

codex alimentarius commission

FOOD AND AGRICULTURE
ORGANIZATION
OF THE UNITED NATIONS

WORLD HEALTH
ORGANIZATION

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ALINORM 97/20

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

**Twenty-second Session
Geneva, 23 - 28 June 1997**

REPORT OF THE FIFTH SESSION OF THE CODEX COMMITTEE ON NATURAL MINERAL WATERS

**Thun, Switzerland
3 - 5 October 1996**

Note: This report incorporates Codex Circular Letter CL 1996/34-NMW.

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CX 5/40.2

CL 1996/34 - NMW
October 1996

TO: - Codex Contact Points
 - Participants at the Fifth Session of the Codex Committee on Natural Mineral Waters
 - Interested International Organizations

FROM: Chief, Joint FAO/WHO Food Standards Programme
 FAO, Via delle Terme di Caracalla, 00100 Italy

SUBJECT: **DISTRIBUTION OF THE REPORT OF THE FIFTH SESSION OF THE CODEX
 COMMITTEE ON NATURAL MINERAL WATERS (ALINORM 97/20)**

The report of the Fifth Session of the Codex Committee on Natural Mineral Waters (CCNMW) is attached. It will be considered by the Twenty-second Session of the Codex Alimentarius Commission to be held in Geneva from 23 - 28 June 1997.

MATTERS FOR ADOPTION BY THE 22ND SESSION OF THE CODEX ALIMENTARIUS COMMISSION

- 1. Draft Revised Standard for Natural Mineral Waters at Step 8** (ALINORM 97/20, paras. 3-59 and Appendix II)

Governments wishing to propose amendments or to comment on the above standard should do so in writing in conformity with the Guide to the Consideration of Standards at Step 8 of the Procedure for the Elaboration of Codex Standards Including Consideration of Any Statements Relating to Economic Impact (*Codex Alimentarius Procedural Manual*, Ninth Edition, pp. 33-35) to the Chief, Joint FAO/WHO Food Standards Programme, FAO, Via delle Terme di Caracalla, 00100 Rome, Italy, **not later than 31 March 1997**.

SUMMARY AND CONCLUSIONS

The Fifth Session of the Codex Committee on Natural Mineral Waters reached the following conclusions:

MATTERS FOR CONSIDERATION BY THE COMMISSION

The Committee recommended to the Commission:

- to adopt at Step 8 the Draft Revised Standard for Natural Mineral Waters as a Codex worldwide standard (paras. 10-59; Appendix II); and
- to initiate the development of a general standard applicable to bottled/package waters other than natural mineral waters in view of the importance of these products in international trade (paras. 4-8, 60).

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REPORT OF THE FIFTH SESSION OF THE CODEX COMMITTEE ON NATURAL MINERAL WATERS

OPENING OF THE SESSION (Agenda Item 1)

1. The Codex Committee on Natural Mineral Waters held its Fifth Session in Thun, Switzerland, from 3 to 5 October, at the kind invitation of the Government of Switzerland. The meeting was opened and chaired by Mr. Pierre Rossier, Chairman of the Swiss National Committee of the Codex Alimentarius. The Session was attended by delegates and observers from 28 Member countries and 5 international organizations. The list of participants and members of the Secretariat is attached to this Report as Appendix I.

ADOPTION OF THE AGENDA (Agenda Item 2)

2. The Committee **adopted** the Provisional Agenda as presented in the document, CX/NMW 96/1.

CONSIDERATION OF DRAFT REVISED STANDARD FOR NATURAL MINERAL WATERS (WORLDWIDE STANDARD) AT STEP 7¹ (Agenda Item 3)

3. The Committee recalled that following the decision of the 19th Session of the Codex Alimentarius Commission concerning the conversion of regional standards into worldwide standards, the European Regional Standard for Natural Mineral Waters was circulated for comments at Step 3². In the light of the comments received a number of amendments were incorporated in the text, which was adopted at Step 5 by the 20th Session of the Commission³ and circulated at Step 6 for government comments⁴.

4. The Committee had an extensive exchange of views on the conversion of the standard in order to ensure its applicability for international trade. The Delegation of the United States emphasized that the current draft was too limited in its scope as a large number of bottled water products were currently traded and it was necessary to establish a general standard which would encompass all types of bottled water including natural mineral waters. The existence of an international standard only for natural mineral waters as currently defined might create some confusion, especially as the current draft was too restrictive and a number of issues remained to be addressed, such as the transport and disinfection of the waters. A number of delegations supported this view and stressed that the current draft was essentially adapted to the conditions prevailing in Europe whereas the Commission had requested the Committee to take into account the views of countries not previously involved in the elaboration of the Regional Standard.

5. Many delegations and the Observer from the EC, however, pointed out that the mandate given to the Committee by the Commission was very clear and concerned only natural mineral waters as well as the name and the terms of reference of the Committee. The extension of the scope of the standard had not been raised at the Commission when the draft was adopted at Step 5. The responsibility of the

¹ CL 1996/3-NMW, CX/NMW 96/2 (comments from Cuba, Czech Republic, Hungary, Japan, Norway, Poland, Switzerland, UK, EC, GISEM and WHO), CX/NMW 96/2-Add. 1 (CRD 1; comments from Australia, Canada, Italy, Malaysia, Peru, Tunisia, USA and Uruguay), CX/NMW 96/2-Add. 2 (CRD 2; methods of analysis), CX/NMW 96/2-Add. 3 (CRD 3; comments from Kenya), CX/NMW 96/2-Add. 3 (CRD 4; comments from Argentina), CX/NMW 96/2-Add. 5 (CRD 5; comments from India and Viet Nam).

² CL 1993/4-NMW.

³ ALINORM 93/40, paras. 398 - 401.

⁴ CL 1996/3-NMW.

Committee was to proceed with the conversion of the regional standard to ensure its applicability for international trade purposes and any deviation from this mandate would require approval by the Commission itself.

6. Some delegations pointed out that in addition to the existing Code of Hygienic Practice applicable to natural mineral waters⁵, the Commission had approved the development of a Code of Hygienic Practice for Bottled Waters Excluding Natural Mineral Waters, under the responsibility of the Committee on Food Hygiene. It was suggested that the clear distinction existing at the level of the codes of practice should also be reflected in further standardization work.

7. The Chairman stated that there was a large measure of consensus on the need to establish a standard for bottled/package waters to control these products in trade. It was noted that the elaboration of a standard covering bottled/package waters other than natural mineral waters or all types of bottled/package waters would require not only approval as new work by the Commission, but also an amendment of the terms of reference and the name of the Committee itself.

8. The Committee **agreed** to propose to the Commission that new work be initiated on the standard for bottled/package waters other than natural mineral waters and to proceed with the consideration of the Draft Standard for Natural Mineral Waters. In order to facilitate discussions of the provisions for composition and contaminants, microbiological specifications and methods of analysis, the Committee agreed to convene an informal working group chaired by Professor Pépin (France) to consider these provisions.

9. The Committee considered the current draft section by section and made the following amendments.

1. SCOPE

10. Some delegations raised the issue of the use of the term “natural” in the name of the standard, indicating that no international definition existed. The Delegation of Canada recalled that the 23rd Session of the Committee on Food Labelling⁶ had decided not to proceed with such a definition in view of the difficulties of interpretation in different countries, especially regarding minimal processing and expressed the view that its use should not be mandatory but optional in accordance with the General Guidelines on Claims⁷. The Delegation of Australia argued that the use of the term “natural” to describe particular products exclusively implied that other mineral waters were unnatural, thus influencing consumer perceptions and possibly creating an unfair trading advantage.

11. These views were supported by some delegations, while other delegations pointed out that certain mineral waters resulted from the addition of minerals to water and should be clearly distinguished from natural mineral waters, which naturally contained a certain amount of minerals. The Committee **agreed** to retain the current name and scope of the standard noting the objections of Australia, Canada and the United States.

12. The Committee **agreed** to replace the term “bottled” with “packaged” throughout the standard as there were products packaged in containers other than bottles in addition to bottled products.

⁵ Code of Hygienic Practice for the Collecting, Processing and Marketing of Natural Mineral waters (CAC/RCP 33-1985; *Codex Alimentarius*, Volume 11).

⁶ ALINORM 95/22, para. 97.

⁷ *Codex Alimentarius*, Volume 1A

2. DESCRIPTION

13. The Committee discussed the reference to “water clearly distinguishable from ordinary drinking water”. Some delegations felt that this was not necessary as the product was clearly defined, and other types of bottled water were also different from ordinary water. It was also noted that such a qualification was not generally made in Codex commodity standards, as the provisions on description clearly defined the specificity of the product. Other delegations and the Observer from GISEM were in favour of retaining this statement to emphasize the characteristics of the product and the Committee **agreed** to this view.

2.1 (a)

14. A number of delegations proposed to include a minimum level of total dissolved minerals in order for the name of the product not to mislead the consumers outside Europe. Several delegations also proposed to include a maximum level of total dissolved minerals from health protection point of view. Several other delegations stated that each natural mineral water was unique, could contain low level of minerals yet meet all specifications stipulated in the standard, and was characterized by constant level of minerals. The Committee **decided** not to include minimum and maximum levels of minerals in the standard. The Delegations of Australia, Canada, Czech Republic and the United States expressed objections on the decision regarding minimum level.

2.1 (b)

15. The Delegation of Germany proposed to include a statement regarding the protection of water bearing strata and the Committee **agreed** to include a statement that all possible precautions should be taken to protect them from pollution, using the same wording as in the Code of Hygienic Practice⁸.

2.1 (c)

16. The Committee recognized that natural fluctuations were recurring every year and **agreed** to insert the word “minor” before the word “fluctuations” to indicate that they should not significantly affect the composition of the waters.

2.1 (d)

17. The Committee **decided** to replace the term “bacteriological” with “microbiological”. The Committee discussed in detail a proposal to replace the term “purity” with “quality”, and to mention chemical composition as well. The Committee **agreed** to make a reference to chemical composition of essential components and to maintain the word “purity” as it covered the microbiological characteristics of the water at the collection stage whereas the notion of quality was more general and might be understood as referring to contamination.

2.1 (e)

18. The Committee had an extensive discussion on the requirement to bottle water close to the source. The Delegation of Indonesia strongly proposed to delete this provision. The Delegation of Australia stressed the problems associated with large geographical areas, sparse population and the practical difficulties of establishing a bottling plant close to the point of emergence, especially in environmentally sensitive and protected areas. Several delegations supported this view, pointing out that the standard was originally intended to apply only to European conditions, and should now be

⁸ Section 3.4 of the Code of Hygienic Practice for the Collecting, Processing and Marketing of Natural Mineral Waters (CAC/RCP 33-1985; *Codex Alimentarius*, Volume 11)

adapted for international application. The use of current technology made it possible to prevent contamination and maintain the composition of water during transport.

19. Several other delegations, however, emphasized the specificity of natural mineral waters and the necessity to take all precautions to avoid contamination as the product was very susceptible to alteration. As transport to a packaging plant would significantly increase the risk of contamination and the possibility of fraud, bottling at the source was the best way to ensure the safety and quality of natural mineral waters. This condition was regarded as essential to distinguish the product from other types of bottled water.

20. The Committee **agreed** to retain the current requirements concerning packaging close to the source. The Delegations of Australia, Canada, Indonesia, Japan and the United States expressed their objection to this decision.

2.1 (g)

21. The Committee **agreed** to delete this section as it was obvious that the product should conform to the standard.

2.2 Supplementary Definitions

22. The Committee noted that there was a need to include synonyms, such as “sparkling water”, in the standards and agreed to discuss this issue when it considered the labelling provision. (see para. 50)

2.2.1 Naturally Carbonated Natural Mineral Water

23. The Committee **agreed** to insert the phrase “taking into consideration usual technical tolerance” after the word “packaging”. The Committee also **agreed** to amend the word “replacement” to “re-incorporation” and to insert the term “from the same source” after the word “gas” in order to clarify that gas was originated from the same source as the water to which it was added.

24. The Committee **decided** not to include a minimum level of carbon dioxide as it was difficult to do so since the carbon dioxide level differs depending on various conditions such as mineral content and temperature.

2.2.2 Non-Carbonated Natural Mineral Water

25. The Committee **agreed** to insert the phrase “taking into consideration usual technical tolerance” as in Section 2.2.1.

2.2.3 Decarbonated Natural Mineral Water

2.2.4 Natural Mineral Water Fortified with Carbon Dioxide from the Source

26. The Committee decided to split Section 2.2.4 of the draft into two new sections: one on decarbonated natural mineral water and the other on natural mineral water fortified with carbon dioxide from the source, and to transfer the characteristics of these products from the Section on the name of the product to these sections (see para. 50).

27. The Delegation of the United States stated that the names such as decarbonated natural mineral water and natural mineral water fortified with carbon dioxide from the source could be simplified as natural mineral water and carbonated natural mineral water respectively. The Committee however **decided** to maintain these names as they reflected the current practice.

2.3 Authorization

28. The Committee **agreed** to add a new section regarding authorization of the product⁹ which reads:

“Natural mineral water should be recognized as such by the responsible authority of the state, in which the natural mineral water has emerged.”

3. COMPOSITION AND QUALITY FACTORS

3.1 Treatment and Handling

3.1.1

29. The Committee **agreed** to include examples of unstable constituents such as compounds containing iron, manganese, sulphur and arsenic.

30. Several delegations proposed that disinfection measures, such as ozone or UV treatment be permitted for health protection purposes which they felt were the primary objective of Codex. The Delegation of Indonesia indicated that these measures were necessary in tropical countries where the temperature and humidity are high. It was stated that as carbon dioxide would alter microbiological profile, other anti-microbial treatments should also be allowed. Many other delegations and some observers, however, expressed their views that disinfection was contrary to Section 2.1 Definition to preserve original microbiological purity; microbiological contamination could be prevented by protection of the source; and this matter should be dealt with in a new standard covering other types of bottled/packaged water. The Committee **decided** not to include a reference to disinfection noting objections of the Delegations of Australia, Canada, Indonesia, Japan, the United States.

31. The Committee **decided** not to include a reference to treatment with ozone-enriched air for separation of unstable constituents noting the reservation of Germany.

3.1.3

32. The Committee **decided** to retain the section. The Delegations of Australia, Canada, Indonesia, Japan and the United States expressed objections stating that transport should be allowed (see paras. 18-20).

33. The Delegation of Belgium pointed out that in the French version the word “traitement” should be corrected to “transport”.

3.2 Health-Related Limits for Certain Substances Error! Bookmark not defined.

34. The Committee considered the conclusions of the working group, presented by Professor Pépin (France) and the Representative of WHO, and expressed its appreciation for the useful work in the revision of the levels for minerals and contaminants. The Committee **agreed** to combine the substances included in Sections 3.2, 4.1, 4.2 and 4.3 of the current draft under the new Section 3.2 Health-related Limits for Certain Substances.

35. The Committee **agreed** to the deletion of zinc, organic matter and sulphide from the list as they did not represent a hazard to health; zinc in particular was normally present at very low levels.

⁹ Section 3.1 of the Code of Hygienic Practice for the Collecting, Processing and Marketing of Natural Mineral waters (CAC/RCP 33-1985; *Codex Alimentarius*, Volume 11) contains the provision on authorization of springs, wells and drillings.

36. The Committee noted that the levels proposed for certain substances differed from the WHO recommendations for drinking water¹⁰ and received the following clarification from the Representative of WHO.

37. The maximum level for manganese had been changed from 0.5 mg/l to 2 mg/l as the WHO guideline value was provisional and manganese is an essential element.

38. As regards arsenic, the current provisional WHO guideline level of 0.01 mg/l was based on limited health effect information and a higher value of 0.05 mg/l would not significantly increase the risk.

39. The guideline level for borate (calculated as boron) was being reevaluated in the framework of IPCS¹¹ and the level might be increased to 1 mg/l. The level of 5 mg/l also took into account the quantities which were actually found in mineral waters.

40. The Delegations of the United States and Indonesia expressed the view that the level of 0.01 mg/l for lead was too high as, in the case of children, it would correspond to a significant proportion of the PTWI¹² set by JECFA (25 µg/kg of body weight), and proposed to reduce it by half in order to minimize the risk. Moreover, the reduction of the level was easily achievable in practice as it corresponded to the values actually found in mineral waters. The Representative of WHO indicated that the calculation was based on the allocation of 50% of the PTWI to water and the rest to food (for infants) but that exposure was more related to water consumption, and that the approach taken ensured an adequate safety margin. The Committee **agreed** to retain the current value.

41. The Committee noted the level for selenium was increased to 0.05 mg/l as it did not present a hazard to health and selenium is an essential element.

42. In reply to a question, the Representative of WHO confirmed that the level for cyanide was based on an adequate scientific data and indicated that the risks associated with inorganic mercury in water were significantly lower than those related to methylmercury in fish.

43. The Committee had a detailed discussion on the proposal to include a limit of 3 mg/l for nitrites, with the exception of water claimed to be suitable for infants, where the level would be 0.02 mg/l. Some delegations pointed out that this level was too high and that water could be used for infants and children even when no claim was made. The Representative of WHO indicated that the current provisional guideline level of nitrites was not very precise. The Committee **agreed** to reduce the general limit for nitrites to 0.02 mg/l, and no reference in the labelling was therefore necessary.

44. The Committee **agreed** that the level of fluorides should be declared in the labelling by a general warning "contain fluorides" when the level was higher than 1 mg/l, and by the following sentence when the level was higher than 2 mg/l, "The product is not suitable for infants and children under the age of seven years". The Delegation of Belgium expressed the view that the latter warning should be included when the level was higher than 1 mg/l, on the basis of scientific studies conducted in the country, and objected to this decision. The Delegation of the United States expressed the view that at high enough levels the product would be inherently unsafe and a warning labelling could not correct that.

45. In reply to a question on the inclusion of radium in the list, it was noted that Codex standards did not generally include radionuclides .

¹⁰ *Guidelines for Drinking-water Quality*, Second Edition, Volume 1 Recommendations, WHO, Geneva (1993).

¹¹ International Programme on Chemical Safety.

¹² Provisional tolerable weekly intake.

46. The Committee **agreed** to include the following substances and levels in the new Section 3.2:

3.2.1	Antimony	0.005 mg/l
3.2.2	Arsenic	0.05 mg/l, calculated as total As
3.2.3	Barium	1 mg/l
3.2.4	Borate	5 mg/l, calculated as B
3.2.5	Cadmium	0.003 mg/l
3.2.6	Chromium	0.05 mg/l, calculated as total Cr
3.2.7	Copper	1 mg/l
3.2.8	Cyanide	0.07 mg/l
3.2.9	Fluoride	See section 7.3.2
3.2.10	Lead	0.01 mg/l
3.2.11	Manganese	2 mg/l
3.2.12	Mercury	0.001 mg/l
3.2.13	Nickel	0.02 mg/l
3.2.14	Nitrate	50 mg/l, calculated as nitrate
3.2.15	Nitrite	0.02 mg/l as nitrite
3.2.16	Selenium	0.05 mg/l

47. The Committee **agreed** to delete the reference to phenolic compounds and to retain all other contaminants currently included in the list, which should be below the limit of quantification in accordance with the relevant ISO methods, when such methods became available. The Delegation of the Netherlands requested that the limit of quantification should be specified.

48. The Committee noted that Section 3.2 would be forwarded to the Committee on Food Additives and Contaminants for endorsement. The Delegation of the United States stated that the provision concerning nitrites was related to quality, should be so indicated in the standard, and should not be included in the endorsement of contaminants. The Committee **decided** to add a footnote indicating that the level was set as a quality limit.

4. HYGIENE

49. The Committee **agreed** to the proposal of the working group to move *Pseudomonas aeruginosa* to follow fecal *streptococci* as it was also an indicator of bacteriological quality. In addition, some previous errors concerning the criteria for the second examination were corrected and it was noted that the second examination would use the same volumes as the first one.

6. LABELLING

6.1 The Name of the Product

50. The Committee had an exchange of views on whether to simplify Section 6.1 or maintain the wording as drafted, and on how to address uses of synonyms. The Committee decided to maintain sub-section 6.1.1 regarding the name of the product; and to combine sub-sections 6.1.2-6.1.6 regarding designations in a new section 6.1.2 and allow the use of suitable descriptive terms as follows:

“6.1.2 The following designations shall be used in accordance with Section 2.2 and may be accompanied by suitable descriptive terms (e.g., still and sparkling):

Naturally carbonated natural mineral water
Non-carbonated natural mineral water
Decarbonated natural mineral water

Natural mineral water fortified with carbon dioxide from the source
Carbonated natural mineral water.”

The specifications of products contained only in Section 7.1 of the draft were moved to relevant sub-sections of Section 2.2. (see para. 26)

51. The Delegation of Malaysia pointed out that “spring water”, which is included in the existing standard as well as in the text circulated at Step 3, was missing from the draft and requested to reinstate it. The Committee **decided** not to do so with the understanding that spring water might better be dealt with in another standard covering bottled/packaged waters other than natural mineral waters.

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52. The Committee **agreed** to delete this provision from the standard as it was already addressed in the General Standard for the Labelling of Prepackaged Foods.

6.2 Name and Address

53. The Delegation of Japan pointed out that this provision had existed in the text considered at Steps 3 and 5 while it was not aware that a proposal for deletion had been made. The Committee **agreed** to reinstate a reference to the name and location of the source in the Standard.

6.3.1 Chemical composition

54. The Committee **decided** to add a new provision on declaration of analytical composition giving the characteristics to the product in the labelling.

6.3.2

55. The Committee **agreed** to the wording proposed by the working group regarding the statements to be included in the labelling when fluoride content exceeded either 1 mg/l or 2 mg/l. (see para. 44)

6.3.3

56. The Committee **agreed** to insert the term “the result of” before the term “the treatment” as it was felt that declaring the treatment itself would be misleading or unnecessary while the result of the treatment, such as removal of iron, might have impact on the quality and characteristics of the product.

6.4.1

57. The Committee had an exchange of views regarding claims of other beneficial effects. Some delegations preferred to make a reference to the Draft Guidelines for the Use of Nutrition Claims¹³ while some other delegations expressed their view that making reference to a draft text was inappropriate. The Committee then considered whether to delete the statement regarding claims of other beneficial effects or retain it. It was noted that in horizontal provisions of all commodity standards the relevant Codex Standards and Guidelines must be followed. Nonetheless, the Committee **decided** to retain the statement noting the strong objections of the Delegations of Australia, Canada and the United States.

¹³ ALINORM 97/22, Appendix II.

Status of the Draft Revised Standard for Natural Mineral Waters

58. Some delegations stressed that more work was needed on the draft standard as some issues of principle needed to be addressed, and the adoption of a standard which did not reflect the conditions prevailing in all regions would create confusion in international trade.

59. The Committee **agreed** to forward the Draft Revised Standard for Natural Mineral Waters to the 22nd Session of the Commission for adoption at Step 8 of the Procedure. The Delegations of Australia, Brazil, Canada, Indonesia, Japan, Malaysia and the United States expressed objections on this decision while the Delegation of the Netherlands expressed a reservation.

OTHER BUSINESS AND FUTURE WORK (Agenda Item 4)

60. Following the discussion held earlier on the conversion of the standard and its application (see paras. 4-8) the Committee **agreed** to propose to the Commission the development of a general standard applicable to bottled/package waters other than natural mineral waters, in view of the importance of these products in international trade, and to ask its advice on how to proceed in this area.

SUMMARY STATUS OF WORK

Subject	Step	Action by	Document Reference (ALINORM 97/20)
Draft Revised Standard for Natural Mineral Waters	8	22nd CAC	Appendix II paras. 3-59
General standard for bottled/packageged waters other than natural mineral waters	1	22nd CAC	paras. 4-8, 60

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DRAFT REVISED STANDARD FOR NATURAL MINERAL WATERS
(Advanced to Step 8 of the Codex Procedure)Error! Bookmark not defined.

1. **SCOPE**

This standard applies to all packaged natural mineral waters offered for sale as food. It does not apply to natural mineral waters sold or used for other purposes.

2. **DESCRIPTION**

2.1 **Definition of Natural Mineral Water**

Natural mineral water is a water clearly distinguishable from ordinary drinking water because:

- (a) It is characterized by its content of certain mineral salts and their relative proportions and the presence of trace elements or of other constituents;
- (b) it is obtained directly from natural or drilled sources from underground water bearing strata for which all possible precautions should be taken within the protected perimeters to avoid any pollution of, or external influence on, the chemical and physical qualities of natural mineral water;
- (c) of the constancy of its composition and the stability of its discharge and its temperature, due account being taken of the cycles of minor natural fluctuations;
- (d) it is collected under conditions which guarantee the original microbiological purity and chemical composition of essential components;
- (e) it is packaged close to the point of emergence of the source with particular hygienic precautions;
- (f) it is not subjected to any treatment other than those permitted by this standard;

2.2 **Supplementary Definitions**

2.2.1 **Naturally Carbonated Natural Mineral Water**

A **naturally carbonated natural mineral water** is a natural mineral water which, after possible treatment in accordance with Section 3.1.1 and re-incorporation of gas from the same source and after packaging taking into consideration usual technical tolerance, has the same content of carbone dioxide spontaneously and visibly given off under normal conditions of temperature and pressure.

2.2.2 **Non-Carbonated Natural Mineral Water**

A **non-carbonated natural mineral water** is a natural mineral water which, by nature and after possible treatment in accordance with Section 3.1.1 and after packaging taking into consideration usual technical tolerance, does not contain free carbon dioxide in excess of the amount necessary to keep the hydrogen carbonate salts present in the water dissolved.

2.2.3 **Decarbonated Natural Mineral Water**

A **decarbonated natural mineral** is a natural mineral water which, after possible treatment in accordance with Section 3.1.1 and after packaging, has less carbon dioxide content than that at emergence and does not visibly and spontaneously give off carbon dioxide under normal conditions of temperature and pressure.

2.2.4 **Natural Mineral Water Fortified with Carbon Dioxide from the Source**

A **natural mineral water fortified with carbon dioxide from the source** is a natural mineral water which, after possible treatment in accordance with Section 3.1.1 and after packaging, has more carbon dioxide content than that at emergence.

2.2.5 **Carbonated Natural Mineral Water**

A **carbonated natural mineral water** is a natural mineral water which, after possible treatment in accordance with Section 3.1.1 and after packaging, has been made effervescent by the addition of carbon dioxide from another origin.

2.3 **Authorization**

Natural mineral water should be recognized as such by the responsible authority of the state, in which the natural mineral water has emerged.

3. **COMPOSITION AND QUALITY FACTORS**

3.1 **Treatment and Handling**

3.1.1 Treatments permitted include separation from unstable constituents, such as compounds containing iron, manganese, sulphur or arsenic, by decantation and/or filtration, if necessary, accelerated by previous aeration.

3.1.2 The treatments provided for in Sections 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5 and 3.1.1 above may only be carried out on condition that the mineral content of the water is not modified in its essential constituents, which give the water its properties.

3.1.3 The transport of natural mineral waters in bulk containers for packaging or for any other process before packaging is prohibited.

3.2 **Health-Related Limits for Certain Substances**

Natural mineral water in its packaged state shall contain not more than the following amounts of the substances indicated hereunder:

3.2.1	Antimony	0.005 mg/l
3.2.2	Arsenic	0.05 mg/l, calculated as total As
3.2.3	Barium	1 mg/l
3.2.4	Borate	5 mg/l, calculated as B
3.2.5	Cadmium	0.003 mg/l
3.2.6	Chromium	0.05 mg/l, calculated as total Cr
3.2.7	Copper	1 mg/l
3.2.8	Cyanide	0.07 mg/l
3.2.9	Fluoride	See section 6.3.2
3.2.10	Lead	0.01 mg/l
3.2.11	Manganese	2 mg/l
3.2.12	Mercury	0.001 mg/l
3.2.13	Nickel	0.02 mg/l
3.2.14	Nitrate	50 mg/l, calculated as nitrate

3.2.15	Nitrite	0.02 mg/l as nitrite ¹
3.2.16	Selenium	0.05 mg/l

The following substances shall be below the limit of quantification² when tested, in accordance with the methods prescribed in Section 6:

- 3.2.17 Surface active agents³
- 3.2.18 Pesticides and PCBs³
- 3.2.19 Mineral oil³
- 3.2.20 Polynuclear aromatic hydrocarbons³

4. **HYGIENE**

4.1 It is recommended that the products covered by the provisions of this standard be prepared in accordance with the applicable sections of the International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2 (1985), *Codex Alimentarius* Volume 1B), and in accordance with the International Code of Practice for the Collecting, Processing and Marketing of Natural Mineral Waters (CAC/RCP 33-1985).

4.2 The source or the point of emergence shall be protected against risks of pollution.

4.3 The installations intended for the production of natural mineral waters shall be such as to exclude any possibility of contamination. For this purpose, and in particular:

- (a) The installations for collection, the pipes and the reservoirs shall be made from materials suited to the water and in such a way as to prevent the introduction of foreign substances into the water;
- (b) the equipment and its use for production, especially installations for washing and packaging, shall meet hygienic requirements;
- (c) if, during production it is found that the water is polluted, the producer shall stop all operations until the cause of pollution is eliminated;
- (d) the observance of the above provisions shall be subject to periodic checks in accordance with the requirements of the country of origin.

4.4 **Microbiological Requirements**

During marketing, natural mineral water:

- (a) shall be of such a quality that it will not present a risk to the health of the consumer (absence of pathogenic microorganisms);
- (b) furthermore it shall be in conformity with the following microbiological quality specifications:

¹ Set as a quality limit (except for infants).

² As stated in the relevant ISO methods.

³ Temporarily endorsed pending elaboration of appropriate method(s) of analysis.

Error! Bookmark not defined.First			Decision	
<i>E. coli</i> or thermotolerant colifoms	1 x 250 ml	}	must not be detectable in any sample	
Total coliform bacteria	1 x 250 ml	}	if ≥ 1 or ≤ 2	second examination is carried out
Fecal <i>streptococci</i>	1 x 250 ml	}		
<i>Pseudomonas aeruginosa</i>	1 x 250 ml	}	if > 2	rejected
Sulphite-reducing anaerobes	1 x 50 ml	}		
Second Examination				
	n	c ⁴	m	M
Total coliform bacteria	4	1	0	2
Fecal <i>streptococci</i>	4	1	0	2
Sulphite-reducing anaerobes	4	1	0	2
<i>Pseudomonas aeruginosa</i>	4	1	0	2

Second examination shall be done using the same volumes as for the first examination.

- n: number of sample units from a lot that must be examined to satisfy a given sampling plan
- c: the maximum acceptable number, or the maximum allowable number of sample units that may exceed the microbiological criterion m. When this number is exceeded, the lot is rejected.
- m: the maximum number or level of relevant bacteria/g; values above this level are either marginally acceptable or unacceptable.
- M: a quantity that is used to separate marginally acceptable quality from unacceptable quality foods. Values at or above M in any sample are unacceptable relative to either health hazard, sanitary indicators, or spoilage potential.

5. PACKAGING

Natural mineral water shall be packed in hermetically sealed retail containers suitable for preventing the possible adulteration or contamination of water.

6. LABELLING

In addition to the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985 (Rev. 1-1991), *Codex Alimentarius* Volume 1A), the following provisions shall apply:

6.1 The Name of the Product

6.1.1 The name of the product shall be ***natural mineral water***:

6.1.2 The following designations shall be used in accordance with Section 2.2 and may be accompanied by suitable descriptive terms (e.g., still and sparkling):

- Naturally carbonated natural mineral water
- Non-carbonated natural mineral water
- Decarbonated natural mineral water
- Natural mineral water fortified with carbon dioxide from the source
- Carbonated natural mineral water.

⁴ Results of the first and second examinations.

6.2 **Name and Address**

The location of the source and the name of the source shall be declared.

6.3 **Additional Labelling Requirements**

6.3.1 **Chemical Composition**

The analytical composition giving characteristics to the product shall be declared in the labelling.

6.3.2 If the product contains more than 1 mg/l of fluoride, the following term shall appear on the label as part of, or in close proximity to, the name of the product or in an otherwise prominent position: "contains fluoride". In addition, the following sentence should be included on the label: "The product is not suitable for infants and children under the age of seven years" where the product contains more than 2 mg/l fluorides.

6.3.3 If a natural mineral water has been submitted to a treatment in accordance with sub-section 3.1.1, the result of the treatment shall be declared on the label.

6.4 **Labelling Prohibitions**

6.4.1 No claims concerning medicinal (preventative, alleviative or curative) effects shall be made in respect of the properties of the product covered by the standard. Claims of other beneficial effects related to the health of the consumer shall not be made unless true and not misleading.

6.4.2 The name of the locality, hamlet or specified place may not form part of the trade name unless it refers to a natural mineral water collected at the place designated by that trade name.

6.4.3 The use of any statement or of any pictorial device which may create confusion in the mind of the public or in any way mislead the public about the nature, origin, composition and properties of natural mineral waters put on sale is prohibited.

7. **METHODS OF ANALYSIS AND SAMPLING**

See *Codex Alimentarius*, Volume 13.