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# Food labels as a source of data on the occurrence of flavourings

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# Aim and usefulness of the Food labelling

In the European Union, rules are put in place on the labelling of foodstuffs to enable European consumers to get comprehensive information on the contents and the composition of food products.

Labelling helps consumers to make an informed choice while purchasing their foodstuffs



Labelling is one of the instruments in the assessment of dietary exposure to chemical substances

The main piece of EU legislation regarding the labelling of foodstuffs is:

**Council Directive 2000/13/EC  
on labelling, presentation and  
advertising of foodstuffs to the  
final consumer**



This Directive is based upon the principle of functional labelling

Its aim is to ensure that the consumer gets all the essential information as regards the composition of the product, the manufacturer, methods of storage and preparation, etc.

# Food labelling definition



'labelling shall mean any words, particulars, trade marks, brand name, pictorial matter or symbol relating to a foodstuff and placed on any packaging, document, notice, label, ring or collar accompanying or referring to such foodstuff'

## Indication of the following particulars shall be compulsory on the labelling of foodstuffs:

- (1) the name under which the product is sold;
- (2) the list of ingredients;
- (3) the quantity of certain ingredients or categories of ingredients
- (4) the net quantity;
- (5) the date of minimum durability or, in the case of foodstuffs which, from the microbiological point of view, are highly perishable, the 'use by' date;
- (6) any special storage conditions or conditions of use;
- (7) the name or business name and address of the manufacturer or packager, or of a seller established within the Community.

## FOCUS ON THE LIST OF THE INGREDIENTS

The list of ingredients shall include all the ingredients of the foodstuff, in descending order of weight, as recorded at the time of their use in the manufacture of the foodstuff. It shall appear preceded by a suitable heading which includes the word 'ingredients'.



'Ingredient' shall mean any substance, including additives, used in the manufacture or preparation of a foodstuff and still present in the finished product, even if in altered form.

With the Directive 2003/89/EC that amended the Directive 2000/13/EC, the rules on the list of ingredients are changed

- ❖ It abolishes the "25% rule" which up to now meant that it was not obligatory to label the components of compound ingredients that make up less than 25% of the final food product

Where the compound ingredient makes up more than 2% of the final product it has to be indicated with the term "contains" followed by the name of the ingredient(s) concerned.

# EXAMPLE

## Crunchy breakfast cereal with milk chocolate

### INGREDIENTS:

Whole oat flakes 48%

sugar

vegetable oil

wheat flour

glucose-fructose syrup

milk chocolate bits 5%

caramelized almonds

rice flour

corn flakes 1,5%

defatted cocoa

salt

flavours

anticaking agent: calcium carbonate



sugar, milk powder, cocoa mass, cocoa butter, soy lecithin; flavour

almond bits 2,2% on the whole, sugar, glucose syrup, vegetal fats, flavours

## The new Directive also establishes

- a list of ingredients liable to cause allergies or intolerances
- alcoholic beverages will also have the obligation to mention allergens on their labels (sulphites)



The new labelling rules in particular aim to ensure that consumers suffering from food allergies or who wish to avoid eating certain ingredients for any other reason are informed.

# Dietary exposure assessment of flavouring substances.....

Food labelling can be useful to identify the presence of flavours through:

- ❖ The list of ingredients
- ❖ The name under which the product is sold



In the list of the ingredients the presence of the flavouring substance is indicated with the term "flavouring"

According to the Council Directive 88/388/EEC, flavouring substances are classified as:

**Natural:** obtained from plant or animal raw materials, by physical, microbiological or enzymatic processes. They can be either used in their natural state or processed for human consumption, but cannot contain any nature-identical or artificial flavouring substances.

**Nature-identical:** obtained by synthesis or isolated through chemical processes, which are chemically identical to flavouring substances naturally present in products intended for human consumption.

**Artificial:** not identified in a natural product intended for human consumption, whether or not the product is processed.

## EXAMPLE

A raspberry-flavoured milk drink could contain:

- o natural flavouring substances, whether derived from raspberry or not;
- o a nature-identical flavouring substance that has been synthesised, but is chemically identical to a substance found in nature, or
- o an artificial flavour, that has been synthesised and has not been identified in any natural product.

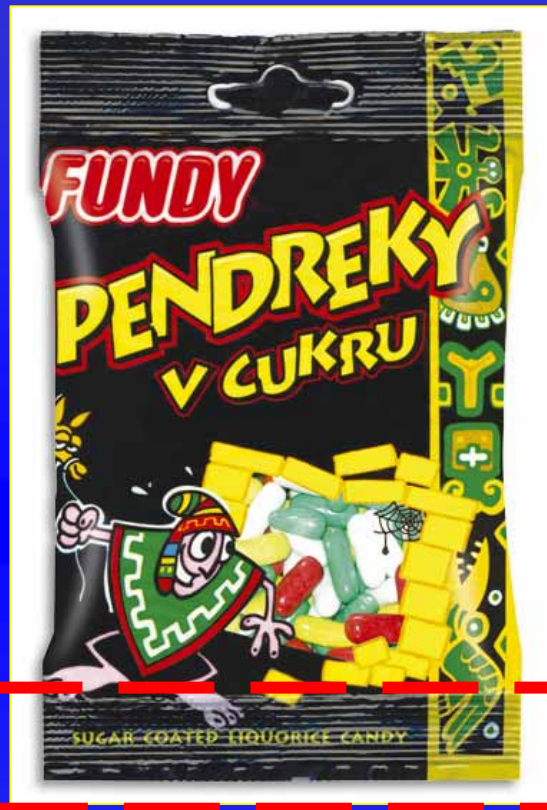
If a natural flavour is present, the label may list "natural flavouring" or specify the natural flavour used, such as "natural vanillin flavour"

If a nature identical or artificial flavour is present, the label will simply list "flavouring"

When a specific flavouring substance is known to provide a specific taste to the food as natural or added constituent, the description on the food label of the taste is useful to identify the presence of that substance



The word "liquorice" implies that the flavour 'glycyrrhizinic acid' is present. It is found naturally in herbal teas and liquorice confectionery.



Moreover, the term 'liquorice' in the name under which the product is sold makes it compulsory to report the percentage of liquorice in the list of the ingredients.

This information makes it easier to assess the concentration of 'glycyrrhizinic acid' in the product



The flavour 'raspberry ketone' is naturally present in raspberry, cranberry, mulberry, loganberry fruit and is also often added to processed foods in which mixed berries or strawberries are present and it is responsible of the specific taste of raspberry.



The main source of the flavour 'coumarin' in the diet is cinnamon

Also in these two examples the name under which the product is sold is sufficient to imply the presence of the flavour

On the other hand, also the indication of the absence of one particular constituent as 'caffeine' is a useful information in the assessment of dietary exposure to flavouring substances. It is the case of caffeine free cola

In some cases, the product may bear the mention "with no added flavours"



# FOOD SURVEY

Food consumption data collected at brand level



Brand databank



Presence of flavouring from the name of the product and ingredients list

X

Flavour concentration levels

	Orario e Luogo (①)	ALIMENTI Scrivi un solo alimento per riquadro e, in caso di ricetta, elenca i vari ingredienti (②)	MARCA	QUANTITA' (in cifre) (③)	Unità di Misura (④)	CONDIMENTI aggiunti da te (garnigiano, olio, ketchup, zucchero, dolcificante, etc...)		QUANTITA' (in cifre) (③)	Unità di Misura (④)
						MARCA condimenti			
CENA	1 21.00 RISTORANTE	PASTA AL FORNO CON RAGU', MOZZARELLA FUNGHI, PARMIGIANO		1	PM				
	2 ~	FRITTURA MISTA DI PESCE (SOLO GAMBERI E CALAMARI)		1	PP	LIMONE		1	SP
	3 ~	PATATINE FRITTE		1	PP	KETCHUP	KRAFT	1	BU
	4 ~	GRISSINI	SAIWA	4	UN				
	5 ~	PEPSI BOOM		3	BG				
	6 ~	VINO ROSSO DA TAVOLA	BRACHETTO	1/2	BP				
	7 ~	PANE (ROSETTA)		1/4	UN				
	8 ~	TORTA DELLA NONNA CON CREMA E PINOLI		1/2	FM				

① specifica il luogo dove hai consumato ogni singolo alimento (es: casa, bar, a casa di amici, scuola, pizzeria, ristorante, pizzeria al taglio, ecc...)

③ Scrivi la quantità di unità consumate (es. numero di cucchiaini di zucchero, numero di bicchieri di bevande, numero di uova, numero di porzioni, ecc.) o la quantità in grammi solo se ne conosci il peso esatto.

② Ricordati di scrivere anche le bevande, il pane e la frutta.

④ Scrivi l'unità di misura usando i codici della tabella riportata nell'ultima pagina del diario (es. UN se la quantità è in numero di pezzi consumati, PM se è una porzione media, ecc...).

- Analytical determination
- Upper Use Levels reported by industry
- Maximum Permitted Levels according to legislation



Dietary exposure assessment to flavouring substances



THANKS FOR YOUR ATTENTION!!



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