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**STANDARDIZATION OF SENSORY METHODS ON INTERNATIONAL AND NATIONAL LEVEL**

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The voluminous outline of actual state in standardization of sensory methods in the most engaged international organizations as well as in Polish national standard has been presented on the background of its chronologic development in the years 1965 - 73.

Sensory evaluation of foods is perhaps the most important element in the whole problem of quality control. Sensory evaluation is concerned with human evaluation and measurement of physical stimuli. Since people are being used as measuring instrument, every effort must be made not only to control the effect of the environment of judgement, but to standardize as far as possible all the activities, rooms, glassware, expert panels and so on. The principal purpose of this work is to provide such national and international standards, which would be able to assure the same conditions of sensory analysis and objective judgement in all interested countries.

In consequence, the sensory quality of food should be determined in the same way and with same results within well established limits in different countries. It is doubtless of particular interest for the purposes of international trade.

Basing upon individual efforts of different countries the first step on the way leading to international standardization of sensory methods has been made during the first Session of Codex Committee FAO/WHO on Methods of Analysis and Sampling in September 1965 West Berlin. The activities of this Committee form a part of the big work of world-wide Codex Alimentarius and are dealing with all aspects concerning the whole problem of analytical examination and sampling of foods.

During the above mentioned first Session of the Committee decided, that the sensory methods should be covered by the Codex Standards and be included into its framework. The Polish delegation has been invited to prepare the first document in this question.

The Polish document has been prepared basing on the results and experience on this field and in close collaboration with our national scien-

tific centers. The document has been discussed during the second Session of the Committee in 1966. The document included the general rules and guide lines only, as well as specification of the problems to be examined. The document has been highly appreciated by the Committee and should be further developed for the next Session.

In the meantime, namely in June 1967, International Organisation for Standardization, Technical Committee 34(ISO/TC 34) — Food and Agriculture Products decided — according to the point of view presented by several delegations — to deal with the problem of methods of sensory analysis in its framework. The Working Group 2 ISO/TC 34/WG 2 has been organised under the chairmanship of Federal Republic of Germany.

The programme of the future work of the ISO/TC 34/WG 2 has been laid down, including all important problems of methodology, sample preparation and statistical evaluation of results.

First Session of ISO/TC 34/WG 2 has been held in London on 28 October 1968. The priorities of works to be done has been discussed. In the first line following problems should be considered: terminology, glassware for testing of liquid samples, methods for testing taste sensibility, perfumers and „testing-blotters”. In the meantime Codex Committee on Methods of Analysis and Sampling aproved the new Polish document during the Session in September 1968/MA 68(2) and stopped further elaboration of sensory mathods, waiting according to the general rules of procedure for the results of ISO/TC 34/WG 2.

During the second Session of ISO/TC 34/WG 2 held in Paris on 1 - 5 July 1969 following documents concerning have been discussed:

Nr 2 — Terminology

Nr 3 — Glassware for testing of liquid samples

Nr 5 — Methods of taste sensibility testing

Nr 6 — Sensoric Dictionary — 1st list

Nr 9 — Perfumers and „testing-blotters”.

The third Session of ISO/TC 34/WG 2 has been held in Ankara on 24 - 25 and 28 September 1970. Apart of the above mentioned documents following problems have been included into agenda:

Doc. Nr 16 — Sensory test methods — Paired comparison test.

Doc. Nr 17 — Standard Layout for Sensory Test Methods.

Especially the last document has been of great importance for the further development of sensory standards. On its VIth Session Codex Committee of Methods of Analysis and Sampling requested the delegation of Poland to continue acting as rapporteur on the field of methods of sensory analysis. The Committee recalled its previous discussion concerning collaboration with ISO in this field. The representative of ISO stressed the need to bring uniformity into the sensory examination of the various quality criteria.

During the IV Session of ISO/TC 34 held in London on 27 - 29 June

1972 Federal Republic of Germany gave up the leading of the Secretariat of The Working Group 2. The Secretariat has been taken by France.

Following progress on the field of different problems has been stated: Terminology: documents 2, 16, 21, 32, 39 — the problem has been studied from August 1968 and reached on the end of 1972 its 3rd step third draft proposal. The first list of terminology was accepted.

Apparatus: Doc. 28 — glassware for wine degustation egg shaped — third draft proposal. Doc. 29 — glassware for wine degustation tulip shaped — third draft proposal both for the end of 1972.

Methodology: Doc. 5 prepared by Poland — Methods of taste sensibility testing — reached 2nd step of procedure second draft proposal. Document 23 — Gustative acuity testing methods — 3rd draft proposal.

Standard layout: documents 17, 30, 31 — reached its 3rd draft proposal.

Paired comparison tests: Documents 22 and 33 — 3rd draft proposal on the end of 1972.

After the IV Session of ISO/TC 34/WG 2 following documents were under elaboration: Doc. 47 — Paired comparison tests with appendix including tables for the statistical evaluation of test results; Doc. 48 — Glassware for wine degustation; Doc. 58 — Methodology including general requirements and methods; Doc. 56 — Vocabulary; Doc. 52 — Gustative acuity.

Some of above mentioned problems and documents (Vocabulary, paired comparison tests, gustative acuity) have been the object of discussion during the last, V Session of WG 2 held in Paris, 23 - 25 January 1974. The report of this Session was not available till now.

It has to be emphasized, that liaison and close cooperation was established between Codex Committee on Methods of Analysis and Sampling FAO/WHO and ISO/TC 34/WG 2. It was agreed, that the present and future work of ISO/TC 34/WG 2 should be put before the Codex Committee to serve as working document in the Codex discussion.

The problems of sensory methods have been discussed in different other international organisations, so — for example — the Joint ECE/Codex Alimentarius Group of Experts on Standardization of Fruit Juices is dealing with this problem.

Obviously, the progress reached in the framework of the above mentioned two international organisations — Codex Alimentarius Commission FAO/WHO and ISO/TC 34 — will affect the national sensory standards. It has to be emphasized, that the influence is a reciprocal one. The international standards have been based upon the experience and work done in different countries. On the other hand the draft proposals — after final agreement of them — will cause in consequence the necessity of actualising the appropriate national prescriptions. In this connection it can be of in-

terest to draw the attention on the Polish national sensory standards being the result of large studies of Polish research centers.

The Polish standards PN for sensory test methods can be divided into two principal groups: the first one consists of the standards concerning the general principles and organisatory problems of sensory testing of food products. The second one concerns detailed prescriptions for particular kinds of foods. This second part is included in almost all Polish quality standards of foods. The detailed discussion would be impossible in the framework of this report.

The attention therefore will be engaged on the first part — general principles — influencing the elaboration of the second one. The first part consists of following 4 basic standards:

PN-66/A-04020 — Sensoric analysis. General principles.

The standard includes following basic items:

1. Introduction — consisting of scope and definitions;
2. Rooms, equipment, apparatus — describes the important details of sensory laboratory area, atmospheric conditions, isolation of foreign odours, noises etc, light, colour of walls, working stands, finally apparatus and facilities being used during the sensory evaluation;
3. Conditions of carrying out the sensory analysis — the item includes general requirements concerning number of panel members, their competence, the acceptable time and number of analysis carried out during one working day, finally the most appropriate time of day for testing;
4. Sample preparation for sensory analysis purposes — the samples have to be anonymous, the sample temperature is given as well as the heat treatment of samples and their dilution;
5. Sensory evaluation of packing.

PN-65/A-04021 — Sensoric analysis. Control methods of sensory sensitivity of taste and smell.

The standard describes in detailed manner the basic sensory testing methods: Taste-blindness test, threshold tests, difference tests paired test, triangle test; olfactory tests. In additional information the patterns of test reports have been included.

PN-64/A-04022 — Methods of analysis. Analysis of particular characteristics and overall quality by scoring methods. Principle of the scoring models for individual food products.

The standard is of particular interest for the trade purposes assuring accurate characteristic of food products based upon test results ranged according to their importance for each particular case.

PN-71/A-04025 — Sensory analysis. Terminology and definitions.

This Polish vocabulary of sensory methods of food examination has been elaborated in close reciprocal relations with the international terminology draft proposal of ISO/TC 34/WG 2.

The above presented information provides an encyclopedic outline of

actual state of standardization of sensory methods in the most engaged international organisations as well as in the Polish national standards. It is supposed, that the increase of interest and wider participation of prominent representatives of science present on the symposium would enrich the standards with last achievements and hereby approach the basic and principal purpose: reliable and objective, repeatable and reproducible quality evaluation of food products.

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#### STANDARYZACJA METOD SENSORYCZNYCH NA SZCZEBLU KRAJOWYM I MIĘDZYNARODOWYM

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#### Streszczenie

Przedstawiono chronologiczny przebieg prac nad ujednoliceniem i standaryzacją metod analizy sensorycznej, prowadzonych w Polsce oraz podejmowanych przez powołane do tego organizacje międzynarodowe: Komisję Kodeksu Żywnościowego FAO/WHO (Sekcję Metod Analitycznych i Próbkobrania) oraz Międzynarodową Organizację Normalizacji (ISO) — Grupę Roboczą Analizy Sensorycznej. Podkreślono, że postęp w pracach tych organizacji zależy w znacznej mierze od doświadczenia i zaawansowania prac metodycznych krajów uczestniczących. W zakresie standaryzacji metod analizy sensorycznej Polska należy do krajów pionierskich a jej propozycje oparte na 4 ustanowionych już normach z tego zakresu wykorzystane zostały w standaryzacji metod sensorycznych na szczeblu międzynarodowym, szczególnie w pracach ISO.