative nutrition claims shall compare the composition of the food in question with a **range of foods of the same category**, which do not have a composition which allows them to bear a claim, including foods of other brands.

Directive 2000/13/EC

Regulation (EC) 1924/2006



NUTRITION CLAIMS : SALT

QUESTION; What is the similar product (control)

- Control values (ie salt content of a sausage) is different country by country.
- In PLEASURE, we have used the reference of the country of the industry partners
- Control values were based on known values of similar products

Recent affair in USA:

A consumer won a judgment against a food company

The consumer get a cancer; he said this was due to salt excess

He quoted the fact the a misleading statement indicated « reduced in salt »

Control value used by the company: based on average of the different brands producing similar values.

Court said that the control value must be based on the average tonnage of similar foods produced in USA, not on average of brands

PLEASURE 's INNOVATION : REPLACEMENT OF CLAIMS in % BY INDEXES

CLAIMS



INDEXES

REFERENCE PRODUCT

SALT « INDEX » : SALI = « 1 »

REDUCED IN SALT PRODUCT

SALT « INDEX » : SALI = « 0.75 »

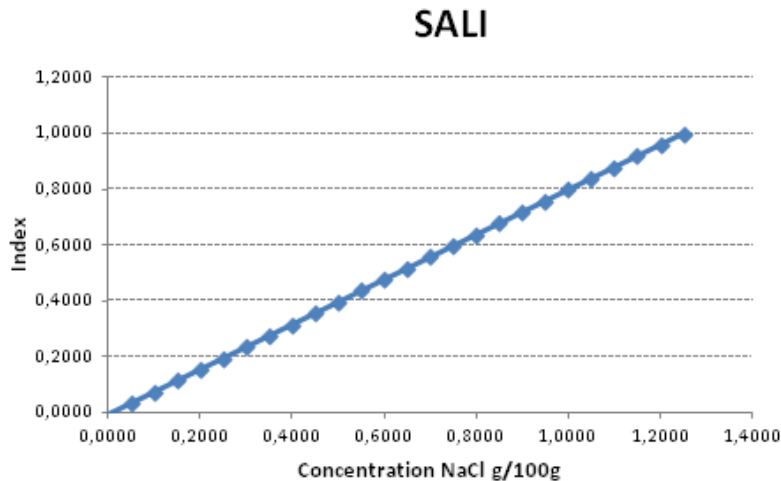
SODIUM FREE or SALT FREE:
where the product contains no more
than 0.005g of sodium, or the equivalent
value for **salt [0.0125g], per 100g**

SALT « INDEX » : SALI = « 0 »

PLEASURE 's INNOVATION : REPLACEMENT OF CLAIMS in % BY INDEXES

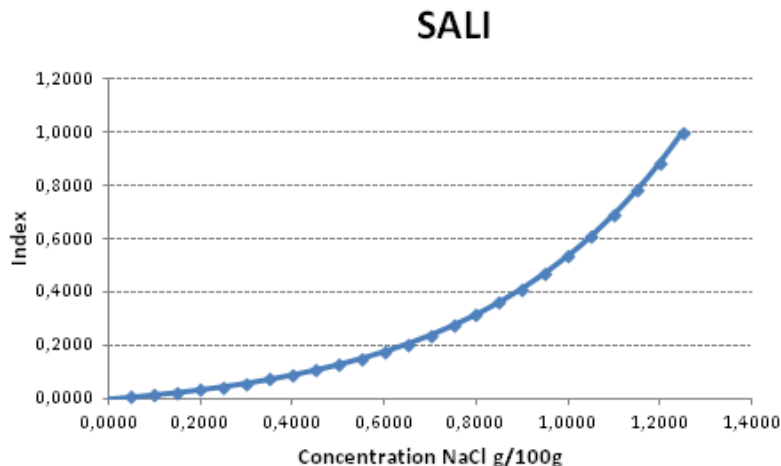
SALI index equation

X_{max} : maximal salt concentration, salt concentration of reference product.
 X_i : salt concentration in studied product.
 X_{min} : minimal salt concentration, free salt concentration.



LINEAR Approach

$$SALI = \frac{X_i - X_{min}}{X_{max} - X_{min}}$$

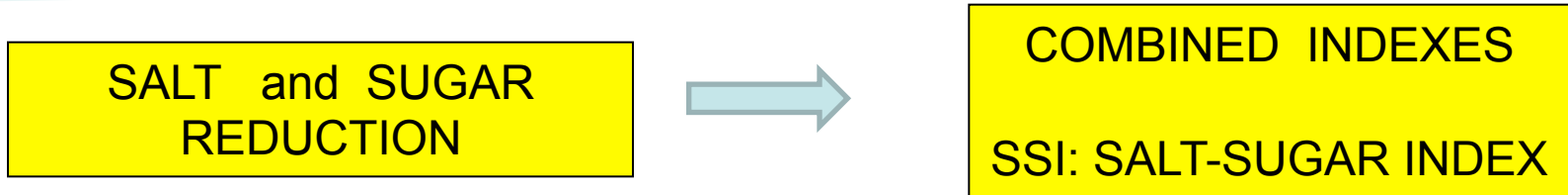


POWER LAW Approach

$$SALI = \frac{10^{X_i} - 10^{X_{min}}}{10^{X_{max}} - 10^{X_{min}}}$$

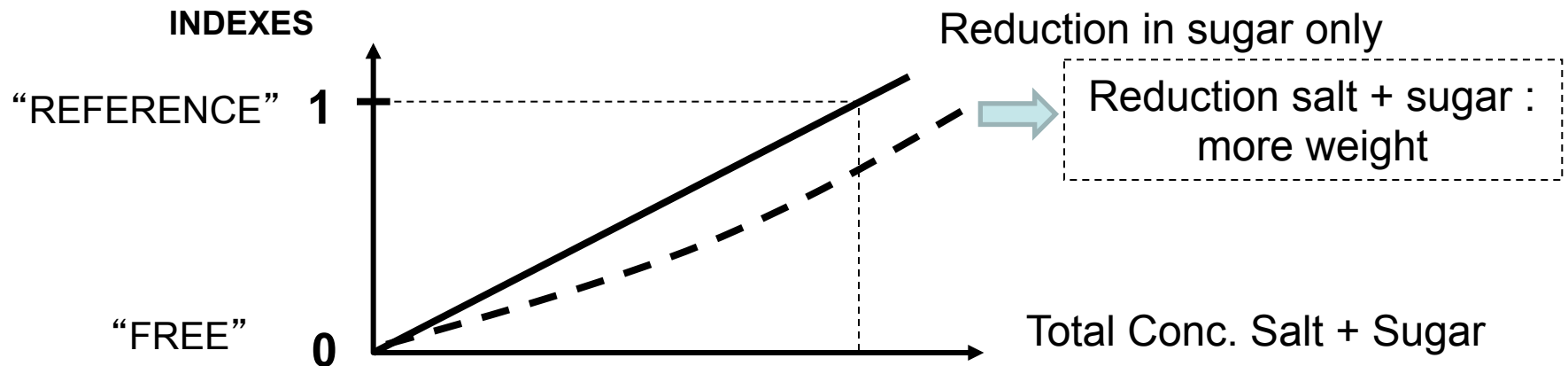
- ➔ Give more strength to reduction in high concentration zone
- ➔ Sensory perception is more sensitive in this zone ?
- ➔ More complex to use; less obvious for interpretation

PLEASURE 's INNOVATION : REPLACEMENT OF CLAIMS in % BY INDEXES



SSI Concept: mathematical model under discussion

- ➔ Should Accommodate the total concentration of salt and sugar
- ➔ Salt or sugar reduction alone should have lower mark than Salt + Sugar reduction
- ➔ Combined salt + sugar reduction should have a boosted mark



PLEASURE 's INNOVATION : REPLACEMENT OF CLAIMS in % BY INDEXES

THE CASE OF « FAT »; A COMPLEX MIX OF « ESSENTIAL » – « NON ESSENTIAL »
+ SPECIFIC NEEDS FOR SOME FAMILIES OF SATURATED FATS

Recommendation – France - 2010

ANC 2010	Apport énergétique (AE) *	2 000	kcal	TOTAL ENERGY	
	Lipides totaux	35 - 40	% AE	TOTAL LIPIDS	
FATTY ACIDS NON ESSENTIALS	Acides gras saturés				SFA
	C12:0 + C14:0 + C16:0	≤ 8	% AE		
	Acides gras non indispensables	AGS totaux	≤ 12	% AE	
	Acide gras monoinsaturés				MUFA
	C18:1	15 - 20	% AE		
	Acides gras polyinsaturés				PUFA
ESSENTIAL FATTY ACIDS	Acides gras indispensables	C18:2 n-6	4	% AE	
		C18:3 n-3	1	% AE	
		C22:6 n-3, DHA	250	mg	
FATTY ACIDS NON ESSENTIALS	Acides gras non indispensables	C20:5 n-3, EPA	250	mg	
		Autres acides gras	-		
* AE : énergie sans alcool					



PLEASURE 's INNOVATION : REPLACEMENT OF CLAIMS in % BY INDEXES

Recommendation – France - 2010

	MAN	WOMAN	
	Recommandations		
	Hommes	Femmes	% of Total Energy
AET (kcal/j)	2200-2700	1800-2200	TOTAL ENERGY
Protéines (% AET)	11-15		PROTEINS
Glucides (% AET)	50-55		CARBOHYDRATES
Lipides (% AET)	30-35		LIPIDS
AGS (% ALT)	25		SFA
AGMI (% ALT)	60		PUFA
AGPI (% ALT)	15		PUFA

CONCLUSION

PLEASURE 's INNOVATION :
REPLACEMENT OF CLAIMS in % BY INDEXES
NEW DATA and CONCEPTS UNDER PROGRESS
IMPLEMENTATION NEEDS THE ACCEPTANCE OF CONSUMERS:
VALIDATED DURING THE SURVEY (5 COUNTRIES)
CONCEPTS SHOULD BE PRESENTED IN PAPERS SOON & REPORTS

