

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
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Agenda Item 11

CX/NFSDU 01/11

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON NUTRITION AND FOODS FOR SPECIAL DIETARY USES

Twenty-third Session  
Berlin, Germany, 26 – 30 November 2001

#### DISCUSSION PAPER ON SPORTS AND ENERGY DRINKS

Prepared by the Codex Secretariat

#### BACKGROUND

##### Committee on Food Labelling

The Committee on Food Labelling considered the question of sports and energy drinks on the basis of discussion papers proposed by South Africa at its 26<sup>th</sup> and 27<sup>th</sup> sessions (1998 and 1999), and discussed the aspects related to the claims put forward for such products, which might be misleading for consumers. Although initially it was proposed to develop a standard, the Committee recognized that the main issues to be addressed were the claims made for these products and their possible inclusion in foods for special dietary uses (ALINORM 99/22A, paras. 67-74). The Committee came to the following conclusions:

*“The Committee agreed that the definition of “alcohol free” and “isotonic/hypertonic/hypotonic” should not be retained; consequently the essential issues to be addressed were the definition of sports drinks as foods for special dietary uses and the claim for high energy. The Committee agreed that these matters should be forwarded to the CCNFSDU for consideration and that at this stage there was no need for the CCFL to consider this issue further. The Committee might however consider the necessity for further work falling within its competence, such as the amendment of the General Guidelines on Claims or the Guidelines for Use of Nutrition Claims, when the advice of the CCNFSDU became available.*

*The Committee agreed to discontinue consideration of the Proposed Draft Recommendations for the time being and to return to this matter after the CCNFSDU had provided advice on whether “sports drinks” should be considered as foods for special dietary uses and on the conditions for the claim for “high energy”.*”

##### Committee on Nutrition and Foods for Special Dietary Uses

The Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU) considered sports and energy drinks at the request of the CCFL at its 22<sup>nd</sup> Session, 19-23 June 2000.

The Delegation of Denmark, supported by some delegations, expressed the view that energy drinks were soft drinks and did not require a specific classification. Other delegations supported further definition of the claim for “high energy” and proposed to ask the Committee on Food Labelling to add this claim to the Guidelines for Use of Nutrition Claims, since it included only a reference to “low energy”. The Observer from EC stated that products marketed for persons making intense muscular efforts (sports foods) and presented as satisfying special nutritional requirements of these persons, should be considered as foods for special dietary uses. So-called energy drinks intended for the population at large should be considered as ordinary foodstuffs.

The Delegation of South Africa pointed out that the main problem with this type of product related to unsubstantiated claims; in particular reference was made to “energy” drinks which had no high energy content but contained additional substances like caffeine.

The Delegation of Sweden expressed its concern with the definition of such a claim, since a distinction should be made between ordinary foods and foods for special dietary uses, including those for special medical purposes.

The Observer from the EC informed the Committee that the Scientific Committee for Foods was about to adopt an opinion on food intended for persons making intense muscular effort (sport foods) and that considered as foods for special dietary uses.

The Committee, recognizing that no conclusion could be reached at this stage, agreed that a Circular Letter should ask for comments on 1) sports foods and drinks as foods for special dietary uses and 2) the claim for “high energy”, as well as the distinction between “energy drinks” and “sports drinks” in order to discuss this question further at the next session and decide how to proceed further.

The comments of governments and international organizations submitted in response to CL 2000/22-NFSDU are presented at the end of the document (Australia, Cuba, Malaysia, New Zealand, South Africa, Spain and International Special Dietary Foods Industries-ISDI).

## **Main issues for consideration by the Committee**

### ***Current status of claims***

The *Guidelines for Use of Nutrition Claims* include nutrient content claims for “low energy” (solids and liquids) and “energy free” (liquids). At the time when the Guidelines were developed, no proposal was made for a “high energy” claim but that could be added to the Table of Conditions without requiring a change to the text of the Guidelines. The Committee may therefore decide to prepare an amendment to the Table to define a claim for “high energy”, as it is responsible for the definition of conditions for claims, while the Committee on Food Labelling is responsible for the provisions concerning claims in the text.

However, the current labelling texts include several provisions concerning nutrition labelling and claims that can be applied to “sports and energy drinks”, and prevent the use of misleading information which would confuse consumers. In the framework of the *Guidelines for Use of Nutrition Claims*, a comparative claim on energy is possible as in the case of other nutrients. As specified under Section 6.3 *The comparison should be based on a relative difference of at least 25% in the energy value or nutrient content*. It is therefore possible to use claims for “increased” energy, as compared with similar foods or drinks, in conformity with the Guidelines.

Claims concerning other nutrients are also allowed and the amended Guidelines now include specific provisions to describe the claims for “high” and “source” of vitamins and minerals, and protein, and these can be applied to “sports and energy drinks”. It was noted in the comments received that some of these products are presented with a high content in vitamins and minerals or protein, and in this case adequate labelling should be provided.

In addition, any food for which a nutrition claim is made should include a nutrient declaration, in conformity with the *Guidelines on Nutrition Labelling* (Section 3.1 Application of Nutrient Declaration). This is also the approach reflected in national legislation in many countries. Where national regulations require mandatory nutrition labelling, nutrient contents would have to be declared for sports and energy drinks as for any other food. Although there are no specific provisions for these products in Codex, it appears from the

above examples that several requirements on nutrition labelling and claims may be used by governments as a reference in international trade and as a basis for national legislation.

A specific problem of “sport and energy drinks” is that the claims put forward may not correspond to the accepted meaning of energy from the nutritional point of view, as described in the *Guidelines on Nutrition Labelling* (section 3.3.1 Calculation of energy). For example the term “energy” used in the name or description of the product refers to the effect of certain of pharmacologically active substances, not to the calories (joules) provided by nutrients. This may create confusion for consumers.

The *General Guidelines on Claims*, based on the principle that no unsubstantiated claims should be made, prohibits all declarations which might be made without adequate justification, including nutrition and health claims. If foods and drinks are described as “high energy” or “energy” products without any definition of the nutrient content, this would be covered by the general provisions on claims. In addition, “Meaningless claims including incomplete comparatives and superlatives” are specifically listed as “Potentially Misleading Claims” in the Guidelines (section 4.1). That would apply to superlatives concerning energy or other nutritional characteristics, when they are used in the description of the food without appropriate justification.

As regards the question of claims, the Committee is invited to consider the need to establish a condition for “high energy” in the *Guidelines for Use of Nutrition Claims*, as already proposed in the Committee on Food Labelling, or any other relevant description relating to the use of the term “energy”, especially in the name of the food.

If the claim refers to the high expenditure of energy over a short(er) time, the claim “high power” could be considered.

#### ***Alcohol-free***

As regards the reference to a claim for “alcohol free”, the Committee on Food Labelling agreed that this definition should not be retained, as indicated above. This is also mentioned in the comments of Malaysia and it does not seem to be actually used as a claim. Should a standard for sports drinks be developed in the future, this question might be considered in relation to the composition requirements.

#### ***Sports drinks as foods for special dietary uses***

In the discussion held in the last session of the Committee, some countries indicated that “sports drinks” were defined by national regulations as foods for special dietary uses and were the subject of specific standards. The comments received after the session provided additional clarification on how these products were regulated at the national level and presented in the market. However, this is not the case of “energy drinks” which are not so clearly defined; as indicated above, the main question in this area relates to the claim, not to composition requirements.

The Committee will need to discuss the need for a standard or specific provisions on sports drinks as foods for special dietary uses, in view of the comments received. It was noted in the comments of Australia that the current Codex definition in the *General Standard for the Labelling of and Claims for Prepackaged Foods for Special Dietary Uses* would not cover this type of product and might need to be revised. The definitions of the products covered and the terminology used will need to be clarified and the description of the products covered, nutritional composition, etc. will require careful consideration, taking into account current regulations and practices in member countries.

#### ***Pharmacological substances***

One of the concerns put forward in the initial discussion on sports and energy drinks was the level of pharmacologically active substances in these products from a public health point of view, in addition to the misleading claims. The risks associated with high levels of caffeine appeared to be the most common problem referred to but many other substances are used, such as taurine, glucuronolactone, inositol, guarana extract, as mentioned in the comments received.

Whether this type of products should be considered by the Committee will require further discussion, and there should be a clear distinction between foods with “high energy” or for special purposes and those with caffeine or other “stimulating” substances. The establishment of maximum levels for these substances might be considered in view of public health concerns, and this would be a relatively new area of work. In the framework of Codex, maximum levels are currently established for additives, contaminants and residues, not for pharmacological substances. However, it is within the mandate of Codex to address potential food safety

problems, and in the present case, “sports and energy drinks” are sold as common foods, or dietetic foods. They are not sold or regulated as drugs, but they contain substances which may be classified either as drugs or as additives.

At this stage, the Committee may wish to address first the issue of claims and the nutritional aspects of sports drinks, and consider pharmacologically active products at a later date. However, if the Committee identifies a need for scientific risk assessment concerning certain substances used in “energy/sports drinks”, with a view to establishing maximum levels, FAO and WHO would consider how to address this issue in order to provide scientific advice as required, with the understanding that it might be a long-term process.

## **CONCLUSION**

The main questions for consideration by the Committee are the definition of a specific claim for “high energy” and the misleading use of the term “energy” or alternatively reference to power (joules/sec); the need for specific provisions for “sports foods/drinks” as foods for special dietary uses; and the levels of pharmacologically active substances.

In view of the issues identified in earlier discussions and of the comments received, the Committee is invited to consider the following proposals for further work:

- to define a suitable claim in the Guidelines for Use of Nutrition Claims (Table of Conditions), and recommendations for the use of the term “energy” or “power”;
- to develop specific provisions for “sports drinks/foods” as foods for special dietary uses, and to clarify the relevant definitions;
- to consider whether there is a need to establish maximum levels for pharmacologically active substances in “sports and energy (power) drinks”, and to require scientific advice from FAO and WHO for that purpose

## COMMENTS SUBMITTED IN REPLY TO CL 2000/22-NFSDU

## AUSTRALIA

*Codex Definitions<sup>1</sup>*

**Special Purpose Foods** - Foods that have been designed to perform a specific function, such as to replace a meal which necessitates a content of essential nutrients which cannot be achieved except by addition of one or more of these nutrients. These foods include but are not limited to foods for special dietary use.

**Foods for Special Dietary Uses** - Those foods which are specially processed or formulated to satisfy particular dietary requirements which exist because of a particular physical or physiological condition and/or specific diseases or disorders and which are presented as such (includes foods for infants and young children). The composition of these foodstuffs must differ significantly from the composition of ordinary foods of comparable nature, if such ordinary foods exist.

Australian context

Australia has proposed its own definition of Special Purpose Foods, based on the Codex definition of Foods For Special Dietary Uses, however the Australian definition does not refer to diseases or disorders, and the term physiological need has replaced physiological condition ie *foods that are specially processed or formulated to satisfy particular dietary requirements that exist because of a particular physical or physiological need*.

Australia currently defines sports foods and drinks as *a food or mixture of foods specifically formulated to assist sports people in achieving specific nutritional or performance goals*.

Specific regulations for so-called 'energy drinks' are currently being developed. Because these drinks are promoted on the basis of their pharmacological stimulation rather than energy-yielding ingredients, Australia has proposed the regulatory category: *formulated caffeinated beverages*.

Because Australia has adopted different category definitions to Codex, 'energy drinks' are considered to be neither general purpose nor special purpose foods but as a third (as yet) undefined regulatory category of functional or dietary supplement-type products. Australia notes that internationally, these latter terms are not consistently defined.

Comment**Sports drinks**

Australia agrees that sports drinks, characterised either as water-based drinks or high protein or energy formulas, conform to the Codex definition of Special Purpose Foods in that they are designed to perform a specific function.

Sports drinks could also conform to the Codex definition of Foods For Special Dietary Uses depending on whether sports performance is considered to be a particular physical or physiological condition. From the context, and the year in which the definition was formulated (1985) however, Australia's interpretation is that the intended definition relates to foods modified from ordinary foods for persons who have physical limitations, physiological conditions such as pregnancy, lactation, or physiological conditions related to adverse health, rather than an enhanced physiological requirement to achieve physical performance.

Australia is therefore persuaded that sports drinks exist as a category within Special Purpose Foods but not in conformance with the current Codex definition of Foods For Special Dietary Uses. One option to clarify this ambiguous situation might be to expand the Codex definition of Foods For Special Dietary Uses to deliberately include foods for sports performance.

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<sup>1</sup> General Standard for the labelling of and claims for prepackaged foods for special dietary uses, CODEX STAN 146-1985.

## Energy drinks

'Energy drinks' could also be classified within the Codex category of Special Purpose Foods because they are designed to perform a specific function. Australia considers 'energy drinks' not to be Foods for Special Dietary Uses, but rather recreational beverages presented to achieve a pharmacological rather than simple physiological effect. Australia is currently developing a third regulatory category for these products, separate from general purpose and (Australia's version of) special purpose foods.

## High energy claim

In its development of draft regulations for 'energy drinks', Australia considered whether a minimum energy level should be set to support the label use of 'energy drink'. This was not agreed because the energy content of such drinks is comparable to that of regular soft drinks. Permitting 'energy drinks' to claim 'high energy' would imply a greater effectiveness of their energy content beyond that provided by similar regular beverages such as soft drinks. Given the comparable energy concentrations of the two types of drinks, this is not appropriate.

Australia also notes that artificially-sweetened 'energy drinks' are available which could not comply with a high energy claim. The availability of these products also places in question the appropriateness of the term 'energy drinks' when the energy stimulus is not totally provided by the traditional calorie/kilojoule content.

Setting criteria for high energy claims would be appropriate for certain foods including medical foods, but such eligible foods should have a higher minimum energy density than regular foods. 'Energy drinks' would not be likely to qualify for high energy claims if such an approach was adopted. Australia considers high energy claims are neither necessary nor appropriate for 'energy drinks'.

## CUBA

1) Sports foods and drinks as foods for special dietary uses

We agree that sports foods and drinks should be considered as foods for special dietary uses

2) "High energy" claim as a distinction between energy drinks and sports drinks: "Energy drinks" intended for the general population should be considered as common foods.

We also think that the claim for "high energy" should be clarified and added to the list of nutrition claims

## MALAYSIA

Malaysia proposes this paper focuses only on sport/electrolyte drinks and not to include energy drinks. The amount of energy in this drink is only 190 kJ or 45 kcal per 100 ml or 144 kcal per can of 325 ml. A can of soft drink could contain up to this amount of energy. It may also contain other "functional" ingredients which are of ill-defined functions to the athlete (eg taurine, glucuronolactone, caffeine, inositol and vitamins and minerals). We therefore propose that this guideline be confined to electrolyte drinks which are better defined.

On clause 1.1, definitions, we further propose to amend the definition of this sport or electrolyte drink to: a beverage which, due to its composition (particularly the added electrolytes), helps to compensate for water and mineral losses of persons engaged in intensive physical exercise such as athletes.

On clause 2.1, we do not think it is necessary or appropriate to have this claim on "alcohol free". It is also not very clear where this wordings are to appear on the label. As is commonly done for soft drinks, there should be a statement or requirement in sports or electrolyte drinks that these products should not contain any alcohol.

If the Committee decides to proceed with the deliberation of a standard for energy drinks, the carbohydrate source should be stipulated as "glucose" and the use of caffeine in this drink should be discouraged.

## NEW ZEALAND

In New Zealand, sports foods are already regulated as either special purpose foods or as dietary supplements. Energy drinks are regulated as dietary supplements, under food legislation.

Energy drinks are being reviewed as part of the development of joint food regulations with Australia as “formulated caffeinated beverages”. It is our view that “energy drinks” are differentiated from other drinks by their ability to provide a “boost” which is due mostly to the caffeine content of the drink rather a pure energy content. The claims made on energy drinks refer more to a “pick me up” or an “energy boost “ rather than a “high energy”, and as such, “high energy” does not need to be defined for these products. Many of the energy drinks have the same energy content as soft drinks. Such drinks, however, should have a minimum energy contribution so as not to mislead the general public.

New Zealand agrees that energy drinks are not foods for special dietary purposes, but does not support their inclusion in the general provisions for foods. These are products that are part of a new generation of functional products and their role in the food supply cannot be ignored. These are some of the reasons New Zealand supports a revision of the general principles for the addition of vitamins and minerals to foods.

New Zealand does not believe that sports foods and energy drinks are the same product, and believes that sports foods do have a special purpose, although though it is also a functional purpose rather than a dietary need. New Zealand recommends that the category of foods for special dietary uses needs to be differentiated from the growing area of foods that use the addition of nutrients for particular functions and purposes but are not really responding to special dietary needs or requirements of a population and are quite different from the foods classically defined as special purpose - such as infant formula and meal replacements.

## **SOUTH AFRICA**

Claim for “high energy” in the table TABLE B: CONDITIONS FOR NUTRIENT CONTENTS

COMPONENT CLAIM		CONDITIONS
		NOT LESS THAN
Energy	Source	80 kJ per 100 ml
	High	250 kJ per 100 ml

## **SPAIN**

### 1. Sports drinks

The Spanish standard, corresponding to the European standard (Directive 89/389/EEC) provides that “foods for intensive muscular effort, especially for athletes”, will be subject to specific legislation, to establish their characteristics and composition. So far such a specific standard has not been developed.

Foods that are marketed or intended to be marketed as “sports foods”, including “sports drinks” may be included in foods for special dietary uses, if their composition corresponds to a specific nutritional purpose. Our view is that it would be appropriate to establish a Codex standard/recommendations or guidelines on the composition of such products.

### 2. Energy drinks

Various products are marketed under the name “energy drinks”, the composition of which, with some differences, is basically the following:

- water, sugars (saccharose, fructose and/or dextrinomaltose) and artificial sweeteners
- caffeine (as added caffeine or originating from substances which contain it (guarana, cola, etc.)
- vitamins and minerals
- nitrogenous substances (carnitine, taurine, amino acids)
- glucuronolactone

Their main characteristic is the high content of caffeine (320 mg/l). This is much higher than the maximum content of 150 mg/l in cola soft drinks (alcohol free).

In Spain there are no specific regulations and drinks with a high content of caffeine and other substances cannot be described as “soft drinks”.

Our view is that there are different aspects to take into account:

a) the name “energy drinks”

We understand that it is not correct as this name creates confusion for consumers, as energy value is not significant in its composition because the sugar content is low.

It would be more appropriate to use the name “stimulating drinks”, due to the effects that they produce

b) Composition

Caffeine: its contents is high. In this respect it should be mentioned that manufacturers compare its level to the amount contained in a cup of coffee. However the following should be taken into account:

- the caffeine content in a cup of coffee may vary greatly according to the type of coffee (raw material) and the preparation
- coffee is not generally consumer by children

c) the Scientific Committee for Food has provided an advice in relation to these products, and although it appears that there are not enough data on the impact of their consumption on the population, it should be noted that:

- if adults replaced coffee consumption with this type of drinks, this would not create serious problems
- the consumption of such products by children may cause changes in behaviour (irritability, sleep disruption)
- pregnant women would be another vulnerable group. It is recommended that they should reduce consumption of caffeine from any source (coffee, tea, drinks, etc..)

3. Vitamins and Minerals

These drinks only contain some vitamins of group B (B1, B2 and B6) and vitamin C, and minerals (sodium, potassium, magnesium).

The impact of consumption of such drinks should be evaluated, in relation to the intake of micronutrients and the RDA.

4. Carnitine and Taurine

Although these substances may be found in foods in their natural form, their presence in these products has no nutritional justification, as they are not essential. The claimed effect on the metabolism of lipids as they facilitate the absorption of fatty acids, does not correspond to extra energy, since that energy is not due to the drink itself but to the effect of organic stimulation. Consequently the use of the term “energy” in the name of the food is not justified.

5. Purpose of consumption

When advertising these products, the manufacturers put forward the following effects :

- stimulation: it creates in the individuals who consume them a state of euphoria, which allows them to stay hyperactive for many hours on end
- counteracting in a certain measure the effect of the intake of alcoholic drinks, due to a stimulation of the metabolism

6. Conclusions

The use of these products has no nutritional justification.

It has no justification to reconstitute the loss of electrolytes, as might be the case for athletes, and in addition the presence of caffeine might cause a “drugs” effect, as caffeine is one of the substances that, according to its concentration, may be considered as a stimulating drug.

Their stimulating effects may produce changes in the behaviour in the population, which would result in difficult situations from the social point of view.

In view of all the above, and although there are no available data the impact of their consumption on public health should be taken into account.



**ISDI (INTERNATIONAL SPECIAL DIETARY FOODS INDUSTRIES)****Summary:**

- ✦ ISDI welcomes the initiative of the Codex Committee on Food Labelling to refer matters on sports and energy drinks to the NFSDU Codex
- ✦ ISDI is of the opinion that sports and energy drinks should be included in foods for special dietary uses
- ✦ Sports and energy drinks should be clearly distinguishable from drinks intended for a whole population and should meet the nutritional requirements of sportsmen.
- ✦ Energy drinks should be considered as a subcategory of sports drinks and should not be confused with stimulant drinks.

ISDI welcomes the initiative of the Codex Committee on Food Labelling to refer matters on sports and energy drinks to the NFSDU Codex. ISDI is of the opinion that sports and energy drinks should be included in foods for special dietary uses.

Sports and energy drinks clearly meet this definition as sportsmen are under particular physical condition and those foods should be specifically formulated to meet their nutritional requirements. This is supported by the recent report of the European Scientific Committee on Foods on “composition and specification of food intended to meet the expenditure of intense muscular effort, especially for sportsmen” (SCF/CS/NUT/SPORT/5 Final, 11 July 2000). This report mentioned the following:

*“The Committee reviewed the scientific literature in the area of sport nutrition as well as a number of consensus reports that were prepared by various sport organisations and came to the conclusion that the concept of a well-balanced diet is the basic nutritional requirement for athletes. Nevertheless, taking the aspects of intense muscular exercise in consideration such as intensity, duration and frequency as well as specific constraints like time and convenience, individuals can benefit from particular foods or food ingredients beyond the recommended dietary guidelines for the general population.*

*As the increased energy need of these individuals is the most apparent difference, the food intake is higher. This can lead to differences in food choice and eating pattern as well as gastro-intestinal distress. Specially adapted nutritious foods or fluids may help to solve specific problems so that an optimal nutritional balance can be reached. These beneficial effects are not only limited to athletes who are taking regular intense prolonged muscular exercise, but are also intended for other target groups, for example for occupational jobs with hard physical work or with extreme environmental conditions, as well as for individuals with irregular physical high intensity or fatiguing leisure time activities. In relation to these general considerations, four food categories have been identified, reviewed and where applicable, essential requirements were formulated.”.*

ISDI would like to add some comments on the category of energy drinks. This category is described in the European report and should be considered as carbohydrate-rich energy products. This category should be clearly distinguished from the stimulant drinks enriched with specific substances such as caffeine, guarana etc. We interpret energy drinks as products which provide energy sources. The category of energy drinks is a subcategory of sport drinks.

ISDI is of the opinion that the claim “high energy” would too difficult to define for all foodstuffs and an agreement would not be possible to reach.

ISDI would like to underline the importance of the inclusion of sports and energy drinks in dietetic foods to avoid confusion with certain soft drinks which may be claimed as being suitable for sportsmen. Sports and energy drinks should be clearly distinguishable from drinks intended for a whole population and should meet the nutritional requirements of sportsmen. In that view ISDI suggests that the Committee works on the establishment of a definition of sports which permit a clear distinction with general foodstuffs and avoid misleading claims.