

Project 505.0060
Normalisatie monsterneming en analyse
Projectleider dr W.G. de Ruig

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Verslag Seventh Inter-Agency Meeting,
Boedapest, 1988-22-10/11
en
Sixteenth Session Codex Committee on
Methods of Analysis and Sampling,
Boedapest, 1988-11-14/19

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VERZENDLIJST

directeur

sectorhoofden

coördinatoren

afdelingshoofden

SAMENVATTING

Er wordt een verslag gegeven over:

- Seventh Inter-Agency Meeting, Boedapest,
1988-11-10/11

- Sixteenth Session Codex Committee on Methods of Analysis and
Sampling
1988-11-14/19

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VERSLAG VAN:

Seventh Inter-Agency Meeting, Boedapest, 1988-11-10/11

Sixteenth Session Codex Committee on Methods of Analysis and Sampling,
Boedapest, 1988-11-14/19

INTER-AGENCY MEETING

De Inter-Agency meeting wordt traditiegetrouw voorafgaande aan de CC/MAS vergadering gehouden. Het is een ontmoetingsplaats van organisaties, die zich bezig houden met de analyse van voedingsmiddelen. Aanwezig waren vertegenwoordigers van CAC, ISO, AOAC, IUPAC, EOQC (European Organization for Quality Control) en van organisaties voor zuivel (IDF), granen (ICC), suikers (ICUMSA) en fruit juices (IFJU). Aan de orde kwamen o.a. de volgende onderwerpen.

- Ringonderzoeken. Door de verschillende organisaties werden tal van ringonderzoeken aangekondigd. Omdat sommigen hiervan voor het RIKILT ook van belang kunnen zijn, zijn de opgaven in een bijlage van dit verslag verzameld (Bijlage 2).

- Verbetering van internationale samenwerking op het gebied van genormaliseerde analysemethoden.

- Toepassing van statistische methoden. Hier werd het werk van ISO/TC69 besproken, in het bijzonder de herziening van ISO 5725. Ook ISO 3534:1977 kwam aan de orde.

- Harmonisatie van ringonderzoeken. Een AOAC/IUPAC/ISO werkgroep heeft een concept-"Protocol for the design, conduct and interpretation of collaborative studies" gepubliceerd. In Nederland (NNI, Zwart) bestond de vrees dat de eindversie van juli 1988 in deze IAM-vergadering zou worden aanvaard en daarmee een officiële status zou krijgen. Er waren echter nog een aantal Nederlandse bedenkingen tegen, die weliswaar opgestuurd waren, maar Zwart was er niet gerust op, dat dit commentaar te bestemder plaatse was gekomen. Hij had daarom gevraagd alert te zijn en, indien mogelijk, aanvaarding te voorkomen. Op de vergadering

bleek het Nederlandse commentaar er te zijn; het werd zelfs als voorbeeld voor de andere organisaties gesteld. Commentaar is nog tot december mogelijk en het is de bedoeling de eindversie in mei 1989 te valideren.

(Dit Protocol is ook voor het RIKILT van groot belang; het geeft een stramien waaraan ringonderzoeken zullen moeten voldoen. Eenmaal geaccepteerd, zal het ongetwijfeld een dwingend karakter krijgen, waaraan het RIKILT en het hele controlerend onderzoek gebonden zal zijn. Gezien recente ervaringen met de BDR kan een ringonderzoek een cruciale rol spelen in het forensisch onderzoek.

In dit verband ontbreekt o.i. aan het Protocol een paragraaf die de waarde van een ringonderzoek relativeert. Een dergelijke aanvulling is op ons initiatief thans alsnog opgestuurd door NNI Commissie 390 69 03).

Er werd opgeroepen tot praktische samenwerking bij ringonderzoeken.

- Validering van analysemethoden. Er werd gewezen op een Brits ontwerp protocol, dat van belang is voor de EEG na 1992. Ook werd aandacht besteed aan referentiematerialen, o.a. van BCR.

Door mij werd validering door middel van Criteria naar voren gebracht en uitgelegd aan de hand van foto's.

- Analysemethoden. De verschillende organisaties presenteren hun analysemethoden (Bijlage 2).

- Bemonsteringsmethoden. Het belang werd van alle kanten onderstreept. Er is echter nog geen internationaal geaccepteerde genormaliseerde aanpak.

- USSR voorstel voor genormaliseerde methode voor verassing van voedingsmiddelen voorafgaande aan de bepaling van zware metalen. Dit voorstel zal binnenkort in JAOAC verschijnen. Van verschillende kanten is commentaar binnengekomen. (Gegevens doorgestuurd aan ACON.)

CC/MAS

Voor een volledig verslag van de vergadering zij verwezen naar het Verslag van de Nederlandse delegatie en het officiële Codex verslag. Daarom kan hier worden volstaan met enkele persoonlijke impressies. Als gewoonlijk werd ook dit keer een groot deel van de week vergaderd in twee werkgroepen: een Analyse- en een Bemonsteringsgroep. Dit maal heb ik mij aangesloten bij de laatste groep.

Allerwegen wordt de noodzaak van een verantwoorde bemonstering erkend. Het is dan ook verbazingwekkend, dat er op dit gebied nog zo weinig geregeld is. "We lopen 25 jaar achter". De respons van de Commodity committee's op een oproep van de vorige CC/MAS bijeenkomst was bedroevend. Er werd daarom gesteld, dat CC/MAS meer leidinggevend moet optreden. Als eerste aanzet werd daarvoor een stuk opgesteld.

Nederland merkte op dat in de zuivelwereld wél veel gedaan is aan (ISO/IDF/AOAC) normen voor bemonsteringsschema's (mede door activiteiten binnen het RIKILT).

De analysewerkgroep heeft een document geproduceerd met de actuele situatie ten aanzien van een lange lijst analysemethoden. Een aantal methoden werd (al dan niet tijdelijk) geëndosseerd.

Andere agendapunten waren o.a.:

Er werd uitvoerig gediscussieerd over de type-indeling van Codex methoden van onderzoek. De vraag werd opgeworpen, of een eenvoudige indeling in routine- en referentiemethoden niet voldoende zou zijn. UK zal een ontwerp-richtlijn maken; intussen wordt commentaar van de regeringen ingewonnen.

Limit of Detection - Limit of Determination. Op eerdere voorstellen was commentaar binnengekomen; het secretariaat had echter niet de regeringen geënqueteerd, omdat men vond dat het opstellen van een definitie beter aan deskundigen (IUPAC, ISO, AOAC) kan worden overgelaten. NL wees in dit verband op een Engelse aanbeveling, waarin de noodzaak tot twee definities ontkend wordt. Er kon nu verder geen besluit worden genomen; dit werd doorgeschoven naar de volgende vergadering. Ook de discussie over dit onderwerp zal consequenties voor het RIKILT hebben.

Bij de bespreking van het IAM verslag kwam het al even aan de orde, maar bij "Andere zaken" kreeg ik ook in deze vergadering gelegenheid validering van analysemethoden door middel van criteria aan de orde te stellen. Er was behoorlijke belangstelling, ook in de wandelgangen. Door de voorzitter werd gesteld, dat chemometrie een opkomende discipline is, die in de naaste toekomst ook voor de Codex van grote waarde zal blijken te zijn. Wat de criteria betreft, sprak hij uit, dat het vooralsnog zaak is, in de wetenschappelijke wereld hiervoor belangstelling op te wekken en dat hij bereid was persoonlijk hieraan mee te werken.

Remarks on "Protocol for the design, conduct and interpretation of collaborative studies"
by NNI Commission 390 69 03.

We sometimes notice a tendency to interpret a succesful collaborative study as implying a guarantee for the correctness of a result obtained by the method studied, irrespective of the nature of the sample examined.

To prevent the unjustified extrapolation of the results of collaborative studies to areas neither aimed at nor covered by the study, a cautionary clause should be added, pointing out the limitation inherent to a collaborative study.

Such a clause could read as follows:

1. A collaborative study gives information about the precision of a method. As such, in most cases it cannot give information about the bias of the method.

2. The results of a collaborative study are valid only for the sampled population, or proven similar ones, in terms of parameters like matrix effects, interfering components, concentration ranges, etc.

It does not warrant correctness of the results when the method is applied to other populations with different parameters.

INTER-AGENCY MEETING
ANALYSIS OF MILK AND MILK PRODUCTS

Item 7.4

INTERLABORATORY STUDIES UNDER IDF/ISO/AOAC AUSPICES

Note prepared by IDF General Secretariat

According to the information available in IDF General Secretariat the following interlaboratory studies are planned or in hand in the various IDF/ISO/AOAC groups of experts :

E5 Water content

Total solids in yogurt	Study to be started shortly
Total solids in ice cream	Study completed: report accepted for publication in Bulletin of IDF
Total solids in caseins and caseinates (IDF Standard 78B)	Study planned
Total solids in cheese and processed cheese (IDF Standard 4A)	Study planned
Total solids in sweetened condensed milk (IDF Standard 15A)	Study completed: report accepted publication in Bulletin of IDF
Water content in Butteroil (IDF Standard 23)	Study completed: report accepted for publication in Bulletin of IDF
Water content of dried milk (IDF Standard 26)	Study planned

E8 Nitrate, nitrite, phosphorous, chloride etc..

Salt content of butter (IDF Standard 12A)	Study completed: report submitted for publication in Bulletin of IDF
Polyphosphates in cream, evaporated milk and processed cheese (by HPTLC and paper chromatography)	Study in hand at present
Nitrate in milk powder and whey powder	Preliminary study completed
Nitrate in preserved grated cheese (amino-bonded HPLC column)	Pilot study completed: full study planned

E9 Lactic acid and lactates

Calcium in milk and dried milk	Study completed: report submitted for publication in the Bulletin of IDF
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E11 Analysis of caseins and caseinates

Ammonia in ammonium caseinates	Study launched, November 1988
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E15 Heavy metals and other elements

Tin in canned milk products	New study planned
Zinc in milk	Study planned for late 1988

E17 Characterization of d.m. by heat treatment and usage

Cysteine number method	Poor results of study have lead to new approach
Heat class of milk powder-HPLC method	New study launched August 1988

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Inter-Agency meeting-page 3

E55 continued

Viscosity

Study planned

E56 Lactulose content

Lactulose in heated milk (HPLC and enzymic methods)

Study completed: submitted for publication in the Bulletin of IDF

E57 Oxygen in milkfat

Photoelectric method

Preliminary study launched May 1988

E64 Listeria monocytogenes

Detection and enumeration

Preliminary studies in hand

Reports of interlaboratory studies may be published in the Bulletin of IDF (see, for example, Bulletin of IDF 1986 No 207), Journal of the AOAC, Deutsche Lebensmittelrundschau etc. IDF Standard 135A gives guidance on the organization, planning and statistical analysis of such studies.

10.2

Inter-Agency Meeting
IDF/ISO/AOAC
Methods of analysis for FAO/WHO Code of Principles
concerning Milk and Milk Products

Immediate review of the latest list (in Appendix 2 of 1986 Milk Committee report) shows the following position. All standard methods are reviewed 5 years after publication to determine whether they need revision or can be confirmed.

Product	Collab. study	FAO/WHO	IDF	ISO	AOAC (14th Ed)
<u>Acid casein</u>					
ash (fixed)	-	B18:1978	88:1979 (confirmed)	5544:1978	
<u>Ammonium caseinate</u>					
ash (fixed)	-	B18:1978	89:1979 (confirmed)		
<u>Butter</u>					
acid value: free fatty acid index	+	B4:1967	6B:1989	1740:1980	16.237-16.239
salt (chloride)	+	B8:1967	12A:1969 (confirmed)	1738:1980	16.235
fat	+	B9:1978	80:1977	3727:1977	16:232
refractive index (butterfat)	+	B5:1967	7A:1979 (confirmed)	1739:1975	16.240
sampling	-	B1:1982	50B:1985	707:1985	16.012-16.014
solids-not-fat	+	B9:1978	80:1977	3727:1977	16.231
total solids (water)	+	B9:1978	80:1977	3727:1977	16.231
<u>Caseins</u>					
acidity (fat acidity)	-	B26:1982	91:1979 (confirmed)	5547:1978	
<u>Caseins and caseinates</u>					
ash (fixed ash)	-	B24:1982	89:1979	5544:1978	
lactose	-	B38:1982	106:1982	5548:1980	
nitrogen (protein)	-	B25:1982	92:1979	5549:1978	
pH value	-	B37:1982	115:1982	5546:1979	
scorched particles	-	B34:1982	107:1982	5739:1983	
total solids (water)	-	B22:1982	78B:1980 (confirmed)	5550:1978	
<u>Cheese</u>					
chloride	+	B18:1978	88:1979 (confirmed)	5943:1978	
citric acid	+	B13:1972	34B:1971	2963:1974	16/292-16.296
nitrate and nitrite	+	B19:1984	84A:1984	4099:1984	
phosphorus	+	B12:1972	33C:1987	2962:1984	

Product	Collab. Study	FAO/WHO	IDF	ISO	AOAC (14th Ed)
<u>Milk(cont)</u>					
total solids	+	B29:1982	21B:1987	DIS 6731	16.032
<u>Milk & foodstuffs containing milk products</u>					
lactose (in the presence of other reducing substances)	-	B27:1982	79A:1985	DP 5765	
<u>Milk & liquid milk products</u>					
sampling	-	B1:1982	50B:1985	707:1985	16.001-16.018
<u>Milk & milk products</u>					
copper	+	B36:1982	76A:1980	5738:1980	25.066-25.071
iron	-	B35:1982	103A:1986	DIS 6732	
scorched particles, milk & milk products, caseins & caseinates	-	B34:1982	107A:19897	5739:1983	
sampling (attributes sampling schemes)	-	B21:1982	113:1982	DP 5583	
sampling (general sampling techniques)	-	B1:1982	50B:1985	707:1985	16.001-16.005
sampling (variables sampling schemes)	-		136:1986	DP 8197	
<u>Milk, cream & evaporated milk</u>					
total solids	+	B29:1982	21B:1987	DIS 6731	16.032, 16.171 16.189
<u>Milkfat</u>					
foreign fat	+	B17:1978	54:1979	3594:1976	28.100
foreign fat	+	B16:1978	32:1965	3595:1976	28.096
<u>Milkfat (anhydrous)</u>					
peroxide value	+	B20:1978	74:1974	3976:1977	not 28/025
<u>rennet casein, & caseinates</u>					
ash	-	B23:1982	90:1979 (confirmed)	5545:1978	
<u>Skimmed milk, whey buttermilk</u>					
fat	+	B32:1982	22B:1985	7208:1984	
<u>Sweetened condensed milk</u>					
fat	+	B7:1967	13C:1987	1737:1985	16.192
sucrose	+	B14:1972	35:1966 (confirmed)	2911:1976	16.208-16.209
total solids	+	B30:1982	15B:1988	DIS 6734	not 16.203
<u>Whey cheese</u>					
fat	+	B10:1973	59A:1986	1854:1972 (rev.)	16.285



Association of Official Analytical Chemists

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ML/ 140/88

Seventh Interagency Meeting
Budapest, Hungary, 10 and 11 Nov. 1988

Contribution by AOAC on Methods of Analysis, agenda item 10

agenda item	method	status
10.2 milk etc	Babcock + ether extr. of fat in milk	adopted
	Infrared analysis of milk	adopted
	Calcium Phosphorus and Magnesium in Cheese	review
	HPLC for Iodide in milk	
	see IDF/ISO/AOAC methods	review
10.3 edible ices	see IDF/ISO/AOAC methods	review
10.5 f. for dietary uses	methods for infant formula :FDA and IFC studies Phase I-s and II-s for soybased formulations	review
10.6 fruit juices	Quinic, malic, citric acids in cranberry juice cocktail and apple juice	adopted
	L-malic/total malic acid ratio: in detection of economic adulteration of apple juice	review
	adulteration of apple juice and orange juice	review
	glycerol in wine and grapefruit juice by HPLC	review
		review
10.8 meat	FSIS study on fish in Frankfurters	review
	Soxtec fat analyzer for total fat content in meat	review
10.9 sugars	Sucrose in molasses by HPLC:	review
	Sugars in syrups and molasses	review
10.12 microbiology	Filth in flour (corn) flotation method	adopted
	Filth in eggs and egg products	adopted
	Filth in mushrooms	adopted
	Bird and insect excrements on food and containers (TLC method for uric acid)	adopted
	Aerobic plate count, E coli, coliforms, Staph. in frozen chilled precooked or prepared foods	adopted
	Thermophilic bacterial spores in sugars	adopted
	Virus in beef (ground)	adopted
	Sporeformers in low-acid canned foods	adopted
	Poliovirus in oysters	adopted
	Salmonella in foods (DNA hybridization method)	adopted
	Salmonella in low-moisture foods (enzyme immunoassay)	adopted

Item 7.4

I U P A C COMMISSION VI.3 - OILS, FATS AND DERIVATIVES
WORKING PROGRAMME FOR 1987 - 1988

WG No.	Title of Working Group	Principle of methods	Co-ordinator (assistant)
3/78	Determination of benzo-a-pyrene	column and HPLC	P Hendrikse G Osterman
3/79 ad hoc	Determination of mineral oil (middle fraction)	capillary glc	P Hendrikse
1/80	Determination of the colour of lecithins	Lovibond (auto) and spectrometry	R Ohlson (A Nasner)
1/83	Determination of n-3 and n-6 fatty acids in vegetable oils	capillary glc	A Dieffenbacher (J Beare-Rogers)
2/83	Determination of lead	AAS (graphite furnace)	P Hendrikse
1/85	Determination of triglycerides according to their ECN's	reversed phase HPLC	J P Wolff (F Mordret)
2/85	Determination of polymerized tri- glycerides	gel-permeation HPLC	J P Wolff (F Mordret)
1/87	Determination of phospholipids in commercial lecithins	HPLC	J Beare-Rogers (A Nasner)
2/87	Determination of total satd., total trans, and n-3 & n-6 fatty acids animal oils and fats	capillary glc	A Dieffenbacher (J Beare-Rogers)
3/87	Determination of benzo-a-pyrene	column & HPLC	P Hendrikse (G Ostermann)

Future work:

Four new Working Groups will be organized:

- trans-isomer content determination to control cold pressed oils
- phosphorus content by AAS
- solvent residues (different types) in vegetable oils
- revision of the methods for acid value and peroxide value determination

Current Projects

Updated &
Revised : May 1986

WORKING GROUP	PROJECT NUMBER	PROJECT TITLE	FIRST COORDINATOR	CO-OPTED ORGANISATIONS	STATUS	EXPECTED COMPLETION DATE
Mycotoxins	11/81	Check-sample survey for mycotoxins Aflatoxin B ₁ , B ₂ , G ₁ & G ₂ in Maize and Peanut Meal Aflatoxin M ₁ in Milkpowder Ochratoxin A in Wheat flour	Castegnaro	IARC	On-going	1985
	30/85	Collaborative Study Ochratoxin A in Barley, Maize and Pig-liver Comparison of TLC-Separation/ UV-Determination and HPLC-separation/UV-Determination- Methods	Krogh	AOAC	On-going	1987
	31/85	Collaborative study of an HPLC method for determination of Aflatoxins in Ground nuts and Cereal grains	Park	AOAC	On-going	1987
	35/86	Spectro-analytical parameters of Fusarium toxins	Steijn	IUFOST IUMS ISPP	On-going	1987
	38/*	Collaborative Study Patulin in Apple Juice Comparison of two methods with HPLC- Separation and UV-Determination	Kubacki	ISO	Submitted for CFC approval	1987
	37/86	Limits and Regulations for Mycotoxins in foods and feeds	Park	IARC WHO/FAO Joint Mycotoxin Committee of AOAC, AOCS, AACC	On-going	1988

Aquatic Biotoxins	41/*	Production of a world-wide directory on laboratories conducting aquatic biotoxin analysis	Krogh	WHO/FAO	Submitted for CFC approval	1987
Elemental Analysis	28/85	Collaborative Study Selenium in Milk-Powder & Pig-Liver Wet-digestion and Determination by Fluoreszenz-photometry	Vaessen	-	On-going	1986
	29/85	Collaborative Study Sodium & Potassium in Milk-Powder & Infant Foods Wet-Digestion and Determination by Atomic Absorbtion Spectrometry	Vaessen	-	On-going	1986
	34/86	Collaborative Study Magnesium & Calcium in Milk-Powder & Infant Foods Wet-Digestion and Determination by Atomic Absorbtion Spectrometry	Vaessen	-	On-going	1987
Nitrosamines	5/81	Feasability and Collaborative Study Total N-Nitrosamines in Urin and Saliva HBr-Pre-Treatment and direct Thermal Electron Analycer-Determination	Castegnaro	-	On-going	1986
	39/*	Collaborative Study Volatile N-Nitrosamines in Rubber- Nippels and Pacifiers Comparison of FDA-Method: CH ₂ Cl ₂ - Extraction/Determination by GLC/TEA and BGA-Method: Salviasimulant- Extraction/Determination by GLC/TEA	Pollock	EC AOAC IARC	Submitted for CFC approval	1987
	40/*	Check-sample survey Non-volatile-N-Nitrosamines in Malt & Beer	Castegnaro	IARC	Ibid	1987

*) Provisional Project Numbers

Natural
Toxicants

36/86

Natural Toxicants in Foods-Phase I
Inventory of institutes, methods &
problems.
Current knowledge/state of the art

Battaglia

-

On-going

1987

Halogenated
Hydrocarbons
Environmental
Contaminants

32/85

Chromatographic separation of 135
chlorinated dibenzo-p-Dioxin and
-Furan-Isomers

Conacher

-

On-going

1987

GL-Capillary-Chromatography and
Electron Capture Detector

Determination of Retention-Indices
and Detection-Response Factors

33/85

Feasability Study
Evaluation of PCB-Quantification
in Foods and other biological
samples

Conacher

-

On-going

1987

Item 7.4

ISO TC 93

Collaborative studies planned 1989

1. Determination of mono, di, tri and oligo saccharides in starch hydrolysis products (HPLC)

Contact: Mme Duhau
AFNOR
Tour Europe
92080 Paris La Defense
Cedex 7

2. Determination of acetyl content (degree of substitution) of starch acetates

- 2.1. Saponification (non-specific) method

- 2.2. Gas chromatographic method

- 2.3. Enzymatic method

Contact: Mr R. Zwart
NNI
P.O.Box 5059
NL 2600GB Delft

3. Determination of adipyl content (degree of substitution) of starch adipates-(GLC)

Contact: as 2

4. Determination of carboxyl value of oxidised starches - titration method

Contact: as 2

METHODS OF TEST FOR CEREALS, CEREAL PRODUCTS

AND PULSES

ISO/TC 34/SC 4 "Cereals and pulses"

1988, November

CEREALS AND PULSES

Terminology

ISO 5526:1986 Cereals, pulses and other food grains - Nomenclature
Trilingual edition
First edition

Sampling

ISO 2170:1980 Cereals and pulses - Sampling of milled products
CFD :1985 Second edition

Thousand kernel weight

ISO 520:1977 Cereals and pulses - Determination of the mass of 1 000 grains
CFD :1983 First edition

Ash content

ISO 2171:1980 Cereals, pulses and derived products - Determination of ash
CFD :1985 Second edition.

Extraneous matter (Filth test)

ISO 6639-1:1986 Cereals and pulses - Determination of hidden insect infestation -
Part 1: General principles
First edition

ISO 6639-2:1986 Cereals and pulses - Determination of hidden insect infestation -
Part 2: Sampling
First edition

CEREALS AND CEREAL PRODUCTSTerminology

- ISO 5527-1:1979 Cereals - Vocabulary - Part 1
Bilingual edition
First edition, under revision
- DP 9228 Cereals - Terms and definitions relating to grain drying

Sampling

- ISO 950:1979 Cereals - Sampling (as grain)
CFD :1985 First edition
- ISO 6644:1981 Cereals and milled cereal products - Automatic sampling by
CFD :1988 mechanical means
First edition.

Moisture content

- ISO 711:1985 Cereals and cereal products - Determination of moisture content
(Basic reference method)
Second edition.
- ISO 712:1985 Cereals and cereal products - Determination of moisture content
(Routine reference method)
Second edition.
- ISO 7700-1:1984 Check of the calibration of moisture meters - Part 1: Moisture
meters for cereals
First edition

Total fat

- ISO 7302:1982 Cereals and cereal products - Determination of total fat content
CFD :1987 First edition.

Enzyme activity

- ISO 3983:1977 Cereals and cereal products - Determination of alpha-amylase
activity
First edition, under revision
- ISO 3093:1982 Cereals - Determination of falling number
CFD :1987 First edition
- DP 7973 Cereals and milled cereal products - Determination of amylograph
viscosity

WHEAT FLOUR

ISO 6820:1985 Wheat flour and rye flour - General guidance on the drafting of bread-making tests
First edition

Gluten

ISO 6645:1981 Wheat flour - Determination of dry gluten
CFD :1988 First edition.

ISO 5531:1978 Wheat flour - Determination wet gluten
CFD :1988 First edition

DIS 7495 Wheat flour - Automatic determination of wet gluten by mechanical means

Physical Dough Testing

DIS 5530-1 Wheat flour - Physical characteristics of doughs - Part 1 :
Determination of water absorption and rheological properties using a farinograph

DIS 5530-2 Wheat flour - Physical characteristics of doughs - Part 2:
Determination of rheological properties using an extensograph

DIS 5530-3 Wheat flour - Physical characteristics of doughs - Part 3:
Determination of water absorption and rheological properties using a valorigraph

ISO 5530-4:1983 Wheat flour - Physical characteristics of doughs - Part 4:
Determination of rheological properties using an alveograph
First edition, under revision.

DURUM WHEAT

Vitreousness

ISO 5532:1987 Durum wheat - Determination of proportion of non-wholly vitreous grains (Reference method)
Second edition

Sensory analysis

ISO 7304:1985 Durum wheat semolinas and alimentary pasta - Estimation of cooking quality of spaghetti by sensory analysis
First edition

NMKL Nordisk Metodikkomitté för Livsmedel

Generalsekretariatet
NORDIC COMMITTEE ON FOOD ANALYSIS (NMKL)
c/o Technical Research Centre of Finland
Food Research Laboratory
SF-02150 ESBO
FINLAND

Esbo, 30 December 1987

To the organizations
participating in the
Inter-Agency Meeting

ANNOUNCEMENTS OF NMKL COLLABORATIVE ANALYTICAL STUDIES OF METHODS OF ANALYSIS


Please find enclosed information on collaborative analytical studies of methods of analysis scheduled for spring 1988 within the Nordic Committee on Food Analysis (NMKL):

- * Fat. Determination in meat and meat products according to SBR (Schmid-Bondzynski-Ratslaff)
- * Campylobacter jejuni/coli. Detection in foods
- * Aspartame and diketopiperazine. Liquid chromatographic determination
- * Metals. Determination by atomic absorption

For your information a recent list of all published NMKL methods is enclosed and also a news-sheet presenting recently published NMKL methods.

NMKL wishes everyone a Happy New Year 1988.

Sincerely,



Harriet Wallin
Secretary General

ENCL

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NORDISK METODIKKOMITTE FÖR LIVSMEDEL c/o Statens tekniska forskningscentral Livsmedelslaboratoriet SF-02150 ESBO, FINLAND	Nat. (90) 4561 Int. +358-0-4561	122972 vtha sf	POSTGIRO 2238-9

Generalsekretariatet

Date	30.12.1987
Organization	Nordic Committee on Food Analysis
Analyte	Fat (according to Schmid-Bondzynski-Ratslaff, SBR)
Commodity	Meat and meat products
Principle of Method	SBR: Fat extraction with a mixture of ether and petroleum ether after treatment of food with hydrochloric acid and addition of alcohol. Distillation of solvent and weighing of residue
Approx. Concentration-Range	2-50 g fat/100 g
No. of Samples per Participant	12
Purpose of Trial	Revision of existing NMKL method no 88 Fat. Determination in meat and meat products according to SBR (Schmid-Bondzynski-Ratslaff). (Samples to be analysed with both no 88 and with proposed revised method)
Month of Distribution of Samples	January 1988
Time Allowed for Analysis of Samples (in Weeks)	4
Expected Date of Report	30.5.1988
Contact - Address for trials open to Other Participants	Trial not open to others (sufficient number of laboratories within Nordic countries has already registered)

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Generalsekretariatet

Date 30.12.1987

Organization Nordic Committee on Food Analysis

Analyte Campylobacter coli/jejuni

Commodity Foods (chicken liver)

Principle of Method Enrichment in broth containing antibiotics, plating on solid selective medium, incubation at 42°C for 48 h in microaerophilic conditions, biochemical verification

Approx. Concentration-Range 0-1000 per gram

No. of Samples per Participant 8

Purpose of Trial To validate published proposed NMKL method nr 119 (1986) "Campylobacter jejuni/coli. Detection in foods"

Month of Distribution of Samples April 1988. Pretest including 3 samples scheduled for March 1988

Time Allowed for Analysis of Samples (in Weeks) 3

Expected Date of Report 31.7.1988

Contact - Address for trials open to Other Participants Trial not open to participants outside the Nordic countries due to problems with shipping of biological tissues

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Generalsekretariatet

Date 30.12.1987

Organization Nordic Committee on Food Analysis

Analyte Aspartame and diketopiperazin (DKP)

Commodity Beverages, marmalades

Principle of Method Dilution, filtration, LC separation, UV detection at 214 nm

Approx. Concentration-Range Beverages 0-600 mg aspartame/kg, 0-200 mg DKP/kg
Marmalades 0-1200 " , 0-200 "

No. of Samples per Participant 20

Purpose of Trial Nordic legislation

Month of Distribution of Samples February 1988

Time Allowed for Analysis of Samples (in Weeks) 2

Expected Date of Report 30.5.1988

Contact - Address for trials open to Other Participants Astrid Nordbotten
Arne Vidnes
The National Quality Control Authority for Processed Fruits and Vegetables
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P.O.Box 6399 - Etterstad
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Generalsekretariatet

Date	30.12.1987
Organization	Nordic Committee on Food Analysis
Analyte	Metals. Pb, Cd, Cr, Cu, Fe, Zn
Commodity	Foods generally
Principle of Method	Dry ashing at 450 ⁰ C, addition of HCl, evaporation to dryness, dissolution in HNO ₃ , flame or graphite furnace atomic absorption spectrophotometry measurement
Approx. Concentration-Range	Down to limit of determination as determined in the laboratory according to method
No. of Samples per Participant	6
Purpose of Trial	To validate method for the needs of international legislation
Month of Distribution of Samples	March 1988 (instrumental pre-testing performed in December 1987)
Time Allowed for Analysis of Samples (in Weeks)	4
Expected Date of Report	30.9.1988
Contact - Address for trials open to Other Participants	Trial not open to others. A sufficient number (19) of laboratories within the Nordic countries has already registered

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PUBLISHED METHODS

No	Name	Year of publication	
1	Determination of boric acid (H_3BO_3)	1950	
2	Benzoic acid (C_6H_5COOH), determination of	1979	3rd Ed.
3	Determination of salicylic acid ($C_6H_6OHCOOH$ 1.2)	1968	2nd Ed.
4	Chemical methods for the detection of inefficient cleansing of cups, dishes and plates	1962	2nd Ed.
5	Total number of microbes. Determination with the swab method or contact plate method on utensils in contact with food	1987	4th Ed.
6	Nitrogen. Determination in foods and feeds according to Kjeldahl	1976	3rd Ed.
7	Ash. Determination in grain and flour	1987	2nd Ed.
8	Determination of formic acid ($HCOOH$)	1966	2nd Ed.
9	Reduction tests for milk	1953	
10	Gravimetric determination of fat in milk, cream, condensed and dried milk	1977	2nd Ed.
11	c a n c e l l e d (replaced by No 107, 108, 109 and 110)		
12	c a n c e l l e d		
13	Determination of moisture content of grains and of certain grain products	1977	2nd Ed.
	Additions and corrections, No 13	1983	
14	Determination of moisture in bread	1953	
15	c a n c e l l e d		
16	c a n c e l l e d		
17	c a n c e l l e d		
18	Sulphurous acid (SO_2). Determination in foods	1970	2nd Ed.
	Additions and corrections, No 18	1980	
19	Determination of flourine in calcium compounds and cereals with added calcium compounds	1955	

20	Methods for microbiological examinations of butter	1982	2nd Ed.
21	Determination of calcium in cereals	1955	
22	c a n c e l l e d (replaced by No 116)		
23	Moisture and ash. Determination in meat and meat products	1974	2nd Ed.
24	c a n c e l l e d		
25	c a n c e l l e d		
26	Pasteurization control of milk, cream and whey - Determination of phosphatase activity	1985	3rd Ed.
27	Determination of the total plate count in milk, cream and ice cream products by means of the plate count method	1982	2nd Ed.
28	Analytical determination by weight of the total solids of tomato purée	1958	
29	c a n c e l l e d		
30	Determination of copper in foods	1958	
31	Isolation and identification of watersoluble, syn- thetic colouring matters	1959	
32	Isolation and identification of oil-soluble, synthetic colouring matters	1959	
33	Identification of sugars by paper chromatography	1981	2nd Ed.
34	Sampling of grains, milling products, and starch products	1974	2nd Ed.
35	c a n c e l l e d (replaced by No 112)		
36	c a n c e l l e d		
37	Fermentation test for non-specific, qualitative detection of preservatives in foods	1961	
38	Acid value. Determination in fats	1975	3rd Ed.
39	Iodine value. Determination in fats (Wij's method)	1972	2nd Ed.
40	Determination of fat content in milk by the Gerber method	1961	
41	Determination of organic combined halogen in bever- ages, fruit juices, and marmalade	1961	
42	c a n c e l l e d (replaced by No 123)		
43	Determination of mono and disaccharides in pure aqueous solutions (according to Potterat & Eschmann)	1962	

44	Coliform bacteria. Determination in foods	1975	2nd Ed.
45	Determination of the peroxide value of pure fats, butter and margarine	1962	
46	Determination of lead in foods	1962	
47	Method for determining the keeping quality of sterilized canned food	1963	
48	Determination of p-hydroxybenzoic acid esters	1963	
49	Determination of nitrite	1963	
I	Unspecific titrimetric routine method for the determination of nitrite in "nitrite salt" and "nitrite saltpetre"		
II	Determination of nitrite in "nitrite salt" and nitrite saltpetre", and in meat, fish, and brine		
50	Quantitative determination of the antioxidants BHA (3-tert-butyl-4-hydroxyanisole) and BHT (3.5-di-tert-butyl-4-hydroxytoluene) in fats	1963	
51	Determination of cadmium in foods	1963	
52	Starch. Determination in meat products	1984	2nd Ed.
53	Preparation and clarification of extracts for sugar determination	1964	
54	Determination of formaldehyde in foods	1964	
55	Determination of net content and drained weight of preserved fruits and vegetables	1980	2nd Ed.
56	Determination of the number of sulphite-reducing clostridia in foods	1980	2nd Ed.
57	Determination of the total content of phosphorus in foods	1965	
58	Determination of zinc in foods	1965	
59	Mikrobiological examination of fully preserved canned foods	1978	2nd Ed.
60	Preservatives. Detection by TLC (proposed method)	1987	2nd Ed.
61	Determination of sorbic acid ($\text{CH}_3\text{CH}=\text{CH}-\text{CH}=\text{CHCOOH}$) according to the thiobarbituric acid method (TBA method)	1972	2nd Ed.
62	c a n c e l l e d (replaced by No 125)		

63	Determination of oxalic acid	1967	
64	Determination of solids in canned kale and spinach	1967	
65	c a n c e l l e d		
66	Determination of Staphylococcus aureus	1980	
67	Determination of Bacillus cereus in foods	1982	2nd Ed.
68	Determination of fecal streptococci in foods	1978	
69	Detection of the antioxidant DPPD (N',N-diphenyl-p-phenylenediamine)	1969	
70	Tomato purée and tomato paste. Refractometric determination of soluble dry matter	1969	
71	Salmonella bacteria. Detection in foods	1985	3rd Ed.
72	Biphenyl. Determination in citrus fruits, marmalade of citrus fruits, and in apples and pears	1970	
73	o-Phenylphenol. Determination in citrus fruits, marmalade of citrus fruits, and in apples and pears	1970	
74	Psychrophilic bacteria. Determination by the plate count method	1970	
75	Psychrophilic bacteria. Determination by measuring the growth rate of bacteria during cold storage (tentative method)	1970	
76	Condensed phosphates (polyphosphates). Identification in meat products, etc. by paper chromatography	1970	
77	α -Amylase activity. Determination in cereals and cereal products	1970	
78	Lactose. Determination in milk chocolate	1970	
79	Botulinum toxin. Determination in foods and serum	1979	
80	Clostridium botulinum. Detection in foods	1979	
81	Paralytic shellfish poison. Biological determination in the common mussel and other bivalves	1986	2nd Ed.
82	Methylmercury compounds. Determination in fish	1972	2nd Ed.
	Corrections, No 82	1980	
83	c a n c e l l e d		
84	n-Dodecyl gallate (DG), n-octyl gallate (OG), n-propyl gallate (PG) and nordihydroguaiaretic acid (NDGA). Detection in fat. TLC-method	1984	2nd Ed.
85	c a n c e l l e d (replaced by No 104)		

86	Aerobic micro-organisms. Enumeration at 30°C in meat and meat products	1986	2nd Ed.
87	c a n c e l l e d (replaced by No 115)		
88	Fat. Determination in meat and meat products according to SBR (Schmid-Bondzynski-Ratslaff)	1974	
89	Chloride. Determination in meat and fish products	1974	
	Corrections, No 89	1986	
90	Aflatoxin. Determination in peanuts and peanut products	1975	
	Corrections, No 90	1980	
91	Pretreatment of solid foods for microbiological examination (deft-infected and surface infected)	1975	
92	Mould count. Determination in tomato products	1976	
93	Glucose. Determination of the total amount in meat products after hydrolysis	1978	
94	Extraction of heavy metals, especially from enamelled articles and glazed ceramic articles	1979	
95	Clostridium perfringens - Determination in foods	1985	2nd Ed.
96	Bacteriological examination of fresh and frozen fish and fish products	1980	
97	Vibrio parahaemolyticus. Detection in foods (tentative method)	1982	
98	Mould. Determination in foods (proposed method)	1987	2nd Ed.
99	Histamine. Determination in fish	1981	
100	Nitrite and nitrate. Determination in meat products, brines, and salt mixtures (tentative method)	1982	
101	Detection of aflatoxins with minicolumn	1982	
102	Detection of saccharin, cyklamate och dulcine in soft drinks	1984	
103	Benzoic acid and sorbic acid in foods. Quantitative determination by gas chromatography	1984	
104	Measuring of water activity with a polyamide filament hygrometer	1984	
105	Determination of coliform bacteria in foods using pre-incubation (proposed method)	1984	
106	Determination of ochratoxins in barley by thin layer chromatography	1984	

107	Milk and cream. Determination of titratable acidity (routine method)	1984	
108	Milk and milk products. Determination of ash	1984	
109	Milk, cream and preserved milk. Determination of chloride, argentometric titration	1984	
110	Milk and milk products. Determination of total solids (water). Gravimetric method	1984	
111	Folate, biologically active, in milk and milk products. Microbiological determination with <i>Lactobacillus casei</i>	1985	
112	Arsenic in foods and food additives. Determination by molybdenum blue method	1985	
113	Calcium and magnesium. Determination by complexometric titration	1985	
114	Isolation and identification of watersoluble, synthetic colouring matters (proposed method)	1985	
115	Tin. Quantitative determination of the total content in food. Spectrophotometric determination with quercetin	1985	
116	Iron. Photometric determination in food	1985	
117	<i>Yersinia enterocolitica</i> . Detection in food	1987	2nd Ed
118	Histamine. Thin-layer chromatographic screening method (proposed method)	1986	
119	<i>Campylocater jejuni/coli</i> . Detection in foods (proposed method)	1986	
120	Benzo(a)pyrene. Fluorescence spectrophotometric determination in smoke preparations (proposed method)	1986	
121	Antibacterial substances. Detection by a microbiological method in kidney and muscle from slaughter animals. (proposed method)	1987	
122	Saccharin. Liquid chromatographic determination in beverages and sweets	1987	
123	Cyclamate. Spectrophotometric determination in food	1987	
124	Bensoic acid, sorbic acid and p-hydroxybenzoates. Liquid chromatographic determination	1987	
125	Thermotolerant coliform bacteria. Determination in foods after pre-incubation	1987	

R E P O R T S

- | | | | |
|------|---|------|--------|
| No 1 | Statistical Evaluation of Results from Quantitative Microbiological Examinations | 1983 | 2nd Ed |
| No 2 | Stikprøveplaner til mikrobiologisk undersøgelse af levnedsmidler - Principper for prøveudtagning og praktisk udførelse (In Danish only) | 1983 | |
| No 3 | Kvalitetskontroll av arbetet på livsmedelslaboratorier (Minisymposium 1982-08-24, Esbo, Finland) (In Scandinavian languages only) | 1983 | |
| Nr 4 | Fysisk-kemiske hurtigmetoder til levnedsmiddelanalyse (Minisymposium 1985-09-03, Århus, Danmark) (In Danish only) | 1986 | |
| Nr 5 | Handbok för mikrobiologiska laboratorier -Handledning för intern kvalitetskontroll av analysarbetet (In Swedish and Finnish) | 1987 | |

THE NORDIC COMMITTEE ON FOOD ANALYSIS

NMKL Nordisk Metodikkommitté för Livsmedel

December 1987

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Generalsekretariatet

NEW NMKL-METHODS

The following eight methods of analysis for food have been published by the Nordic Committee on Food Analysis in 1987 and are available through NMKL's office in Finland:

* **Ash. Determination in grain and flour**
(NMKL no 7, 2nd ed)

This method, which replaces the first edition of the method published in 1952, has been collaboratively studied. Kaj Michaelsen (Denmark) was responsible for the study, and Claus Brenøe (Denmark) has assisted NMKL in working out the final text.

* **Preservatives. Detection by TLC. Proposed method**
(NMKL no 60, 2nd Ed)

NMKL no 60 (1987) replaces the first edition of no 60 published in 1967 and has been elaborated first by Astri Rogstad (Norway) later by Ingegerd Beckman (Sweden). Since the method in its present form has not been subjected to a collaborative study, it is published as an NMKL proposed method. All users are invited to submit comments on the performance of this proposed method.

* **Mould. Determination in food. Proposed method**
(NMKL no 98, 2nd ed)

This proposed method has been prepared by botanist Kerstin Åkerstrand at the National Food Administration in Uppsala, Sweden. Note that this method replaces the first edition of no 98 from 1980: 'Mould. Determination in cereals and cereal products'.

* **Yersinia enterocolitica. Detection in food**
(NMKL no 117, 2nd ed)

The first edition of this method was issued in 1986 as an NMKL proposed method. Subsequently, Georg Kapperud and Truls Nesbakken (Norwegian College of Veterinary Medicine) conducted a collaborative study of the method. The second edition of the method has been revised according to experience gained during the interlaboratory study; it includes new instructions for biochemical and serological characterization of suspected *Y. enterocolitica* colonies.

* **Saccharin. Liquid chromatographic determination in beverages and sweets** (NMKL no 122)

An LC method for the determination of saccharin has been collaboratively tested. Anna-Maija Sjöberg at the Food Research Laboratory of

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the Technical Research Centre of Finland coordinated the study and the collaborative study report appeared in the 1987 January/February edition of the Journal of the Association of Official Analytical Chemists (JAOAC 70(1987)58).

*** Cyclamate. Spectrophotometric determination in foods (NMKL no 123)**

NMKL no 123 was developed to replace the gravimetric NMKL method no 42 from 1972. Anna-Maija Sjöberg at the Food Research Laboratory of the Technical Research Centre of Finland arranged the collaborative study of the method. This showed the relative standard deviation for repeatability to be 4.1 % for soft drinks and 3.2 % for jams. The corresponding reproducibility parameters were 6.7 and 4.4 %, respectively. The study report appears in the 1987 May/June edition of the Journal of the Association of Official Analytical Chemists (JAOAC 70(1987)588).

*** Benzoic acid, sorbic acid and p-hydroxybenzoates. Liquid chromatographic determination (NMKL no 124)**

Chemist Barbro Halén of the National Food Agency, Uppsala, Sweden has developed this method and arranged its collaborative testing. The test included the sample matrices mayonnaise, fish, cheese and apple juice. A total of sixteen samples with varying analyte levels and combinations were analyzed in eleven laboratories. The statistical evaluation revealed no interlaboratory variation for any of the five preservatives.

*** Thermotolerant coliform bacteria. Determination in foods after pre-incubation (NMKL no 125)**

This new method which replaces former NMKL method no 62 (1966) is applicable to all types of food products with the exception of fish products. It was especially developed to obtain a more reliable determination of "stressed" or sublethally injured coliform bacteria, which will not grow in violet red bile agar without suitable pre-incubation. Frits Vagn Jensen and Bjørn Fredebo Thomsen in Denmark prepared the revised method.

ORDERING OF METHODS

All NMKL methods are published in a Scandinavian language (Danish, Norwegian or Swedish) and in English. Since 1985 all new methods are also available in a Finnish-English edition. NMKL methods are available through the office of the Secretary General and cost FIM 25 or US \$ 6 each.

The address is: Nordic Committee on Food Analysis, c/o Technical Research Centre of Finland, Food Research Laboratory, SF-02150 ESBO, Finland. NMKL can be reached through telex: 122972 vttha sf or via telefax: +358-0-462382.

NEW NMKL METHODS

The following methods of analysis for food have been published by the Nordic Committee on Food Analysis in 1988 and are available through NMKL's office in Finland:

Collaboratively Studied Chemical Methods

- * **Histamine. Qualitative thin-layer chromatographic screening method for fish** (NMKL no 118), 2nd ed.

NMKL no 118 (1988) replaces the first edition of the method, which was published as a proposed method in 1986. The method has now been collaboratively studied and is issued as an official NMKL method. Benedicte Hald at the Royal Veterinary and Agricultural University in Denmark, coordinated the collaborative test. Twelve laboratories participated in the collaborative study, which included 5 samples containing histamine at levels from 0 mg/kg to 1000 mg/kg. At the lowest tested level, 100 mg histamine/kg, eight laboratories found from 60 to 250 mg histamine/kg while the rest of the collaborators reported "less than 100 mg/kg". No laboratory reported "not detected" or zero at this level. The method has a sensitivity of 200 mg histamine/kg and a recovery of 90 % on this level.

The method can be applied to fish products and has only been tested on such products. If it is intended to apply the method to foods other than fish products, it should be noted that it may be necessary to introduce modifications.

- * **Tin. Determination by atomic absorption in fruits and vegetables** (NMKL no 126)

This collaboratively studied method is applicable to the determination of tin in fruits and vegetables in the concentration range 10 to 500 mg/kg. It is a rapid method, especially suitable for routine determinations of tin in canned fruits and vegetables contaminated with migrated tin from the can. Rolando Mazzone, Erik Frandsen (PLM Hastrup, Odense) and Knud Voldum-Clausen (National Food Agency, Copenhagen) from Denmark have each in turn contributed to the elaboration, collaborative testing and final editing of this method.

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In the collaborative testing of the method two samples of tomato soup and two samples of apple sauce were analyzed in 13 laboratories. The repeatability relative standard deviations were 4.3 and 2.4 % in the tomato soup samples and 7.7 and 2.9 % in two samples of apple sauce. The corresponding parameters for reproducibility were 12.0 and 7.6 % for tomato soup and 9.4 and 4.0 % for apple sauce. The coordinators of the collaborative study are working on a report of the study, aiming at publishing it shortly in a scientific journal.

*** Hydroxyproline. Colorimetric determination as a measure of collagen in meat and meat products (NMKL no 127)**

This method, which describes the quantitative determination of hydroxyproline and an estimation of the amount of collagenous connective tissue in meat and meat products, has been collaboratively studied in 18 laboratories. Eight samples were included.

Kurt Kolar of the Swedish Meat Research Institute in Kävlinge, Sweden, coordinated the study. The final report of the study is expected to be published soon. As determined in the collaborative study, the within laboratory precision of the method, its repeatability, allows the hydroxyproline content of a sample containing the analyte at the 0.50 g/100 g level, to be determined with a precision of ± 0.03 g/100 g. The corresponding between laboratory parameter, the reproducibility of the method, predicts that results from different laboratories at the level 0.50 g hydroxyproline/100 g will vary within ± 0.05 g/100 g.

Proposed method

*** Polyphosphates. Detection by paper chromatography in meat products etc. (NMKL no 76, 2nd Ed)**

NMKL no 76 (1988) replaces the first edition of no 76 published in 1970 and has been elaborated by Per Joner of the Norwegian College of Veterinary Medicine in Norway. It has been revised according to experiences of the Oslo Board of Health Dept of Food Control where ca 1000 polyphosphate determinations are performed each year. The method has not been subjected to a full collaborative study and is therefore published as an NMKL proposed method, not an NMKL method.

Compared to the first edition of this method, the following changes have been made:

1. For greater accuracy in reading of chromatogrammes and for increased sensitivity the developers have been changed.

2. To reduce the consumption of trichloroacetic acid, which is a toxic compound, the sample preparation has been simplified: meat samples are extracted with warm water only. It has been found, that the trichloroacetic acid present in the chromatography solvent is sufficient to achieve precipitation of proteins present in meats. Only milk powder, caseinates and blood plasma samples are extracted with 20 % trichloroacetic acid. For confirmation of results meat samples found to be positive for polyphosphates when extracted with water are re-chromatographed after trichloroacetic acid extraction.

Microbiological Method

* Pretreatment of foods for microbiological examination (NMKL no 91, 2nd Ed)

NMKL no 91 (1988) replaces the first edition of the method published in 1975. This method describes a routine technique for sampling and further pretreatment of samples for subsequent determination of microorganisms. The method can be used with solid, semi-solid and liquid foods. In solid foods both surface flora and depth flora may be determined. The method does not take into account obligatory anaerobic Gram negative non-spore forming microorganisms. Mette Nyborg and Bjørn Fredebo Thomsen (Denmark) have been responsible for the elaboration of these instructions.

Most microbiological NMKL methods include no pretreatment instructions but contain a reference to NMKL no 91. Please make sure that this new edition of the method for sampling and further pretreatment is always used in connection with microbiological NMKL-methods.

ORDERING OF METHODS

All NMKL methods are published in a Scandinavian language (Danish, Danish, Norwegian or Swedish) and in English. Since 1985 all new methods are also available in a Finnish-English edition. NMKL methods cost FIM 25 or US \$ 6 each and are available through NMKL's office:

Nordic Committee on Food Analysis, c/o Technical Research Centre of Finland, Food Research Laboratory, SF-02150 ESB0, Finland. NMKL can also be reached through telex: 122972 vttha sf or via telefax: +358-0-4552103.

NMKL COLLABORATIVE STUDIES PLANNED FOR 1988/89

Code No	Method	Referee
3.10.3	Microbiological methods, automatization. DEFT-methods	Flemming Boisen Miljö- og levnedsmiddel- kontrollenheden Mikrobiologisk Laboratorium Lille Tornbjerg vej 24 DK-5220 ODENSE SØ DENMARK
3.12.1	Aflatoxin. Determination in peanuts and peanut products (Rev no 90)	Tord Möller National Food Administration Box 622 S-751 26 UPPSALA SWEDEN
3.20	Listeria monocytogenes. Detection in food	Professor Niels Skovgaard Royal Veterinary and Agricultural University Institute of Hygiene and Microbiology Bülowsvej 13 DK-1870 FREDERIKSBERG DENMARK
8.11.6	PCB. Congener specific determination in food	Kimmo Himberg Techn Res Centre of Finland Food Research Laboratory SF-02150 ESPOO FINLAND
12.3.4.2	Starch. Enzymatic determination in meat products	Dr Ulla Edberg National Food Administration Box 622 S-751 26 UPPSALA SWEDEN

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METHODS UNDER DEVELOPMENT WITHIN THE NORDIC COMMITTEE ON FOOD ANALYSIS

<u>Code No</u>	<u>Method</u>	<u>Referee</u>	<u>Status</u>
3.2.1	Coliform bacteria. Determination in foods (Rev no 44)	Ivar Hellesnes Trondheim off. kjøtt- og næringsmiddelkontroll Brattøra N-7000 TRONDHEIM NORWAY	Revised method being drafted
3.5	Fecal streptococci. Determination in foods (Rev no 68)	Steen Ewald Norwegian College of Veterinary Medicine, P.O.Box 8146 Dep. N-0033 OSLO 1 NORWAY	Revised method being drafted
3.8	Salmonella bacteria. Detection in foods (Rev no 71, 3rd ed.)	Christer Wiberg National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Revised method being drafted
3.10.3	Microbiological methods, automatization. DEFT-methods	Flemming Boisen Miljø- og levnedsmiddelkontrollenheden Mikrobiologisk Laboratorium Lille Tornbjerg vej 24 DK-5220 ODENSE SØ DENMARK	New draft method to be collaboratively studied in 1988/89
3.12.1	Aflatoxin. Determination in peanuts and peanut products (Rev no 90)	Tord Möller National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Collaborative study scheduled for winter 1988/89
3.17	Campylobacter jejuni/coli. Detection in food (Rev no 119)	Mats Peterz National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Collaborative study of revised method completed Report expected before 1.12.1988

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8.6.10.3	Sulfite. Spectrophotometric determination in food	Eva Lönberg National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Collaborative study completed. Report under consideration
8.6.10.4	Sulfite. Enzymatic determination in food	Dr Ulla Edberg National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Collaborative study completed. Report under consideration
8.9.3.2.1	Betacarotene, beta-apo-8-carotenal and canthaxantin. Determination by HPLC in food	Dr Tapani Suortti Techn Res Centre of Finland Food Research Laboratory SF-02150 ESP00 FINLAND	Collaborative study completed. Report expected before 1.12.1988
8.11.6	PCB. Congener specific determination in food	Kimmo Himberg Techn Res Centre of Finland Food Research Laboratory SF-02150 ESP00 FINLAND	Joint NMKL/AOAC Collaborative study scheduled for 1988/89
8.13	Metals. Determination by atomic absorption	Lars Jorhem National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Collaborative study scheduled for autumn 1988
8.16.2	Glutamic acid and monosodium glutamate. Enzymatic determination in meat and fish products and in soups	Tapani Hattula Techn Res Centre of Finland Food Research Laboratory SF-02150 ESP00 FINLAND	Collaborative study scheduled for autumn 1988
12.3.1/ 12.3.2	Water and ash. Gravimetric determination in meat products (Rev no 23, 2nd ed.)	Britt Hanto Statens Teknologiske Institutt Postboks 8116, Dep. N-0032 OSLO 1 NORWAY	Revised method being drafted
12.3.3	Fat. Determination after SBR in meat and meat products (Rev no 88)	Lars-Börje Croon National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Collaborative study of present and revised method completed. Report expected before 1.12.1988

3.19	Brochothrix thermosphacta Detection in food	Sven Qvist Slagteri- og Konserver- laboratoriet Howitzvej 13 DK-2000 FREDERIKSBERG DENMARK	New method being drafted
3.20	Listeria monocytogenes. Detection in food	Professor Niels Skovgaard Royal Veterinary and Agricultural University Institute of Hygiene and Microbiology Bülowsvej 13 DK-1870 FREDERIKSBERG DENMARK	New method being drafted, collaborative study scheduled for 1988/89
5.3	Microbiology. Examination of fully preserved canned foods (Rev no 59, 2nd ed)	Karl Håkon Skramstad Norconserv Postboks 327 N-4001 STAVANGER NORWAY	Revised method being drafted
7.3.3	Ochratoxin A. Determination by HPLC	Referee not appointed	New subject
8.1.2.2	Wateractivity. Determination with crystal solution method	Referee not appointed	New subject
8.3	Phosphorous, total. Photo- metric determination after wet ashing in food (Rev no 57)	Dr Georg Fuchs Ia Torelm National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Revised method being drafted
8.4.5	Monosaccharides, disacchar- ides. Determination by HPLC in fruit and vegetable products	Dr Håkan Johnsson Hans Hessel National Food Administration Box 622 S-751 26 UPPSALA SWEDEN	Collaborative study completed Report expected before 1.12.1988
8.5.4	Aspartame and diketopiperaz- ine. Determination by HPLC	Astrid Nordbotten Arne Vidnes Norwegian Food Control Authority Postboks 8187 Dep. N-0034 OSLO 1 NORWAY	Collaborative study completed Report expected before 1.12.1988

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12.3.4.2 Starch. Enzymatic determination in meat products

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New method being drafted, collaborative study scheduled for 1989

13.4 Glycoalkaloids. Liquid chromatographic determination in potatoes

Karl-Erik Hellenäs
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New method being drafted