



## NORDIC COMMITTEE ON FOOD ANALYSIS

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All NordVal International certificates  
are available on  
[www.nmkl.org](http://www.nmkl.org)  
under the tab "NordVal".

### What has happened since the last newsletter?

**NMKL method No. 151 Presumptive *Shigella* spp. Detection in foods** has been updated and reintroduced.

*Shigella* in foods and the environment is normally of human fecal origin, usually low in number, low in infectious dose, person-to-person contamination can occur, and it can survive in weeks and months in or on various foodstuffs.

In this updated method, a step to reduce background flora and ease the isolation of *Shigella* for some matrices has been included. In addition, a recommendation as to which plates to use has been added. This method can be used for subsequent isolation of *Shigella* spp., after using NMKL 174, 2016, for detection of the virulence factor *ipaH* in the enrichment broth. Furthermore, NMKL 174 can be used for detection of *ipaH* in presumptive colonies.

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NMKL and AOAC INTERNATIONAL have entered a **cooperation agreement** in order to make certification of chemical and microbiological proprietary analysis methods for food, water, feed, contact surfaces and primary production samples easier.

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At NMKL's 73rd annual meeting at the beginning of September, the members elected a **new chairman**: Dag Grønningen, Norway, takes over from Franklin Georgsson, Iceland.



**UPDATED AND REINTRODUCED METHOD**

## Presumptive *Shigella* spp. Detection in foods (NMKL method No. 151, 2019)

The presence of *Shigella* in food and the environments is normally of human fecal origin. *Shigella* is host-specific for higher primates, including humans. *Shigella* is usually present in foods in low number due to their poor ability to compete. Consequently, they are notoriously difficult to detect in foods. The infectious dose is low, and only 10-100 *Shigella* are needed to cause infection. Due to the low infectious dose, cross contamination from infected humans to foods and consequently to more persons can occur, for example through handling of foods. Person-to-person contamination can also occur. It has been shown that *Shigella* can survive in weeks and months in or on different foodstuffs.

It was considered necessary to have a culturing method in addition to PCR methods for the detection of *Shigella* spp., and thus NMKL 151 (withdrawn in 2005) has been reintroduced.

A voluntary acid treatment is included, which reduces the background flora in some matrices, and isolation of *Shigella* becomes easier. The effect of the acid treatment varies between the different *Shigella* spp. and also between different strains of the same species. It is recommended to use it in addition to direct plating from the enrichment broth.

Samples are enriched in Buffered Peptone Water (BPW) and recommendation for plates is given. NMKL 174, 2016, (PCR method) can be used for detection of the virulence factor *ipaH* in presumptive colonies. Isolates should be sent to a reference laboratory for confirmation.

Referees were Gro Skøien Johannessen and Tone Mathisen Fagereng, both from the Norwegian Veterinary Institute.

Gro S. Johannessen is a senior research scientist at the section for Food Safety and Animal Health at the Norwegian Veterinary Institute. She has broad experience with working with detection of foodborne pathogens and indicators along the food production chain. Gro is currently the chairperson of the microbiology subcommittee of NMKL, takes part in working groups in ISO TC 34/SC 9, and is the contact person for NRL STEC in Norway. She also takes part in different projects and research projects both in Norway and internationally.



Photo: Eivind Røhne

## NordVal International - Renewed certificate



NordVal International certificate No. 046 "Salmonella Velox" issued to DNA Diagnostic has been renewed. This method is applicable for the detection of *Salmonella* spp. in raw meat, poultry and fishery products, ready-to-cook, ready-to-reheat og ready-to-eat meat, poultry and fishery products and on swabs on raw food.

## COOPERATION AGREEMENT

# Agreement streamlines certification for food scientists and laboratories

In September, NMKL and AOAC INTERNATIONAL signed a cooperation agreement that will streamline the process for analytical scientists and test kit companies seeking recognition from AOAC and NMKL.

The new agreement allows the two organizations and their respective certification programmes to jointly develop and use common evaluation protocols and select independent testing laboratories.

The goal of the cooperative agreement is to reduce the economic barrier imposed by requiring separate studies. "These joint AOAC-NMKL protocols mean method developers will avoid having to collect data twice, once for each organization," said Dave Schmidt, Executive Director of AOAC INTERNATIONAL. "Method developers will be able to conduct testing once at one laboratory, and the data will be applicable to both AOAC and NMKL."

When test kit companies apply for validation from both NordVal International and AOAC, either of the two organizations may conduct peer reviews, render decisions on approvals of methods, and review and/or renew approval or certification according to acceptance criteria agreed upon by both organizations.

Non-proprietary methods can be issued jointly by AOAC and NMKL and may potentially be named an "AOAC-NMKL method" or an "NMKL-AOAC method," depending on which organization first elaborated the method. "Scientists will have more methods to choose from," added NMKL subcommittee chairperson Hilde Skår Norli of NordVal International. "For laboratories, the benefit is that they will not need to validate methods themselves – they will have already validated methods."



Dave Schmidt, Executive Director of AOAC INTERNATIONAL, and Nina Skall Nielsen, General-Secretary of NMKL, signing the agreement.

In the back: Palmer Orlandini, AOAC; Hilde Skår Norli, NordVal International, Scott Coates, AOAC; Jonathan J. Goodwin, AOAC;  
In the front: Dave Schmidt, AOAC; Nina Skall Nielsen, NMKL

Photo: AOAC INTERNATIONAL

## NMKL's 73<sup>RD</sup> ANNUAL MEETING

NMKL's 73<sup>rd</sup> annual meeting was held on 1-3 September in Reykjavik, Iceland.

This year, we congratulated Mari Sandell (Finland), Vala Friðriksdóttir (Iceland) and Ingibjörg Jónsdóttir (Iceland) for their 10-year anniversary.

This was also the year when Sven Qvist and Arne H. Jensen (both from Denmark) attended their last annual meeting; they have previously retired from work and now also from NMKL. Sven Qvist has been a member of NMKL since 1988 and chairman of NordVal International for eighteen years, until 2017. Arne H. Jensen has been a member of NMKL since 1996 and chairman of the Danish national committee during two terms. At the annual meeting, a big thank you was extended to both Sven and Arne for their work for NMKL for so many years.

We are happy to welcome the following persons to NMKL:

Arvid Fromberg, Denmark,  
Birgit Groth Storgaard, Denmark  
Linda M. Andersson, Sweden  
Maria Simola, Finland  
Rune Ellegaard Lyngsø, Denmark  
Sunniva Hoel, Norway

A big thank you to the Icelandic national committee for organising this meeting, which offered opportunities for knowledge-sharing, project work and social gatherings. Besides the academic work, participants were taken on a tour to, amongst others, a geothermal centre for renewable energy. At the centre, warmth and electricity is produced, and, at the same time, CO<sub>2</sub> is fixated.



Photos: NMKL Secretariat



Photo: Norwegian Veterinary Institute

Franklin Georgsson had announced that he would not again run for chairman of NMKL.

Instead, **Dag Grønningen** was elected chairman.

Dag Grønningen is cand. scient. (University in Oslo, 1990) in inorganic analytical chemistry. Since 1995 he works at the Norwegian Veterinary Institute ([www.vetinst.no](http://www.vetinst.no)), and since 2014 he is the chairman of the Norwegian national committee of NMKL.

At the annual meeting, a big thank you was extended to Franklin Georgsson for his leadership as chairman of NMKL through the past four years.



## NMKL procedures available

No 1, 2nd Ed. 2005 Kalibrering och kontroll av vågar på laboratorier. *Calibration and performance checking of laboratory balances*

No 3, 1996 Kontrollkort och kontrollprov i den interna kvalitetskontrollen på kemiska livsmedelslaboratorier. *Control charts and control materials in internal quality control in food chemical laboratories*

No 4, 3rd Ed., 2009 Validering av kemiske analysemetoder. *Validation of chemical analytical methods*

No 5, 2nd Ed. 2003 Skattnig och angivande av mätosäkerhet vid kemiska analyser. *Estimation and expression of measurement uncertainty in chemical analysis (3rd Ed. 2019)*

No 6, 2nd Ed. 2016 Generelle retningslinier for kvalitetssikring af sensoriske laboratorier. *(Yleiset ohjeet aistinvaraisten laboratorioiden laadunvarmistukseen)*

No 7, 1998 Kontrol af UV/VIS spektrofotometre. *Checking of UV/VIS spectrophotometers*

No 8, 4th Ed. 2008 Måleusikkerhet ved kvantitativ mikrobiologisk undersøkelse av næringsmidler. *Measurement of uncertainty in quantitative microbiological examination of foods*

No 9, 2nd Ed., 2007 Utvärdering av det systematiska felet med användning av certifierade referensmaterial. *Evaluation of method bias using certified reference materials*

No 10, 2nd Ed. 2017 Kvalitetskontroll av mikrobiologiske dyrkningsmedier. *Control of microbiological media*

No 11, 2nd Ed. 2010 Sensorisk bedømmelse av drikkevann. *Procedure for sensory analysis of drinking water*  
Juomaveden aistinvarainen arviointi.

No 12, 2nd Ed., 2014 Håndbok i prøvetaking av næringsmidler. *Guide on sampling for analysis of foods*

No 13, 2003 Volumetrisk kontrol. *Volumetric control*

No 16, 2005 (2007) Sensorisk Kvalitetskontroll. *Sensory quality control*. Aistinvarainen laadunvalvonta

No 17, 2006 Kravspesifikasjoner ved kjøp av analysetjenester. *Guidelines for requirement specifications for food analyses*.

No 18, 2006 Bruk av referansmaterialer, referansestammer og kontrollkort i mikrobiologiske næringsmiddellaboratorier. *The use of reference materials, reference strains and control charts in a food microbiological laboratory*

No 19, 2007 Riktlinjer för sensorisk bedömning av livsmedelsförpackningar. *Guideline for sensorial Analysis of Food containers/packages*

No 20, 2007 Evaluering av resultater fra kvalitative metoder. *Evaluation of results from qualitative methods*

No 21, 2nd Ed. 2016 *Guide for sensory analysis of fish and shellfish* (Available in English and Finnish)

No 22, 2008 Anvisningar för värdering av immunokemiska testkit för livsmedelsanalys. *Considerations regarding evaluation of immunochemical test kits for food analysis*

No 23, 2008 Handledning i kvalitetssäkring för mikrobiologiska laboratorier. *Guide on quality assurance in microbiological laboratories*

No 24, 2010 Veiledning i kvalitetssäkring for kemiske levnedsmiddellaboratorier. *Guidelines for quality assurance for food chemical laboratories* (also available in Finnish)

No 25, 2014 Utbyte (Recovery) vid kemiska analytiska mätningar. *Recovery information in analytical measurement*

No 26, 2nd Ed., 2015 Kontroll och intern kalibrering av termometrar och temperaturkontroll på mikrobiologiska laboratorier. *Control and internal calibration of thermometers and temperature control on microbiological laboratories*

No 27, 2013 Måleusikkerhet i sensoriske analyser. *Measurement uncertainty in sensory analysis*

No 28, 2014 *Guidelines for reporting sensory data*

No 29, 2014 *Guidelines for sensory analysis of meat and meat products (English and Finnish)*

No 30, 2014 *Statistical Evaluation of Results from Quantitative Microbiological Methods (English)*

No 31, 2015 *Guidelines for sensory evaluation of bread*

No. 32, 2017 Verifikation af mikrobiologiske metoder. *Verification of microbiological methods*