Erik Kirknel

Training of pesticide residue- and heavy metal chemists from Poland. Accreditation survey visit to an Estonian laboratory.
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<tr>
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</tbody>
</table>
## Annexes

A  Report from the visit to Ås, Norway August 14.-16. 2001  
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C  Evaluation from trainees, schemes  
D  Evaluation from the training centres and the training programmes  
E  Evaluation from the home laboratories  
F  DANAK’s report from survey visit, Tartu December 7. 2001  
G  Pictures of analytical equipment installed in Trzebnica
1. List of abbreviations

CD-ROM Compact Disk-Read Only Memory
DANAK The Danish Accreditation
DIAS The Danish Institute of Agricultural Sciences
EEC European Economic Communities
EPA Environmental Protection Agency
EU European Union
MFAF Ministry of Food Agriculture and Fisheries
SNT Statens Næringstilsyn (National Food Control)

2. Summary of project activities

2.1 Training of chemists

<table>
<thead>
<tr>
<th>Home country/ city</th>
<th>Name</th>
<th>Starting date, Sunday</th>
<th>Final date, Saturday</th>
<th>Number of days</th>
</tr>
</thead>
<tbody>
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<td>Poland</td>
<td>A. Rogulska 2</td>
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<tr>
<td>Poznan</td>
<td>E. Smolka 2</td>
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<td>15-09-01</td>
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<td>A. Nowacka 2</td>
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<td>Torun</td>
<td>B. Langowska 2</td>
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<td>13</td>
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<tr>
<td>Białystok</td>
<td>B. Morzycka 3</td>
<td>07-10-01</td>
<td>27-10-01</td>
<td>20</td>
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<tr>
<td>Białystok</td>
<td>A. Hajduk 4</td>
<td>30-09-01</td>
<td>27-10-01</td>
<td>27</td>
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<tr>
<td>Białystok</td>
<td>L. Rodziewicz 4</td>
<td>30-09-01</td>
<td>27-10-01</td>
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<td>Pulawy</td>
<td>J. Szkoda 3</td>
<td>12-08-01</td>
<td>01-09-01</td>
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<td>Poznan</td>
<td>K. Michalska 3</td>
<td>12-08-01</td>
<td>01-09-01</td>
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</tr>
</tbody>
</table>

Sum: 302

2.2 Visits by the Danish expert

The training centre in Ås, Norway was visited August 14.-16. 2001
The training centres in Dresden and Chemnitz were visited September 30. – October 3. 2001.
The visits were a shared activity with the Baltic project 00108

2.3 Inspection of analytical equipment

Analytical equipment for 2 laboratories in Poland was purchased, installed and in function in Torun and Trzebnica. Inspection took place 14.-17. November 2001 and 7.-12. July 2002. Due to partners lack of self-finance, the equipment planned to be installed in Poznan was not purchased.
2.4 DANAK accreditation, 1-day survey visit to Tartu
A one day survey to the Health Protection Inspectorate, Central Laboratory of Chemistry was made by DANAK. The laboratory was evaluated to continue the accreditation earlier given by DANAK

3. Project background

3.1 Project justification
This project is part of a much wider programme aimed at developing and implementing crop protection strategies that will contribute to environmentally and economically sound agricultural production in the Baltic Countries and Poland.

The Council Directives 91/414/EEC (concerning the placing of plant protection products on the market) and 93/99/EEC (on the subject of additional measures concerning the official control of foodstuffs) describe the requirement for well functioning chemical pesticide residue laboratories in member states, in order to be able to bring pesticides through the national registration process and to monitor foodstuffs on the market for residues of pesticides.

The EU regulation and monitoring of heavy metals may take place according to:

- The EU Council regulation 315/93/EEC (a frame, which may be filled out with specific rules on heavy metals, but have not taken place yet). These rules are valid for all foodstuffs (DG-3 concern).
- Council Directive 96/23/EC on the control measures for certain compounds and residues hereof, in living animals and the out coming products of animals. In annex I and II (among others), requirements on monitoring of so-called B3 compounds, for example heavy metals (DG 6 concern)

In Denmark, these two activities are under the auspices of The Ministry of Food. It is, therefore, a natural part of the Environmental Related Sector Programme of the Danish state’s East Assistance Programme.

This project aims at training of pesticide- and heavy metal chemists so that modern techniques and methodologies, complying with EU requirements, can be used in the laboratories. This will work towards enabling pesticide- and heavy metal residue laboratories in The Baltic countries in the future to meet EU standards in this field.

3.2 Project background

The Danish Ministry of Food, Agriculture and Fisheries requested a survey to be carried out by The Danish Institute of Agricultural Sciences (DIAS) in late 1997 and early 1998 to assess the need for support and possibilities of co-operation in the process of harmonization to the EU directives. The survey covered efficacy testing system for pesticides, quality assurance systems and residue analysis for pesticides suitable for the purpose of registration and monitoring of pesticides in food, as well as a basis for providing advice to farmers based on environmentally sound agricultural production principles.

Furthermore a need for support on quality control of pesticides was registered.

Relevant chemical pesticide residue laboratories in The Three Baltic Countries and Poland were visited (see Final reports for the project: Project Identification in The Three Baltic Countries and Poland in the Environment Related sector Programme). Within the area of chemical pesticide residues and quality control of pesticides, the following areas of co-operation were identified:
1. Training of chemists
2. New equipment
3. General Co-operation between the Nordic countries, the Baltic Countries and Poland
4. Support to formulation of development plans for future activities in pesticide residue work

The survey revealed a strong wish and a pronounced need for co-operation on all four subjects.

The four reports: Identification of possible partners (in Estonia, Latvia, Lithuania and Poland) in environmental related sector programmes of the Danish Ministry of Food, Agriculture and Fisheries revealed a clear need and wish for new equipment necessary for pesticide residue analysis and quality control of pesticides.

Equipment and methodologies are very closely related in modern chemistry in general and this is also the case in the Baltic countries and Poland. Laboratories employ chemists that are skilled in methodologies and use of equipment which are in use at the present. These are out of date and inadequate to meet EU standards.

During the project identification mission it was realised that there is a general need for purchase of modern equipment for laboratories. The quality and quantity of equipment needed varied, however, at the various laboratories. It was not possible during the mission to make a specific identification of needs. The equipment available at present is in general old equipment from the Soviet Union era - often 15-20 years old and in most cases practically worn out. Chemists must be informed of the availability and options of newer equipment which will enable them to meet EU standards. This is a prerequisite for the harmonisation process for EU.

Since 1997 10 individual projects consisting of training of 43 chemists in pesticide residue analysis, heavy metal analysis have been performed in Estonia, Latvia, Lithuania and Poland with co-operation from DIAS Flakkebjerg. Implementation of necessary analytical equipment to help bringing a range of national monitoring laboratories into the position of accreditation has taken place. One laboratory in Estonia (Tartu) have been accredited by DANAK (DANAK’s first accreditation outside DK!).

A still running project on co-operation on the pesticide registration process, involves 19 persons from the four countries. The Project is made in co-operation with the Danish EPA.

The total budget for the first 10 projects has been nearly 24 mill DKK, 7 mill financed by partner and 17 mill financed by MFAF. The last two projects are applying for totally 2.5 mill to MFAF

This application has been one of two final applications that submitted to this programme. Both are mainly on training of chemists. The second project covers Poland. The number of chemist applied for training in the two projects was 11 and 13 respectively. This brings the number of persons totally trained in all the 12 project up till 86. The training period had varied from one to six weeks abroad. The training have been performed on accredited laboratories in Germany, Norway, Sweden and Denmark.

The evaluation of the co-ordinator is that there has been created a network of pesticide residue chemists, risk assessors and administrators in The Baltic/Polish/Scandinavian region, not only to the benefit of the three Baltic countries and Poland, but to the region as a whole.

The partner laboratories are all in the stage where they have either obtained national or international recognised accreditation, or are in the process to do so. Education will continue to be needed on the laboratories, but must be a task for the respective national funding in the future.
4. Project objectives

4.1 The wider objectives
The main development objective is to promote the environmentally safe use of pesticides in the Three Baltic Countries and Poland and to contribute to the process of harmonisation with relevant EU directives.

The immediate objective of this project is to support pesticide residue and heavy metal laboratories in Poland in the process of harmonisation with relevant EU directives.

4.2 The specific objectives
4.2.1 Poland
• 1 chemists to be trained at Ås N, in 3 weeks total
• 2 chemists to be trained at Ås N, in 4 weeks total
• 2 chemists to be trained in Speyer D, in 12 weeks total
• 2 chemists to be trained in Speyer D, in 8 weeks total
• 1 chemists to be trained in Dresden D, in 2 weeks total
• 2 chemists to be trained in Dresden D, in 6 weeks total
• 1 chemist to be trained in Leipzig D, in 6 weeks total
• 2 chemists to be trained in Trier D, in 4 weeks total
• Equipment inspection in PPI in Poznan, Torun and Trzebnica
• Visits to selected training centres

4.2.2 Estonia
• DANAK accreditation 1-day survey visit to Tartu

5. General remarks

5.1 Project geographic area
The project has taken place in:

Ås, Norway,
Leipzig, Speyer, Dresden Chemnitz and Trier Germany,
Poznan, Torun and Trzebnica Poland,
Tartu Estonia and
Denmark.

5.2 Project partners in recipient countries
Poland
1. Plant Protection Institute
Department of Pesticide Residues Research
Poland, 60-318 Poznan, ul.Miczurina 20
Phone : +48 61 8674841,+48 61 8649046
Fax : +48 61 867 63 01, e-mail: gruchot@ior.poznan.pl
Head : Dr Jerzy Dabrowski
Responsible team leader. Pesticide residues analyses : Anna Nowacka
2. Plant Protection Institute  
  PPI, Field Experimental Station  
  Poland, 15-192 Bialystok, ul. Moniuszki 44/2  
  Phone: +48 85 67534 19  
  Head Station and Responsible team leader  
  pesticide residues analyses: Bozena Morzycka

3. Plant Protection Institute  
  Field Experimental Station  
  Poland, 87-100 Torun, ul. Zwirki i Wigury 73  
  Phone: +48 56 623 56 99  
  Fax: +48 56 623 69 23  
  Head Station: Dr Heliodor Banaszak  
  Responsible team leader  
  pesticide residues analyses: Barbara Langowska

4. Plant Protection Institute  
  Field Experimental Station  
  Poland, 35-101 Rzeszow, ul. Langiewicza 28  
  Phone: +48 17 8543862  
  Head Station: Prof. Zdzislaw Przybylski  
  Responsible team leader  
  pesticide residues analyses: Dr Stanislaw Sadlo

5. Plant Protection Institute  
  Field Experimental Station  
  Poland, 55-100 Trzebnica, ul. Milicka 21  
  Phone: +48 71 3120462  
  Head Station: Dr Marek Urban  
  Responsible team leader  
  pesticide residues analyses: Maria Klaczek

6. Plant Protection Institute  
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  Poland, 44-153 Sosnicowice, ul. Gliwicka 29  
  Phone: +48 32 2387596  
  Fax: +48 32 2387503  
  Head Division: Stanislaw Stobiecki  
  Responsible team leader  
  pesticide residues analyses: Irena Giza

1. Ministry of Agriculture and Food Economy  
   National Veterinary Research Institute  
   Dr. Jan Zmudski  
   Department of Pharmacology and Toxicology  
   Partyzantow 57  
   24 – 100 Pulawy, Poland  
   Phone: +48 81 886 30 51 ext. 104  
   Fax: +48 81 886 25 95  
   E-mail address: zmudzki@piwet.pulawy.pl
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Fax: +48 85 651 62 91
ZHW belongs to the Voivode of Podlaskie Province.

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Sanitary and Epidemiology Centre
For The Province Poznan
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Fax: +48 61 852 50 03
e-mail: wsse@man.poznan.pl

Estonia
Ministry of Social Affairs
Health Protection Inspectorate,
Central Laboratory of Chemistry.
Director Jüri Ruut/Leader of laboratory Dr. Mari Reinik
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EE-2400 Tartu
Phone: +372 74 47 421
Fax: +372 74 47 422
GSM: +372 55 16 384
E-mail: Jyri.Ruut@ut.ee, mari@ttkt.tartu.ee

5.3 Project partners outside recipient countries

Norway
Planteforsk, Pesticidlaboratoriet
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Oslovn. 1, 1430 Ås
Norge
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Fax: +47 64 94 95 79
e-mail: borge.holen@planteforsk.no
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Fax: + 47 64 94 81 20
e-mail: borge.holen@jordforsk.no

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Fax: +49 6232 6521 95
e-mail: axel.Welter@cua-sp.rlp.de

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Präsident Dr. Bernd Schlegel
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Fax: +49 351 8144 497
bernd.schlegel@lua.sms.sachsen.de or DRXSCHL@aol.co

Landesuntersuchungsanstalt für das Gesundheits- und Veterinärwesen Sachsen
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04107 Leipzig
Phone: 49 341 9788 218
Fax: 49 341 9788 214
E-mail: Ulrich.Hempel@lua.sms.sachsen.de

Chemisches Untersuchungsamt Trier
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Maximineracht 11a
D-54295 Trier
Germany
Phone: 49 651 1446 211
Fax: 49 651 2102 8

Denmark
Erhvervsfremme Styrelsen
Erhvervsministeriet
DANAK
Lead assessor Arne Kjær Sørensen
Tagensvej 137
DK-2200 København N
Denmark
5.4 Purchased equipment
Equipment was purchased to two Polish Institutes under project 00108. The present project only contains inspections on the institutes of the purchased equipment.

5.5 Dissemination effect
The concept and spirit in the EU directives will spread to other laboratories in the regions and to neighbouring countries.

5.6 Impact on sustainable development and the environment
A modern well functioning analytical tool for pesticide- and heavy metal residue analysis and quality control of pesticides is a must in order to reduce the amount of pesticide used in primary crop production, heavy metal in general and to reveal unintended presence of pesticides and heavy metals in food and the environment. This is the basis for decision making regarding the use of any pesticide and heavy metal. A modern sensitive analytical tool and the results generated, will lead to increased attention to the presence of pesticides and heavy metal in food and the environment by the public and the producers of agricultural products.

Furthermore, as modern analytical methods require considerably reduced amounts of organic solvents a reduction of the burden on the environment will be achieved. This is especially relevant in the regions where no public interaction of waste is established.

5.7 Impact on the Danish industry
None

6. Status for activities

6.1 Training of chemists
The following table give an overview of the chemists trained on different European laboratories.
### Training Centre weeks (rounded)

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<th>Home country/city</th>
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<th>Final date, Saturday</th>
<th>Number of days</th>
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<td>Poland</td>
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<td>M. Walasek</td>
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<td>U. Sztwiertnia</td>
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<td>K. Schwarz</td>
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<td>A. Nowacka</td>
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<td>29-09-01</td>
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<td>B. Langowska</td>
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<td>29-09-01</td>
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<td>27-10-01</td>
<td>27</td>
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<td>L. Rodziewicz</td>
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<td>27</td>
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<td></td>
<td>J. Szkoda</td>
<td>12-08-01</td>
<td>01-09-01</td>
<td>20</td>
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<tr>
<td></td>
<td>K. Michalska</td>
<td>12-08-01</td>
<td>01-09-01</td>
<td>20</td>
</tr>
</tbody>
</table>

#### 6.2 Visits by the Danish expert

The training centre in Ås, Norway was visited August 14.-16. 2001. Please see Annex A
The training centres in Dresden and Chemnitz were visited September 30. – October 3. 2001. Please see Annex B. (The visits was a shared cost activity with project 00108 and is also reported in the final report of project 00108)

#### 6.3 Inspection of analytical equipment

Equipment was purchased to two Polish Institutes under project 00108. The present project only contains inspections on the institutes of the purchased equipment.
Due to lack of self-finance, only the laboratories in Torun and Trzebnica received analytical equipment. At the visit November 14.-17. 2001, the equipment was installed but not functioning in Torun. The equipment for Trzebnica was stored in Poznan in the original packages.
At the inspection in Torun and Trzebnica July 7.-12. 2002 the equipment was installed. All purchased equipment was functioning.

#### 6.4 DANAK accreditation, 1-day survey visit to Tartu

A one day survey to the Health Protection Inspectorate, Central Laboratory of Chemistry was made by DANAK.
Annex F documents the full DANAK report from the visit. Although deviations from ISO 17025 were noted, the laboratory was evaluated to continue the accreditation earlier given by DANAK.
7. Evaluation

7.1 Evaluation from trainees

Please see Annex C evaluation schemes filled out by the trainees.

An overall conclusion of the evaluation made by the trainee express a rather high degree of satisfaction of the training.

Only contacts to other institutions and the living accommodations receive grading in the medium class and below. 6 trainees have not graded the question.

Contacts to other institutions were actually not a part of the programme due to the short time of the training, but is seen as a benefit where possible.

<table>
<thead>
<tr>
<th>Grading schemes from project 00108</th>
<th>Grading number of persons</th>
<th>Grading in %</th>
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<tr>
<td></td>
<td>Unaccept.</td>
<td>Poor</td>
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<td>The benefit/relevance of the training?</td>
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<td>5</td>
</tr>
<tr>
<td>Contacts to other institutions?</td>
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<td>1</td>
</tr>
<tr>
<td>Quality of the instructors?</td>
<td>13</td>
<td>0,0%</td>
</tr>
<tr>
<td>The money available for food?</td>
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</tr>
<tr>
<td>The social contacts (also week-ends)?</td>
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<tr>
<td>The living accomodations?</td>
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<table>
<thead>
<tr>
<th>Grading number of persons</th>
<th>Grading in %</th>
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| Did the training give you some ideas to new working procedures when returning home? | No | Maybe | Yes | No | Maybe | Yes |
|-------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                | 2 | 11 | 0,0% | 15,4% | 84,6% |

7.2 Evaluation from the training centres and the training programmes.

The evaluation of the benefit gained by the trainee is made by the leader of the training centres, following a brief description of the content of the training.

Please see Annex D.

7.3 Evaluation from the home laboratories

The evaluation of the training by the leaders of the home laboratory is reproduced in Annex E

8. Evaluation of project sustainability

Very sustainable, part of the requirements in the directive EEC 91/414

9. Agreement between partners

None
10. **Conditions for procured articles**

No articles procured

11. **Gained experiences**

   The primary prerequisites for success in an education programme like the present are motivated trainees, a comprehensive training programme on the bench, which includes well equipped laboratories, a highly professional staff, willingness of this staff to take intensive part of the training and keen interest by the same staff to do their best in the working hours but also feel responsibility for their guests after working hour.

   All these conditions have been present in this project. The overall evaluation indicates satisfaction with the project.

   My experience is that this type of training, short time 2-4 weeks for trained chemists to visit a new working environment, will contribute to raise their professional skill as well as being accustom to other cultures.

   But it is also my experience that the working load is extremely high on European control laboratories and extra work means normally that the staff must run a little bit faster.

   Despite this, the training centres have accepted to take care of the training for which the project will express their appreciation.

12. **Future proposals**

   If economic resources will be available in the future, I will strongly recommend this type of training on the bench. The development in pesticide residue chemistry goes so fast today, that in order to keep up with the latest development, practical short training in running laboratories in western Europe is important for our neigbourghs in the eastern part of Europe.

13. **Date and signature**

    Flakkebjerg

    ………………………
    Erik Kirknel
Annex A

Report from the visit to Ås, Norway August 14.-16. 2001
August 14. –16. 2001 the two laboratories in Ås, Norway, Jordforsk and Pesticidlaboratoriet were visited.

**Jordforsk** is a private company managed as a foundation. Jordforsk was founded 1988 and has to a large extend contracted projects for Miljøvernsdepartementet (The Ministry of Environment). The staff consists of totally 80 scientific and technical workers, 20 of these working on the laboratories. Jordforsk is split up in 3 departments, department of registration and storage of samples, a Department of Environment and Department of Agriculture. Most of the methods of analysis on the department of environment have been accredited by Norsk Akkreditering (this accreditation was started in 1995), in contrast to the department of agriculture where accreditation traditionally not has been required by the customer. (A principle in quality: the customer defines the quality, this goes also for accreditation). Until now the Norwegian agriculture has not been ready to pay for a quality assurance which naturally increases the cost of the analysis. The laboratories are mainly working with soil as matrix. Each department analyse in average 15.000 analysis per year. The yearly turnover is around 12 Mio NOK. The present project have placed trainee on department of environment, working with the analysis of heavy metals. This department is well equipped with modern analytical equipment such as ICP and atomic absorption with graphite furnace. Training plans for the two trainees was discussed and accepted and characterised as very suitable.

Statens Plantevern, Ås, was in 1995 merged with 'Statens Forskningsstationer i landbrug’ and **Planteforsk** was realised. The organisation consists of 12 local units, 420 staff and is organised under Landbrugsdepartementet (The Ministry of Agriculture). 30% of the budget comes from the ministry. Plantevernet (The Plant Protection) in Ås is one of the local units consisting of 4 departments, plant disease, pest insects, weeds and **Pesticidlaboratoriet** (the Laboratory of Pesticides). The leader of Pesticidlaboratoriet and the laboratory leader on Jordforsk is the same, Børge Holen. Pesticidlaboratoriet is self financed, with no fixed annual budget from the state. The main task for Pesticidlaboratoriet is 4.500 analysis per year, hereof 3.000 analysis in the Norwegian monitoring for pesticides in food and 1.500 environmental analysis, mainly water analysis. Pesticidlaboratoriet has been handed over this monitoring by Statens Næringsmiddel Tilsyn (SNT, the National Food Control). The administration in Norway has the general attitude not to mix the administration and check off decisions taken in the administration (monitoring) and have contracted with private companies to a high degree on this check-activities. Plans for sampling plans are made by Pesticidlaboratoriet, results are passed via SNT to EU, despite Norway is not a member of the EU. The laboratory is fully accredited by the Norwegian Accreditation on pesticide residue analysis in food. The leader of the laboratory, Børge Holen, is furthermore a technical assessor of DANAK, the Danish Accreditation.

Pesticidlaboratoriet is absolutely well equipped both technically and a highly professional staff. Together with the responsible for the laboratory’s quality assurance manager, Agnethe L. Christiansen, I discussed a focal point in accreditation, method validation. Pesticidlaboratoriet is in full compliance with the requirements with the requirements DANAK have to similar laboratories. The plan for the trainees was discussed and accepted as very suitable.

At present plans are being developed to merge the two Jordforsk and Planteforsk, administratively and physically.

Conclusive remarks: The general impression of the two laboratories is that they have a very high technical level as well as a highly skilled staff interested in going into the training of our Baltic and Polish partners.

Pictures from the laboratories are reproduced on the attached CD-ROM on Final report of 00108.
Annex B

Report from the visit to Dresden and Chemnitz, Germany
September 30. – October 3. 2001
The two laboratories in Dresden and Chemnitz was visited during the period October 1. To 3. 2001. The organisation of the institution “Landesuntersuchungsanstalt für das Gesundheits- und Veterinärwesen Sachsen” placed at “Staatsministerium für Soziales, Gesundheit, Jugend und Familie”, is shown below. President, Dr. Bernd Schlegel was met in Dresden and Dr. Guenther Kempe in Chemnitz.

All German food laboratories are accredited according to EN 45.001, and will later follow the ISO standard 17025.

Sachsen is somehow on the size of Denmark and have four pesticide residue laboratories, each taking care of monitoring pesticide residues in their respective region. The technical and human standard is very high. All the equipment is no older than 5-10 years, see pictures on CD-ROM attached to this report. The methods of analysis are developed for all Germany, in-house validated and multi-residue in character. Possibilities for confirmation of exceeding of the Maximum Residue Limits (MRL) with mass spectrometry are present at all laboratories. As any EU-member country, Germany is obliged to monitor pesticide residues in plant and meat products. The monitoring programme revealed in 1999 exceeding of the MRL’s on plant and meat products 4% and 1% respectively. This is based on approximately 2,000 analyses per year, analysing for 220 pesticides and metabolites in plant products and 45 pesticides in meat products. In year 2000 the result was reduced to 2% and 0.2%. The result of the monitoring programme is similar to the Danish monitoring results. The dominating pesticide found in plant products is dithiocarbamates as seen in Denmark too. In general the fungicides dominates in plant products.

Plans for education of the trainees were discussed and found very appropriate. It was agreed that this type of education, working on the bench, was an optimal way of getting the trainee to absorb the “craft” of making pesticide residue analysis, understanding the quality assurance system (especially how to develop and maintain the system) and experiencing a new working environment. It was the experience by Dresden and Chemnitz, that sometimes could the trainee report they were in possession of newer equipment, but was completely unable to operate the equipment! This is in agreement with my own experience from other training centres. A field of intense interest was: Method validation. This aspect of the quality assurance system was earlier underestimated also in the western world. But, a central point in assuring high quality analysis. As we have seen in the accreditation process in the Estonian laboratory in Tartu (project 00065), method validation was totally neglected when DANAK and I made the first visit in the accreditation process.

The interest for educating the trainee was high, I would say I was very surprised positively, despite the fact that the laboratory did not receive any of the fees we pay for training! I find it very demotivating not to reward the laboratory for the extra working burden it actually is exposed to. I was told that Sachsen is the only region in Germany that has this policy. All other laboratories receive at least a share of the training fee to be used on small equipment, broken glass ware (by the trainee!) etc. Social weekends have been paid by private money!

Conclusive remarks: The laboratory and the staff is evaluated as highly skilled and interested in training this type of chemists in their laboratories.

Pictures from the laboratories are reproduced on the attached CD-ROM of Final report 00108.
Annex C
Evaluation from trainees, schemes
The Ministry of Food, Agriculture and Fishery  
The Danish Institute of Agricultural Sciences  
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse


<table>
<thead>
<tr>
<th>Name of trainee</th>
<th>A. Rogulska</th>
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| Home Institute  | State Sanitary Inspection  
Sanitary and Epidemiology Centre  
For The Province Poznan  
ul. Noskowskiego 23  
61-705 Poznan  
Phone: +48 61 852 99 18  
Fax: +48 61 852 50 03 |
| Trained at Institute | Jordforsk Lab  
Frederik A. Dahls vei 12  
1432 Ås  
Norway  
Phone: +47 64 94 81 08  
Fax: +47 64 94 81 20 |
| Project no.     | 00109       |

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The Ministry of Food, Agriculture and Fishery  
The Danish Institute of Agricultural Sciences  
Department of Plant Protection, Flakkebjerg, DK-4290 Slagelse

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<tr>
<td>Do you have suggestions to us for doing the training better in the future (if more space needed, please continue)</td>
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The training of heavy metals should be extended. I would like to participate in similar training in next year.

Date: 14.08.01  
Signature: [Signature]

Thank you for taking the time to fill in the questionnaire!
The Ministry of Food, Agriculture and Fishery  
The Danish Institute of Agricultural Sciences  
Department of Plant Protection, Flakkebjerg, DK-4280 Slagelse


<table>
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<th>Name of trainee</th>
<th>E Smolka</th>
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| Home Institute  | State Sanitary Inspection  
Sanitary and Epidemiology Centre  
For The Province Poznan  
ul. Noskowskiego 23  
61-705 Poznan  
Phone: +48 61 852 99 18  
Fax: +48 61 852 50 03 |
| Trained at Institute | Jordforsk Lab  
Frederik A. Dahls vei 12  
1432 Ås  
Norway  
Phone: +47 64 94 81 08  
Fax: +47 64 94 81 20 |
| Project no.     | 00109    |

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<td>Do you have suggestions to us for doing the training better in the future (if more space needed, please continue)</td>
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The training of heavy metals should be continues. I would like take part in similar training in next year.

Date: 14.09.01

Signature: [Signature]

Thank you for taking the time to fill in the questionnaire!

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<tr>
<th>Name of trainer</th>
<th>M. Walasek</th>
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| Home Institute | State Sanitary Inspection  
Sanitary and Epidemiology Centre  
For The Province Poznan  
ul. Nowikowskiego 23  
61-705 Poznan  
Phone: +48 61 852 99 18  
Fax: +48 61 852 50 03 |
| Trained at Institute | Landesuntersuchungsanstalt für das Gesundheits- und Tierwesen  
Sachsen (LUA) Dresden  
Präsident Dr. Bernd Schlegel  
Reichsbahnstrasse 71/73  
D-01217 Dresden  
Phone: +49 351 8144 403  
Fax: +49 351 8144 497 |
| Project no. | 00109 |

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*The Ministry of Food, Agriculture and Fishery  
The Danish Institute of Agricultural Sciences  
Department of Plant Protection, Flakkebjerg, DK-4260 Slagelse*
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Do you have suggestions to us for doing the training better in the future (if more space needed, please continue)

My first suggestion is: 2 weeks is not enough to see investigation all kinds of investigations.
I've seen microbiology labs in LUT - Jöger Nr. Dresden.

My second suggestion is: It is very important to organize the training for food microbiologist also. It is very many new techniques of investigations.

Date: 19 Sept. 01

Signature: [Signature]

Thank you for taking you the time to fill in the questionnaire!
Dear Dr. Berno Schlegel,

I haven't the possibility to see you in D.C. I'd like to say thank you for my mycotoxin training in October. Everything was okay. I've seen investigation of aflatoxins, TLC, chromat of HPLC and renewable. There was no enough time to see everything. After all, the training was very instructive and important for me. Mr. Hübner is very friendly, Mr. Richter is very good and nice trainer and Mrs. Rame is always ready to show everything. I've seen the microbiolaboratory at Fägerstr. It was also very instructive for me. I think it is necessary to organize trainings for food-mycotoxinists also.

At least, accommodation was good also.

Thanks for everything, my best regards.

Mieczysław Kabisch

Sani-Lab Inspection
ul. Młodzieżowa 25
Poznan
Poland

<table>
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<tr>
<th>Name of trainee</th>
<th>U. Sztwierdtsa</th>
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<td>Home Institute</td>
<td>Plant Protection Institute</td>
</tr>
<tr>
<td></td>
<td>Lab. of Pest. Residues Research</td>
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<tr>
<td></td>
<td>Poland, 44-153 Sosnowiec, ul. Gliwicka 29</td>
</tr>
<tr>
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<td></td>
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<tr>
<td></td>
<td>Nikolaus von Weis-Strasse 1</td>
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<td></td>
<td>D-67346 Speyer</td>
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<td>Mr. Axel Welter</td>
</tr>
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<td></td>
<td>Phone: +496232652181</td>
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The Danish Institute of Agricultural Sciences  
Department of Plant Protection, Flakkebjerg, DK-4260 Slagelse

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Do you have suggestions to us for doing the training better in the future (if more space needed, please continue)

Date: 12.10.2001  
Signature: [Signature]

Thank you for taking you the time to fill in the questionnaire!
The Ministry of Food, Agriculture and Fishery  
The Danish Institute of Agricultural Sciences  
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse


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<tr>
<th>Name of trainee</th>
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| Home Institute  | Plant Protection Institute  
Field Experimental Station  
Poland, 35-101 Breszow, ul. Langiewicza 28  
Phone: +48 17 8543862 |
| Trained at Institute | Landesuntersuchungsamt  
Institut für Lebensmittelchemie Speyer  
Nikolaus von Weis-Strasse 1  
D-67346 Speyer  
Mr. Axel Walter  
Phone: +49 6232 6521 81  
Fax: +49 6232 6521 95 |
| Project no.     | 00109       |

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The Ministry of Food, Agriculture and Fisheries
The Danish Institute of Agricultural Sciences
Department of Crop Protection, Flakkebjerg, DK-4300 Slagelse

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Do you have suggestions to us for doing the training better in the future (if more space needed, please continue)

Date: 42.40.200n
Signature: Spilge

Thank you for taking you the time to fill in the questionnaire!
The Ministry of Food, Agriculture and Fishery
The Danish Institute of Agricultural Sciences
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse

Evaluation scheme for training in pesticide residue analysis under the

<table>
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<tr>
<th>Name of trainee</th>
<th>K. Schwarz</th>
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| Home Institute    | Plant Protection Institute  
                   | Department of Pesticide Residue Research  
                   | Poland, 60-318 Poznan, ul.Micrania 20  
                   | Phone: +48 61 8674841,+48 61 8649046  
                   | Fax: +48 61 867 63 01 |
| Trained at Institute | Landesuntersuchungsanstalt für das Gesundheits- und  
                      | Veterinärwesen Sachsen  
                      | Standort Leipzig  
                      | Dr. Ulrich Hempel  
                      | Beethovenstr. 25  
                      | 04107 Leipzig  
                      | Phone: 49 341 9788 218  
                      | Fax: 49 341 9788 214 |
| Project no.       | 00109            |

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Do you have suggestions to us for doing the training better in the future (if more space needed, please continue):

I do not have any suggestions. In my opinion, the training was organized excellent.

Date: 04. NO. 01

Signature: Karolina Diks

Thank you for taking you the time to fill in the questionnaire!

<table>
<thead>
<tr>
<th>Name of trainee</th>
<th>A. Nowacka</th>
</tr>
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| Home Institute  | Plant Protection Institute  
Department of Pesticide Residues Research  
Poland, 60-318 Poznan, ul.Miezurina 20  
Phone: +48 61 8649046  
Fax: +48 61 867 63 01 |
| Trained at Institute | Chemisches Untersuchungsamt Trier  
Dr. Ottendorfer  
Maximinerach 11a  
D-54295 Trier  
Germany  
Phone: 49 651 1446 211  
Fax: 49 651 2102 8 |
| Project no.     | 00109 |

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The Ministry of Food, Agriculture and Fishery
The Danish Institute of Agricultural Sciences
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse

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Do you have suggestions to us for doing the training better in the future (if more space needed, please continue)

Date: 28.09.2001

Signature:

Thank you for taking the time to fill in the questionnaire!
Evaluation scheme for training in pesticide residue analysis under the

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<td>Poland, 87-100 Torun, ul. Zwirki i Wigury 73</td>
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The Ministry of Food, Agriculture and Fishery  
The Danish Institute of Agricultural Sciences  
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse

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| Do you have suggestions to us for doing the training better in the future (if more space needed, please continue) | |
|                                                                                                       |

Date: 28. 08. 2001  
Signature: B. Damourouza

Thank you for taking you the time to fill in the questionnaire!

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<tr>
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<td>Phone: +48 85 67534 19</td>
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<td>Planteforsk, Pesticidilaboratoriet</td>
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<tr>
<td></td>
<td>Borge Holen</td>
</tr>
<tr>
<td></td>
<td>Oslovn. 1, 1430 As</td>
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<td></td>
<td>Phone: +47 64 94 95 69</td>
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<tr>
<td></td>
<td>e-mail: <a href="mailto:borge.holen@planteforsk.no">borge.holen@planteforsk.no</a></td>
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Duration of the training? | Too short | Adequate | Too long |
|-------------------------|-----------|----------|----------|
The Ministry of Food, Agriculture and Fishery
The Danish Institute of Agricultural Sciences
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse

| Did the training give you some ideas to new working procedures when returning home? | No | Maybe | Yes |
| Do you have suggestions to us for doing the training better in the future (if more space needed, please continue) | | | |

Date: 26.10.2002
Signature: B. Møgelin

Thank you for taking you the time to fill in the questionnaire!
The Ministry of Food, Agriculture and Fisheries
The Danish Institute of Agricultural Sciences
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse

Evaluation scheme for training in pesticide residue analysis under the

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<th>A. Hajduk</th>
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| Home Institute  | Plant Protection Institute  
Field Experimental Station  
Poland, 15-192 Bialystok, ul. Moniuszki 4/2  
Phone: +48 81 67534 19 |
| Trained at Institute | Landesuntersuchungsamt  
Institut für Lebensmittelchemie Speyer  
Nikolaus von Weis-Strasse 1  
D-57346 Speyer  
Mr. Axel Welter  
Phone: +49 6232 6521 81  
Fax: +49 6232 6521 95 |
| Project no.     | 00109     |

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| Do you have suggestions to us for doing the training better in the future (if more space needed, please continue) | NO | 2 |

Date: 2001. 10. 25  

Signature: [Signature]

Thank you for taking the time to fill in the questionnaire!
The Ministry of Food, Agriculture and Fisheries
The Danish Institute of Agricultural Sciences
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse


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<td>Plant Protection Institute, Uniwersytet im. Adama Mickiewicza, ul. Wapowicka 5, 60-780 Poznan, Poland</td>
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<td>Field Experimental Station, Poland</td>
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<td>Phone: +48 85 67534 19</td>
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<td>Trained at Institute</td>
<td>Landesuntersuchungsamt, Institut für Lebensmittelchemie Speyer, Nikolaus von Weis-Straße 1, D-67346 Speyer, Mr. Axel Welter</td>
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Date: 2001.10.25  
Signature: [Signature]

Thank you for taking the time to fill in the questionnaire!

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<th>J. Szkoda</th>
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<td>Ministry of Agriculture and Food Economy. National Veterinary Research Institute Department of Pharmacology and Toxicology Partyzantow 57 24 – 100 Pulawy, Poland Phone: +48 81 886 30 51 ext. 104 Fax: +48 81 886 25 95</td>
</tr>
<tr>
<td>Trained at Institute</td>
<td>Landesuntersuchungsanstalt für das Gesundheits-und Veterinärwesen Sachsen(LUA) Dresden Präsident Dr. Bernd Schlegel Reichenbachstrasse 71/73 D-01217 Dresden Phone: +49 351 8144 403 Fax: +49 351 8144 497</td>
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Do you have suggestions to us for doing the training better in the future (if more space needed, please continue)  

Please continue this form of training in the future.

Date: 30.05.01  
Signature: 

Thank you for taking you the time to fill in the questionnaire!
The Ministry of Food, Agriculture and Fishery
The Danish Institute of Agricultural Sciences
Department of Plant Protection, Flakkebjerg, DK-4200 Slagelse


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<th>Name of trainee</th>
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<td>Veterinary Inspection Laboratory</td>
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</tr>
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<tr>
<td></td>
<td>60 – 166 Poznan</td>
</tr>
<tr>
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Please continue this form of training in the future.

Date: 30-08-2001  
Signature: [Signature]

Thank you for taking you the time to fill in the questionnaire!
Annex D

Evaluation from the training centres and the training programmes
CERTIFICATE

This is to certify that Elzbieta Smolka was as a trainee in our laboratory from Sept. 3rd to Sept. 14th 2001.

The training programme included sample preparation and quantitative determination of heavy metals, macro- and micro nutrients in water, soil and plants. The training included the following techniques:

1. Determination of zinc in soil extracts by flame atomic absorption spectrometry (AAS)
2. Determination of cadmium in plant material by graphite furnace atomic absorption spectrometry (AAS)
3. Determination of macro- and micro nutrients by inductively coupled plasma - atomic emission spectrometry (ICP-AES)
4. Analysis of anions by ion chromatography (IC)
5. Determination of mercury in water samples by cold vapour atomic absorption spectrometry (CVAAS) and flow injection
6. Determination of arsenic and selenium in plant material by hydride atomic absorption spectrometry (HAAS)

The training was based upon practical work of all parts of the methods combined with theory on detection principles and discussions. Quality assurance was an integrated part of the work. In addition the chemist was introduced to Jordforsk Lab’s quality assurance system and accreditation, which is in compliance with the International Standard EN ISO/IEC 17025.

Elzbieta Smolka showed great interest in the analytical work performed at Jordforsk Lab and was also very active in discussions. She has a good understanding of the theoretical principles for the analytical methods as well as for the quality system used. Many years of experience in Poland combined with training abroad has given her the ability to perform advanced instrumental analysis.

Byrne
Berge Holen
Lab. Manager
CERTIFICATE

This is to certify that Anna Rogulskas was as a trainee in our laboratory from Sept. 3rd to Sept. 14th 2001.

The training programme included sample preparation and quantitative determination of heavy metals, macro- and micro nutrients in water, soil and plants. The training included the following techniques:

1. Determination of zinc in soil extracts by flame atomic absorption spectrometry (AAS)
2. Determination of cadmium in plant material by graphite furnace atomic absorption spectrometry (AAS)
3. Determination of macro- and micro nutrients by inductively coupled plasma - atomic emission spectrometry (ICP-AES)
4. Analysis of anions by ion chromatography (IC)
5. Determination of mercury in water samples by cold vapour atomic absorption spectrometry (CVAAS) and flow injection
6. Determination of arsenic and selenium in plant material by hydride atomic absorption spectrometry (HAAS)

The training was based upon practical work of all parts of the methods combined with theory on detection principles and discussions. Quality assurance was an integrated part of the work. In addition the chemist was introduced to Jordforsk Lab's quality assurance system and accreditation, which is in compliance with the International Standard EN ISO/IEC 17025.

Anna Rogulskas showed great interest in the analytical work performed at Jordforsk Lab and was also very active in discussions. She has a good understanding of the theoretical principles for the analytical methods as well as for the quality system used. Many years of experience in Poland combined with training abroad has given her the ability to perform advanced instrumental analysis.

Berge Holen
Lab. Manager

JORDFORSK - Senter for jordfaglig miljøforskning

Jordforsk hovedkontor
Adresse: Frederik A. Dahls vei 20, 1432 Ås
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Jordforsk Lab
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Raskeforsok: NoS 04, Raskeforsok 05/05/0127, VNTNO: FORSKOM77, Postadresse: NO-1432 Ås Tlf: 64 94 81 11
SNM: N63 645 504 USA
To whom it may concern

CERTIFICATE

This is to certify that Bozena Morzycka was as a trainee in our laboratory from Oct. 5th to Oct. 26th 2001.

The training programme has included sample preparation and quantitative/qualitative determination of the pesticides included in the Norwegian Monitoring Programme for residues in fruit, vegetables and cereals. The training included the following techniques:

Sample preparation:
- homogenizing of the sample
- extraction with organic solvents
- purification using gel permeation chromatography
- concentration of the sample using several evaporation techniques

Quantitative/qualitative determination:
- Capillary GC with simultaneous dual detection using electron capture and nitrogen-phosphorus detectors
- Quantitative and qualitative analysis using GC/MS or LC/MS
- Determination of dithiocarbamates by distillation and spectrophotometric measurement

In addition, information was given about performance and quality control of field trials

The training was based upon practical work of all parts of the methods combined with theory on detection principles and discussions. Quality assurance was an integrated part of the work. In addition the chemist was introduced to our quality assurance system and accreditation, which is in compliance with the International Standard NS-EN 45001.

Bozena Morzycka showed great interest in the analytical work performed and was also very active in discussions. She has a good understanding of the theoretical principles for the analytical methods as well as for the quality system used. Many years of experience in Poland combined with training abroad has given her the ability to perform advanced instrumental analysis.

Borge Holm
Lab. Manager
PROGRAMME FOR THE TRAINEES ANNA ROGULSKA AND ELZBIETA SMOLKA AT JORDFORSK LAB

TRAINING PERIOD: 03.09.01 – 07.09.01 (FIRST WEEK)

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<tr>
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<th>Programme</th>
<th>Responsible</th>
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<tbody>
<tr>
<td>Monday 3. Sept.</td>
<td>Introduction to the staff of Jordforsk Lab</td>
<td>Børge Holen</td>
</tr>
<tr>
<td></td>
<td>General information about Norwegian Centre for Soil and Environmental Research (Jordforsk)</td>
<td>Børge Holen</td>
</tr>
<tr>
<td></td>
<td>Information about Jordforsk Lab (field of work, customers, instrumentation, methods of analysis)</td>
<td>Børge Holen/Monica Ø. Hansen/Ivar Dahl</td>
</tr>
<tr>
<td>Tuesday 4. Sept.</td>
<td>Atomic absorption spectroscopy (AAS) : theory flame and graphite furnace</td>
<td>Ivar Dahl</td>
</tr>
<tr>
<td></td>
<td>Determination of zinc in soil extracts by flame AAS</td>
<td>Jon Malcolmson</td>
</tr>
<tr>
<td>Wednesday 5. Sept.</td>
<td>Determination of cadmium in plant material by graphite furnace AAS</td>
<td>Johnny Kristiansen/Jon Malcolmson</td>
</tr>
<tr>
<td></td>
<td>Determination of macro- and micro nutrients by ICP-AES</td>
<td>Ivar Dahl/Johnny Stang</td>
</tr>
<tr>
<td>Friday 7. Sept.</td>
<td>Analysis of different materials by ICP-AES</td>
<td>Ivar Dahl/Johnny Stang</td>
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</tbody>
</table>
TRAINING PERIOD: 10.09.01 – 14.09.01 (SECOND WEEK)

<table>
<thead>
<tr>
<th>Day</th>
<th>Programme</th>
<th>Responsible</th>
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</thead>
<tbody>
<tr>
<td>Monday 10. Sept.</td>
<td>Analysis of different materials by ICP-AES</td>
<td>Ivar Dahl/Johnny Stang</td>
</tr>
<tr>
<td></td>
<td>Handling of samples prior to analysis: Unpacking, registration, labelling, preservation, storage etc.</td>
<td>Inger Lise Hobbelstad</td>
</tr>
<tr>
<td>Tuesday 11. Sept.</td>
<td>Analysis of anions by ion chromatography</td>
<td>Børge Holen/Johnny Kristiansen</td>
</tr>
<tr>
<td>Wednesday 12. Sept.</td>
<td>Determination of mercury in water samples by cold vapour atomic absorption (CVAAS) and flow injection.</td>
<td>Jon Malcolmsen</td>
</tr>
<tr>
<td>Thursday 13. Sept.</td>
<td>Determination of arsenic and selenium in plant material by hydride atomic absorption (HAAS)</td>
<td>Jon Malcolmsen</td>
</tr>
<tr>
<td>Friday 14. Sept.</td>
<td>Quality assurance and accreditation</td>
<td>Ivar Dahl</td>
</tr>
</tbody>
</table>
24.09.2001

PROGRAMME FOR THE TRAINEE B. MORZYCKA

TRAINING PERIOD (FIRST WEEK): 8. – 12. OCTOBER

Monday 8. Oct.: Introduction to the staff of the Pesticide Laboratory
General information about the Norwegian Crop Research Institute and the Plant Protection Centre
Information about the Pesticide Laboratory: Field of work, customers instrumentation, methods of analysis, quality assurance etc.
Responsible: Børge Holen and Agnethe Christiansen

Analysis of dithiocarbamates in fruit and vegetables (M05). Theory
Responsible: Sven R. Odenmarck

Tuesday 9. Oct.: Analysis of dithiocarbamates in fruit and vegetables (M05)
Responsible: Inger Sanne

Wednesday 10 Oct.: Handling of samples prior to analysis: Unpacking, registration (documentation), labelling, homogenisation, storage, preservation etc.
Responsible: Trude Svendsby

GC-analysis of fruits and vegetables (M41). Theory
Responsible: Børge Holen

Thursday 11. Oct.: Confirmation of pesticide residues by GC/MS
Responsible: Henriette Leknes

Friday 12. Oct.: GC/MS-method for propargite, ortho-phenylphenol and difenyl (M37)
Responsible: Nina O. Svendsen

TRAINING PERIOD (SECOND WEEK): 15. – 19. OCTOBER

Monday 15. Oct.: Sample preparation and GC-analysis of cereals (M02)
Responsible: Lene Botten/Sven Odenmarck

Tuesday 16. Oct.: GC-analysis of cereals (M02)
Responsible: Sven Odenmarck
Wednesday 17. Oct.: Quality assurance
   \textit{Responsible: Agnethe Christiansen}

   Control of analytical standards
   \textit{Responsible: Trude Svendsby}

Thursday 18. Oct.: LC/MS-multimethod for fruit and vegetables (M46)
   \textit{Responsible: Agnethe Christiansen/Marianne Fresvig}

Friday 19. Oct.: LC/MS-multimethod for fruit and vegetables (M46)
   \textit{Responsible: Agnethe Christiansen/Marianne Fresvig}

   Sample preparation for LC/MS-method for chlormequat (M39)
   \textit{Responsible: Marianne Fresvig}

TRAINING PERIOD (THIRD WEEK): 22. – 26. OCTOBER

Monday 22. Oct.: Information about analysis of samples from field trials \textit{Responsible: Agnethe Christiansen}

   Information about field trials - performance and quality control
   \textit{Responsible: Rolf Skuterud}

Tuesday 23. Oct.: LC/MS-method for chlormequat (M39)
   \textit{Responsible: Marianne Fresvig}

   Confirmation of pesticide residues by LC/MS
   \textit{Responsible: Marianne Fresvig}

Wednesday 24. Oct.: Sample preparation for the GC-multimethod fruit and vegetables (M41)
   \textit{Responsible: Tone Eliassen}

Thursday 25. Oct.: GC-analysis of fruits and vegetables (M41)
   \textit{Responsible: Anita B. Glosli/Sven Odenmarck}

Friday 26. Oct.: GC-analysis of fruits and vegetables (M41)
   \textit{Responsible: Anita B. Glosli}
Dear Mr. Kirknel,

The visit of Mrs. Urszula Szwietrnia in our Institute has been done to our satisfaction. She was very interested in all our methods for analysing pesticides in plant material. She tested the learned methods by practical work together with the assistants, including the measuring techniques. Always she compared the learned methods with the methods in the “home – laboratory” and discussed about that with the chemist of the compartment. Because the training was 6 weeks long, she had the opportunity to cooperate in method validation (pesticide-spiking, recoverys etc.), what she did with great interest.

Generally she demonstrated a good handling with the technical equipment.

In our opinion Mrs. Szwietrnia also understood very good the quality assurance program, that we apply in our Institute.

There had been no language problems; she speaks very good English.

With best regards

Axel Welter

Amorechtszeit: Montag - Donnerstag 09.00 bis 12.00 Uhr, 14.00 bis 16.00 Uhr
Dear Mr. Kirknel,

The visit of Mrs. Ewa Szppyrka in our Institute has been done to our satisfaction. She was very interested in all our methods for analysing pesticides in plant material. She tested the learned methods by practical work together with the assistants, including the measuring techniques. Because the training was 6 weeks long, she had the opportunity to cooperate in method validation (pesticide – spiking, recoverys etc.), what she did with great interest. Generally she demonstrated a good handling with the technical equipment.

We have the impression, that Mrs. Szppyrka easily understood the whole training including the course of quality assurance.

There had been no language problems.

With best regards

(Axel Welter)
Evaluation of Mrs. Alicja Hajduk, Bialystok, Poland

Dear Mr. Kirknel,

The visit of Mrs. Alicja Hajduk in our Institute has been done to our satisfaction. She was very interested in all our methods for analysing pesticides in animal foodstuff. Readily she worked in the laboratory together with the assistants to apply the methods including the measuring techniques. Always she discussed intensively about the analytical tasks during the training. In addition to the routinely applied methods she demonstrated also interest for advanced analytical methods like the determination of pesticides by Gaschromatography – Mass-Spectrometry.

In our opinion Mrs. Hajduk also understood very good the quality assurance program, that we apply in our Institute.

There had been no language problems.

With best regards

(Axel Weller)
Evaluation of Mr. Lech Rodziewicz, Białystok, Poland

Dear Mr. Kirknel,

The visit of Mr. Lech Rodziewicz in our institute has been done to our satisfaction. Although he analyse routinely in the “home laboratory” pharmacological substances, he was very interested in all our methods for analysing pesticides in animal foodstuff, including the measuring techniques. In addition to the routinely applied methods he demonstrated also interest for advanced analytical methods like the determination of pesticides by Gaschromatography – Mass-Spectrometry.

In our opinion Mr. Rodziewicz also understood very good the quality assurance program, that we apply in our Institute.

There had been no language problems.

With best regards

(Axel Welter)
Re: Training in pesticide residue analysis

We hereby confirm, that Mrs. Urszula Szwiertnia, from Plant Protection Institute, Sośniów, Poland,
from 03.09.2001 to 12.10.2001 successfully absolved at our institute the following training programme:

1. General introduction
   - Food control system in Germany: organisation, sampling programs, sampling; legal basis

2. Analysis of pesticide residues in food of plant origin

Multi residue methods according to the method collection of the Deutsche Forschungsgemeinschaft, especially method 8.19, founded on the work of Specht et al.

- sample preparation
- residue extraction techniques
- clean up techniques by using gel permeation chromatography
- separation, identification and quantification of residues or organochlor pesticides,
  pyrethrinides and phosphoric ester pesticides

Seite 1 von 7

Angeordneten: Montag - Donnerstag 09.00 bis 12.00 Uhr, 14.00 bis 16.00 Uhr
Freitag 09.00 bis 13.00 Uhr
by gas chromatography with electron capture detector, nitrogen-phosphorous detector, mass spectrometric detector

- optimising the instrumental parameters and separation of substances
- quantification by using internal and/or external standards
- training the maintenance and repair of the instruments (as far as possible by the laboratory personal)
- changing and maintaining the capillary columns
- photometric determination of dithiocarbamates
- enzymatic determination of nitrate in plants
- measures of quality assurance
- proficiency tests

Axel Walter
Chemiedirektor
Re: Training in pesticide residue analysis

We hereby confirm, that Mrs. Ewa Szpyrka, from Plant Protection Institute, Rzeszow, Poland, from 03.09.2001 to 12.10.2001 successfully absolved at our institute the following training programme:

1. General Introduction
   - Food control system in Germany: organisation, sampling programs, sampling; legal basis

2. Analysis of pesticide residues in food of plant origin
   Multi residue methods according to the method collection of the Deutsche Forschungsgemeinschaft, especially method S 19, founded on the work of Specht et al.
   - sample preparation
   - residue extraction techniques
   - clean up techniques by using gel permeation chromatography
• separation, identification and quantification of residues or organochlor pesticides,
  pyrethrones and phosphoric ester pesticides
• by gaschromatography with electron capture detector, nitrogen-phosphorous detector,
  mass spectrometric detector
• optimising the instrumental parameters and separation of substances
• quantification by using internal and/or external standards
• training the maintenance and repair of the instruments (as far as possible by the
  laboratory personal)
• changing and maintaining the capillary columns
• photometric determination of dithiocarbamates
• enzymatic determination of nitrate in plants
• measures of quality assurance
• proficiency tests

Axel Weiler
Chemiedirektor
Re: Training in pesticide residue analysis

We hereby confirm, that Mrs. A. Hajduk from Wojewidzki Inspektorat Weterynarii, Zaklad Higieny Weterynaryjnej, Bialystok, Poland from 01.10.2001 to 26.10.2001 successfully absolved at our Institute the following training programme:

1. General Introduction
   - Food control system in Germany: organisation, sampling programs, sampling, legal basis

2. Analysis of pesticide residues in food of animal origin
   Multi residue methods according to the method collection of the "Deutsche Forschungsgemeinschaft", especially method S 19, founded on the work of Specht et. al., Silve et al.
   - sample preparation
   - residue extraction techniques
   - clean up techniques by using gel permeation- and absorption chromatography
   - separation, identification and quantification of residue of organochlor pesticide including polychlorinated biphenyls and nitro musk substances, pyrethines and phosphoric ester pesticides
   - by gaschromatography with electron capture detector, nitrogen-phosphorus detector, mass spectrometric detectors (quadrapole mass – spectrometer and high resolution sector field – mass – spectrometer)

Seite 1 von 2

Anspreadsiten: Montag - Donnerstag 09.00 bis 12.00 Uhr, 14.00 bis 16.00 Uhr
Freitag 09.00 bis 13.00 Uhr
- optimising the instrumental parameters and separation of substances
- quantification by using internal and/or external standards
- changing and maintaining the capillary columns
- measures of quality assurance
- measures of method validation
- internal quality assurance
- proficiency tests

3. Special analysis of contaminants in food of animal origin

- polychlorinated dioxins and furans
- organotin compounds in mussels and fish
- amitraz in honey

Axel Weiler
Chemiedirektor
26/11/2001 16:27 LANDESUNTERSUCHUNGSAMT SPEYER + 004559113301 NR. 777 924

Re: Training in pesticide residue analysis

We hereby confirm, that Mr. L. Rodziewicz from Wojewódzki Inspektorat Weterynarii, Zakład Higieny Weterynaryjnej, Białystok, Poland from 01.10.2001 to 26.10.2001 successfully absorbed at our institute the following training programme:

1. General Introduction
   - Food control system in Germany, organisation, sampling programs, sampling, legal basis

2. Analysis of pesticide residues in food of animal origin
   Multi residue methods according to the method collection of the "Deutsche Forschungsgemeinschaft", especially method S 18, founded on the work of Specht et al., Stivje et al.
   - sample preparation
   - residue extraction techniques
   - clean up techniques by using gel permeation- and absorption chromatography
   - separation, identification and quantification of residue of organochlor pesticides including polychlorinated biphenyls and nitro musk substances, pyrethrines and phosphoric ester pesticides
   - by gaschromatography with electron capture detector, nitrogen-phosphorus detector, mass spectrometric detectors (quadrupole mass — spectrometer and high resolution sector field — mass — spectrometer)

Seite 1 von 2
optimising the instrumental parameters and separation of substances
quantification by using internal and/or external standards
changing and maintaining the capillary columns
measures of quality assurance
measures of method validation
internal quality assurance
proficiency tests

3. Special analysis of contaminants in food of animal origin
polychlorinated dioxins and furans
organotin compounds in mussels and fish
amitraz in honey

Axel Weller
Chemiedirektor
Evaluation by the leader of the training centre

Trainee:
Mrs. Malgorzata Walasek, State Sanitary Inspection,
Sanitary and Epidemiology Centre for the Province Poznan, Poland

Mrs. Walasek interests on mycotoxins were of fundamental nature, because she will establish the analysis of mycotoxins in her home institit in future. She brought along a lot of previous knowledge of theoretical aspects and was very interested to learn especially all the practical things of the analysis of food for mycotoxins and how to use the analytical equipment for chromatography. Mrs. Walasek showed a good understanding of the demands of extreme trace analysis and the necessity of extensively measures of quality assurance. Mrs. Walasek is a very kind person, we wish her all the best for the future.

Dr. B. Schlegel
Leader of the training centre
Evaluation by the leader of the training centre

Trainee:
Dr. Jozef Szkoda; Nat. Veterinärforschungsinstitut Pulawy, Polen  
Dr. Kristina Michalska; Hygiene- und Veterinärinstitut Poznan, Polen

Place of training:  
Landesuntersuchungsanstalt für das Gesundheits- und Veterinärwesen Sachsen (LUA)

Time of training:  
13.08. - 31.08.2001

Home laboratory / Trainer:  
Analysis of elements (AAS/ICP-MS) / Dr. Richter

The LUA Sachsen was accreditated for Controlling and Investigating of Food in 19th August 1998 according the european norm EN 45001 and guidelines of OECD for "Gute Laborpraxis". The laboratory (AAS/ICP-MS), where Mrs. Michalska and Mr. Szkoda attended her practical course, took part on this accreditation procedure. Internal audits take place for controlling the laboratory regular.

The trainees could provide an overview about quality control system in the laboratory (individually specified in the flow diagram). Since our laboratory spaces are on highest level, we could be demonstrated the boundary conditions of correct analytics for ultra trace elements in a very detailed manner.

Especially Mr. Szkoda was very interested in several methods of graphit-tube-AAS, while Mrs. Michalska main interested in quality control system of elemental laboratory and the institut.

Over ICP-MS-technique they got a short, informativ introduction. This method won’t used in the intitut in Poznan and Pulawy.

Here are the main points of the training:

- Quality control system of institut including laboratory of elemental analysis
- Sample preparation (acid digestion in microwave oven)
- Methods of graphit-furnace AAS (Se, Pb, Cd)
- Analytical problems in AAS / ICP-MS
Both trainees were especially interested in:
- all steps of quality control and the documentation of these
- room conditions for ultra trace analysis
- management of the programs Monitoring and Nationaler Rückstandskontrollplan in Germany
- sample preparation (all the way from sample input to digestion).

Dr. B. Schlegel
Leader of the training centre

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01192 Dresden
Tel.: (0351) 8144-0
Fax.: (0351) 8144 - 497

Hausanschrift: LUA Sachsen, Standort Dresden
Reichenbachstraße 71-73
01217 Dresden
Overview of the training programme

Trainee:
Mrs. Malgorzata Walasek, State Sanitary Inspection, Sanitary and Epidemiology Centre for the Province Poznan, Poland

Time of training:

Home laboratory:
Laboratory for Mycotoxin-Analysis

Mrs. Walasek was on a placement in our department for two weeks, within the scope of the EU-scheme "Environment related Sector Program". She was introduced to basic problems of contamination of food with mycotoxins, planning and choice of samples for the analysis of mycotoxins, how to analyze samples with state-of-the-art-techniques, the classification of food samples according to legal limits on the basis of mycotoxin content and the steps of quality control and documentation.

In the practical part in detail she learned something about the single steps of the analysis of
Aflatoxins, Ochratoxin A, Zearalenon, Deoxynivalenol and Patulin:
- preparation and extraction of samples
- purification of the extract by different types of columns (especially immunofafinity columns)
- Analysis using chromatographic methods (especially TLC and HPLC)

Furthermore the colleagues from the Department of Food Microbiology have given her an overview of their working methods here in Dresden.

Dr. B. Schlegel
Leader of the training centre
## Overview of the training programme

**Trainee:**

Dr. Jozef Szkoda, Pulawy  
Dr. Kristina Michalska, Poznan

<table>
<thead>
<tr>
<th>Datum</th>
<th>Praktikumsinhalt</th>
</tr>
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</table>
| 13.08.01 | **Dr. Schlegel:** Begrüßung, Besichtigung des Institutes Reichenbachstraße  
              Struktur der LUA Sachsen  
              **Dr. Richter:** Rundgang im Labor Elementanalytik |
| 14.08.01 | **Frau Zschieschang:** Stadtführung Dresden |
| 15.08.01 | **Dr. Schlegel:** Kennenlernen des LUA-Standortes Leipzig, Beethovenstraße; Institutsführung |
| 16.08.01 | **Labor Dr. Hübner:** Analytik Nitrat, Nitrit, biogene Amine, Fluorid usw. |
| 17.08.01 | **Labor Dr. Richter:** Aufschluß der Proben für Elementanalytik; Mikrowellensystem;  
              Prüfvorschrift "Druckaufschluß", Gerätehandbücher Mikrowellenaufschlußsystem und Waage;  
              Waagenkontrolle-Regelkontrollkarte, Pipettenprüfung-Regelkontrollkarten; Einführung ICP-MS  
              und Demo-Messung |
| 20.08.01 | **Labor Dr. Richter:** Qualitätssicherung Elementanalytik (Prüfverfahren, Referenzmaterial,  
              Wiederfindung, Blank-Kontrolle, Regelkontrollkarten für Blanks und Referenzmaterial; AAS-  
              Methoden: Selenbestimmung) |
| 21.08.01 | **Dr. Schlegel:** Besuch LUA- Institut Chemnitz, Laborbesichtigung, Stadtbesichtigung |
| 22.08.01 | **Labor Dr. Richter:** Qualitätssicherung Elementanalytik (Präzision, Optimierungsrountinen am  
              ICP-MS, Dokumentation Standards und Referenzmaterial; Anwendung Höchstmengen und  
              Richtwerte, Laborvergleichsuntersuchungen) |
<p>| 23.08.01 | <strong>Frau DLC Kröber:</strong> Qualitätsmanagement Institut / Zertifizierung / Akkreditierung nach EN 45 001 (Lebensmittel/Bedarfsgegenstände) |
| 24.08.01 | <strong>Frau DLC Kröber:</strong> Qualitätsmanagement Institut / Zertifizierung / Akkreditierung nach EN 45 001 (Lebensmittel/Bedarfsgegenstände) |
| 27.08.01 | <strong>Labor Frau DAI Hempel:</strong> Gentechnik, Eiweißdifferenzierung |
| 28.08.01 | <strong>Herr Langefeld:</strong> Stadtbesichtigung Meißen |</p>
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<tr>
<th>Date</th>
<th>Lab Member</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.08.01</td>
<td>Labor Frau DC Kasten:</td>
<td>Pestizidanalytik</td>
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<tr>
<td>30.08.01</td>
<td>Frau DLC Kröber:</td>
<td>Qualitätsicherungshandbuch QSH</td>
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<td></td>
<td>Labor Dr. Richter:</td>
<td>Datenbank-LIMS</td>
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<tr>
<td>31.08.01</td>
<td>Labor Frau DC Neugebauer:</td>
<td>Mykotoxinanalytik</td>
</tr>
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</table>

Dr. B. Schlegel  
Leader of the training centre

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Reichenbachstraße 71-73  
01217 Dresden
Leipzig, Germany

4. OKT. 2001 13:49 LUA SACHSEN STANDORT LEIPZIG

Leipzig, 04.10.2001

Dr. Heidrun

Fax 0045 58 11 33 01

Dear Mr. Kinkel,

Mrs. Schwarcz's training will come to the end at Oct. 05th 2001. Therefore I send you enclosed following documents:

- the overview of the training programme
- the evaluation by the trainee
- the evaluation by the leader of the training centre
- the signed document by trainee for receiving daily allowances.

Thank you very much for your excellent organisation of the training. This training meant some more work for us and some problems with language but the trainees were very friendly and open and we had no problems at all.

We think the training was very successful.

Sincerely yours,

Unnax Kempel
Training of pesticide residue chemist’s 2001

Karolina Schwarz from Poznan

Overview of the training programme

Mrs. Karolina Schwarz has participated in the programme from Aug. 27th to Oct. 05th 2001 at Landesuntersuchungsanstalt für das Gesundheits- und Veterinärwesen Sachsen (LUA), Standort Leipzig.

The main issue of the training was the explanation of the method “Examination of food, Modular multi-method for determination of pesticide residues in food, No. L 00.00-34 according German Food Law (“LMGB”)§ 35 (revised version of the method “§ 19” of the German Research Associations).”

The multi-residue-method of determination of pesticides is used for fruits, vegetable and samples of animal origin.

This method encloses the gas-chromatographic (GC) determination of pesticide residues after cleaning up the samples by gel-permeation chromatography and mini-silica-gel-columns. Different injector systems combined with different columns and detector-systems e. g. electron capture-detector, thermoionic N/P-detector, flame photometric detector and mass-spectrometric detector were explained on samples of routine analytics.

Mrs. Schwarz has analysed samples of routine analytics with the software Chem Station of HEWLETT PACKARD guided by the colleague of the pesticide laboratory.

Mrs. Schwarz has learned about using GC for the determination of the pesticide Amitraz.

Another concern of the training was the high performance liquid chromatography (HPLC). This method is used for the determination of Carbendazim and Thalbenzol residues in plant materials. Working parameters of UV- and fluorimetric detectors as well as the adaptation of the HPLC to different kind of samples were explained to the trainee.

Furthermore Mrs. Schwarz has learned about the examination-system of food samples in product and service laboratories at LUA. In order to make sure the identity of the sample from arrival at LUA till the evaluation in a complete certificate. She learned also about the treatment of food samples from their arrival at the laboratory and the conditions of storage at LUA.

At LUA Dresden the trainee has got a general impression of the Quality Assurance System used by LUA Sachsen.

Kempel

Dr. Hempel  
Leader of the training centre

Leipzig, 04.10.2001
Training of pesticide residue chemist’s 2001

Karolina Schwarz from Poznan

Evaluation by the leader of the training centre

Mrs. Karolina Schwarz has participated in the programme for a six weeks period at the Landesuntersuchungsanstalt für das Gesundheits- und Veterinärwesen Sachsen (LUA), Standort Leipzig.

She was trained mainly in learning and applying of the method “Examination of food, Modular multi-method for determination of pesticide residues in food, No. L 06.00-34 according German Food Law (“LMBG”) § 35 (revised version of the method “§ 19” of the German Research Association) in routine analysis.

She was not only very interested in theory but also in practice of the methods and analytical equipments used. She succeeded in performing the analysis trained very well.

Her understanding of the general Quality Assurance System of the LUA Sachsen and of the special system used in the pesticide laboratory was very good.

Mrs. Schwarz is a very kind colleague and the contact to our colleagues was excellent.

Dr. Hengsel
Leader of the training centre
Trier, Germany

Evaluation of Mrs. Anna Nowacka
Trainee for Pesticide multiresidue analysis in Fruit and vegetables, carbanates from 17. – 28.09.2001

Mrs. Anna Nowacka was highly interested during the whole training program, especially on the different possibilities for the implementation of a Quality Assurance system in a pesticide laboratory. Because of her long experience in pesticide analysis and her very good knowledge of the English language it was easy to have long but very constructive discussions on the mean differences to their in house methods and by taking the opportunity of watching the performance of the main multiresidue methods.

Im Auftrag

Dr. Herbert Otteneder
Ltd. Chemiedirektor

Bearbeiter: Herr Majerus, ChD
Evaluation of Mrs. Barbara Langowska; Trainee for Pesticide multiresidue analysis in Fruit and vegetables, Quality Assurance from 17. – 28.09.2001

Mrs. Barbara Langowska was highly interested during the whole training program, especially on the different possibilities for the implementation of a Quality Assurance system in a pesticide laboratory. Because of her long experience in pesticide analysis and her very good knowledge of the English language it was easy to have long but very instructive discussions on the mean differences to their in house methods and by taking the opportunity of watching the performance of the main multiresidue methods.

Im Auftrag

(Dr. Herbert Ottendner)
Lfd. Chemiedirektor

Bearbeiter: Herr Majerus, ChD
• Training program for Mrs. Anna Nowacka

1. Introduction
   Legislation for Pests
   European Community Regulations
   German federal Food Control System
   German and european pesticide survey programs

2. Call for samples and sampling

3. Presentation of the Quality Insurance System
   Conditions for the accreditation
   method validation
   Evaluation of test methods and test results
   Quality regulation cards and function controls of apparatus
   Study of standard operation procedures
   Questions concerning SOP’s

4. Instrumentation
   HPLC-DAD, - FD, post-column derivatisation procedures
   Structures, functionality, advantages and disadvantages
   maintenance and troubleshooting

5. Acquaintance of analytical methods
   EN 12393:1998 Multiresidue method for gas chromatographic determination of
   pesticide residues – Part 1+2
   Pesticides in drinking water by HPLC
   WD 275045 Determination of benomyl, carbendazim, thiabendazole and thiophanate-methyl beside
   other fungicides preservatives
   EN 14185 Determination of N-methyl carbamate residues by HPLC
   Germination inhibitors on potatoes by HPLC
   Benzoylphenylurea insecticides by HPLC

6. Confirmation by mass spectrometry

• Supplementary program

1. Introduction to Chromeleon (chromatographic software)
2. Introduction to LABbase (laboratory information and management system)
Training program for Mrs. Barbara Langowska

1. Introduction
   Legislation for Pests
   European Community Regulations
      German federal Food Control System
      German and European pesticide survey programs

2. Call for samples and sampling

3. Presentation of the Quality Insurance System
   Conditions for the accreditation
   Method validation
   Evaluation of test methods and test results
   Quality regulation cards and function controls of apparatus
   Study of standard operation procedures
   Questions concerning SOP’s

4. Instrumentation
   GC-ECD, - NPD, - FPD
   Structures, functionality, advantages and disadvantages
   Maintenance and troubleshooting

5. Acquaintance of analytical methods
   EN 12393:1998 Multiresidue method for gas chromatographic determination of
   pesticide residues - Part 1-3
   Pesticides in drinking water by GC
   EN 13191 Determination of bromide residues
   Germination inhibitors on potatoes by GC

6. Confirmation by mass spectrometry

Supplementary program

1. Introduction to Chromeleon (chromatographic software)
2. Introduction to LABbase (laboratory information and management system)
Annex E
Evaluation from the home laboratories
Regarding training of pesticide residue and heavy metal chemists

Dear Dr. Erik Kirksej,

Refers to the training of Anna Rogalska and Elżbieta Skromna in heavy metal determination in the laboratory in Jodłownik, next to Poznań, conducted from September 9, 2003 till September 15, 2003.

The training consisted in familiarizing with the work of an analytical laboratory from the moment of receiving the sample through preparing the sample, disposing of the sample, making analyses and finally issuing the results using a central computer system.

The experience gained was implemented in our laboratory helping to improve the work. The number of metallic elements assayed in a single tube has been increased, such tray being permanently fixed. Following the example of the laboratory in Jodłownik, here also the apparatuses were divided into those applied to assay using the flame method and those applied to assay with the use of hydride generation, cold and flame with atomic emission.

As the number of devices increases the analytical methods will be arranged in the same way as in the laboratory in Jodłownik.

During the lectures and practical classes the issue of calibration in regards to the application of the ICP method in elemental analysis was discussed. Knowing the laboratory with ICP would make it possible to improve the work since ICP allows to assay numerous elements at the same time.

The gained experience originated the introduction of a member of minor and serious changes in the laboratory thus making the training more while ensuring the same accuracy.
PLANT PROTECTION INSTITUTE
Miczurina str. 20  60-318 Poznań, Poland

tel: (0-61) 864-90-00
  Director (0-61) 864-90-01
  (0-61) 867-92-22
  fax (0-61) 867-63-01

Account: BGŻ S.A. O/W Poznań nr 20301765-9188-2700

Poznań, 7.01.2002

HOME LAB EVALUATION

Trainees: Urszula Szwietrznia, Ewa Szpyrka (Speyer), Karolina Schwarz (Leipzig), Bożena Morzycka (Aas), Barbara Langowska, Anna Nowacka (Tric)

In 2001 six persons from our institute took part in trainings on pesticide residue analysis in three German labs.

All trainees have learned about the multi-residue-method of determination of pesticides which are used for fruit and vegetables samples. It's a big help for us to know analytical procedures by which we can analyse more compounds at the same time. It'll help us to extend the programme of our pesticide residue monitoring.

Our trainees got the information on method validation. It's a critical point specially in the case of multi-residue-methods. We are aware of that, so we are grateful that our colleagues could discuss that topic with experienced chemists. They also had opportunity to talk on SOPs, control charts etc., on all points concerning quality assurance in the lab. They could see how quality system works in a daily laboratory practice. It let them understand the necessity of building such system in their own lab and give us facilites for implementing the quality system in the net of our labs. These aspects are the most important for us as laboratories making national monitoring and working toward accreditation (ISO 17025). Our country is going to be a member of EU, so we have to prepare our labs to the EU requirements and standards. The knowledge that we've got from our foreign colleagues help us to understand the rules associated with EU pesticide residue monitoring. We are also content that trainees established the contacts with GC specialists, it will help them in a further work. We see the big benefits from having them working outside the country.

Anna Nowacka
Head of Department
of Pesticide Residue Research
The workers of Laboratory of Department of Hygiene Veterinary in Białystok - mgr Alicja Hajduk and dr Lech Rodziewicz took part in training contract in Laboratory of Testing Food in Speyer (Chemisches Untersuchungsamt Speyer) from 30 september to 27 october 2001.

During visitation is Laboratory our worker familiarized with:
- work organization,
- analytical methods in food;
- quality system;
- modern equipment.
Members of training assess their training very well. It allows to introduce the UE norm quality system in ours laboratory.
Dr. Erik Kirknei
Danish Institute of Agricultural Sciences (DIAS)
Flakkebjerg, DK-4200 Slagelse
Danmark

Dear Erik Kirknei,

As part of my responsibility as the leader of veterinary group I would like to thank you and your Authorities for giving us opportunity to improve our analytical skills in pesticide and heavy metal residues analysis. I am very grateful for this year program which cover training of four persons in accredited laboratories in Germany.

Dr. Krystyna Michalska and Dr. Jozef Szkoda - Landesuntersuchungsanstalt für das Gesundheits- und Veterinarwesen Sachsen (LUA), Dresden - from 13.08 to 31.08.2001


All trainees highly evaluated their stay in both laboratories. They learned not only details of the routine analytical procedures used for pesticides and trace elements residue determinations in food products in Germany but also how to perform internal quality program in the accredited laboratories. Knowledge and experience which they received during their 3-4 weeks training will be very useful in the process of accreditation of Polish veterinary laboratories and implementation of European community standards to our labs.

Finally I would like to thank people in both Laboratories in Dresden and Speyer, specially Dr. B. Schlegel and Dr. A. Welter for their hospitality and involvement in organisation of training.

Sincerely yours

Jan Zmudzki, DVM, PhD
Professor and Head

c.c. Dr. B. Schlegel
Dr. A. Welter
Dear Dr. Erik Kirknel,

Mrs Malgorzata Walusek was in Poland from 09.09. till 22.09.01. Mrs Malgorzata Walusek had some very interesting and important things. The most valuable for our laboratory was:

1) organization of government food control
2) laboratory administration and economical aspects
3) laboratory equipment
4) methods of detection: thin-layer chromatography, GC, HPLC, TLC

Mrs. Malgorzata Walusek interested in the organisation of the pesticide laboratory, which was very impressive for her. Hopefully she will continue to work in this way.

Mrs Malgorzata Walusek said they don't have any task of detecting PAH's.
Annex F

DANAK’s report from survey visit, Tartu December 7. 2001
Letter from DANAK to Erik Kirknel:

**ERHVERVS- OG BOLIGSTYRELSEN**

Erik Kirknel
Åmosevejen 8
Ørby
3210 Vejby

2. september 2002
Søg 2000-720-328

Vedr.: Tartu Laboratory

Kære Erik

Hermen efter aftale rapport til Tartu laboratory.

Med venlig hilsen

Arne Kjær Sørensen
Tlf. direkt 35466230
E-post: aks@ebst.dk

DANAK
ERHVERVS- OG
BOLIGSTYRELSEN
Dehliens Pkhus
Langelinie Allé 17
2100 København Ø

Tlf. 35468000
Fax 35468202
CVR-nr. 48464114
danak@ebst.dk
www.danak.dk
Report on:

Surveillance visit: 07.12.2001

Accreditation No. 436

Health Protection Inspectorate, Tartu Laboratory
Chemical Department.

Remarks and Recommendation:

Before the assessment the laboratory has supplied the assessors with informations necessary for the evaluation.

During the assessment of the laboratory 9 non-compliances from the accreditation criteria were found. The Laboratory has agreed on completing these non-compliances within the time limits arranged with DANAK.

On the basis of informations received before and during the assessment the assessors conclude:

- The internal organization and the procedures prepared by the laboratory are sufficient to give the assessors confidence in the quality of the tests performed by the laboratory when non-compliances given are completed
- The technical qualifications, education and experience of the personnel in performing tests’ as required by the clients are satisfactory.
- The laboratory has participated in relevant proficiency tests with fairly satisfactory results and has a procedure for evaluation of the results obtained.
- The test-reports assessed are satisfactory
- The measures taken by the laboratory to correct non-compliances found during the accreditation visit are satisfactory

The assessors recommend, that the accreditation continue’s with an unchanged accreditation scope.
The accreditation will be valid till the second Surveillance visit, which is planned to take place in spring 2003. Continuation of the accreditation will however be dependent of the financial situation.
The above stated recommendations are given with the precondition, that the corrective actions based on the non-compliances given at the Surveillance visit are completed within the time frame arranged with DANAK.

(Signature of Lead assessor)  2/9-2002 (date)
Content

Cover page with the recommendation of the assessors ........................................... 3
1. Summary of data from the visit .............................................................................. 3
2. Scope of Accreditation, criteria ............................................................................. 4
3. Other matter relevant for the visit ........................................................................ 5

Annex 1 Scope of accreditation from DANAK's register at the internet
Annex 2 Accreditation criteria
Annex 3 Non-compliance report
Annex 4 Proficiency test's
Annex 5 Observations made by the technical assessor
Annex 6 Observations made by the lead assessor
1. **Summary of data from the visit**

### 1.1 Plan of visit

<table>
<thead>
<tr>
<th>Technical Unit</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Protection Inspectorate,</td>
<td>2001.12.07</td>
<td>08.30-17.30</td>
</tr>
<tr>
<td>Tartu Laboratory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department of Chemistry</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 1.2 Participants

- **From Laboratory**
  - Mari Reinik
  - Jüri Ruut
  - Linda Margna
  - Peeter Laumann
  - Helve Uus
  - Peeter Pirts

- **Lead assessor**
  - Arne Kjer Sörensen

- **Technical assessor**
  - Erik Kirk Kirknel

- **Authority Representatives**
  - None

### 1.3 Documents forwarded prior to the assessment

<table>
<thead>
<tr>
<th>Document</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Results of proficiency tests 2001</td>
<td>29.11.01</td>
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### 1.4 Authorities heard in connection with the visit

<table>
<thead>
<tr>
<th>Name of Authority</th>
<th>Summary of hearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
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</tr>
</tbody>
</table>

2. **Scope of Accreditation, criteria etc.**

### 2.1 Legal identity

<table>
<thead>
<tr>
<th>Legal identity</th>
<th>Health Protection Inspectorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accredited unit</td>
<td>Tartu Laboratory, Chemical Department,</td>
</tr>
<tr>
<td>Address</td>
<td>PK 272, Tartu 50002, Estonia</td>
</tr>
<tr>
<td>Telephone</td>
<td>+372 7 447 422</td>
</tr>
<tr>
<td>Telefax</td>
<td>+372 7 447 422</td>
</tr>
<tr>
<td>Home page</td>
<td></td>
</tr>
<tr>
<td>e-mail</td>
<td><a href="mailto:Tartu.labor@tklabor.ee">Tartu.labor@tklabor.ee</a></td>
</tr>
</tbody>
</table>
2.2 Management

<table>
<thead>
<tr>
<th>Role</th>
<th>Contact Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>DANAK's contact person</td>
<td>Mari Reiniik</td>
</tr>
<tr>
<td>Telephone</td>
<td>+372 7 447 427</td>
</tr>
<tr>
<td>e-mail</td>
<td><a href="mailto:Mari.Reiniik@klabor.ee">Mari.Reiniik@klabor.ee</a></td>
</tr>
<tr>
<td>Technical management</td>
<td>Mari Reiniik, Peer Laumann, Linda Margna</td>
</tr>
<tr>
<td>Quality manager</td>
<td>Linda Margna</td>
</tr>
<tr>
<td>IT Manager</td>
<td>Toomas Rosin</td>
</tr>
</tbody>
</table>

2.3 Scope of accreditation from DANAK's register at the Internet

See Annex 1 Scope of accreditation from DANAK's register at the Internet http://www.danak.dk

2.4 List of method

List of methods valid: T25a-GC/MS, T26a-GC/MS, T28a-GC/MS all dated 22.06.2001.

2.5 List of Signatories (scope and date of CV)

Mari Reiniik (the total accreditation area. 17.10.2000)
Peer Laumann (the total accreditation area. 17.10.2000).

2.6 Provisions, standards, general Technical regulations (TF) and guidelines (Danish and international) valid for the accreditation

See annex 2

2.7 Sector specific guidelines (international) valid for the accreditation

See annex 2

2.8 Specific condition for the accreditation

None (see however Annex 6)

3. Other matter relevant for the visit

3.1 Test demonstrations

Determination of pesticide residues in vegetable crop (Peer Laumann).
3.2 Non-compliances ascertained during last visit

No further comments to non-compliances given at the accreditation visit.

3.3 Proficiency tests

See Annex 4
Register over Akkrediteringer og godkendelser

Akkreditering nr. 436
Tilfælde Multimethod determination of pesticides and PCB residues in food

Akkrediteringsområde / Scope of Accreditation:
A. Chemical determination of:
- Multimethod Determination of Pesticide Residues in Food
- Multimethod Determination of Pesticide Residues in Fruits and Vegetables
- Multimethod Determination of PCB Residues in Fatty Samples

Testing is carried out according to list of methods accepted by Danish Accreditation (DANAK)

Opdateret: 11.07.2001

http://www.efs.dk/ple/www1prod/efsdata.danak_akk?akknrmain=436

31.08.2002
Annex 2

Accreditation criteria for

**Accreditation No: 436 Health Protection Inspectorate, Tartu Laboratory, Chemical Department**

**General Provisions and Guidelines**

<table>
<thead>
<tr>
<th>Standards valid for accreditation to testing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standards:</strong></td>
</tr>
</tbody>
</table>

**Technical Regulations:**
- Technical Regulation No 1. DANAK Logotype and Reference to Accreditation. 1999.03.05.
- Technical Regulation No 3. Application for Accreditation to perform Technical Testing. 2000.08.03
- Technical Regulation No 4. Rules for the duty to inform. 2000.11.06.

**Guidelines:**
- Guideline RL 10. DANAK's guideline for the use of computers for technical testing. 2002.03.15.
**Specific Regulations and Guidelines**

<table>
<thead>
<tr>
<th>Specific Guidelines valid for the Accreditation:</th>
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<tbody>
<tr>
<td>Guidelines:</td>
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### Non-Compliance report

#### Summary of non-compliances:

<table>
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<tr>
<th>Non-compliance</th>
<th>Time limit (date)</th>
<th>Completion (date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identification of improvements of potential sources to non-conformacies is not carried out.</td>
<td>01.02.2002</td>
<td></td>
</tr>
<tr>
<td>2. New text in revised documents in the quality manual and instructions is not identified</td>
<td>01.02.2002</td>
<td></td>
</tr>
<tr>
<td>3. Identification of sample from extraction to detection is unsafe</td>
<td>01.02.2002</td>
<td></td>
</tr>
<tr>
<td>4. Missing signature from external maintenance of MSD</td>
<td>01.02.2002</td>
<td></td>
</tr>
<tr>
<td>5. Internal quality control is only carried out for Aldrin on MSD despite a range of pesticides are accredited</td>
<td>01.02.2002</td>
<td></td>
</tr>
<tr>
<td>6. Interval for external calibration of balances not in procedure</td>
<td>01.02.2002</td>
<td></td>
</tr>
<tr>
<td>7. The accept criteria for MSD can not be defined as a function of ongoing registration</td>
<td>01.02.2002</td>
<td></td>
</tr>
<tr>
<td>8. Volume control of GPC is not documented and a procedure is missing.</td>
<td>01.02.2002</td>
<td></td>
</tr>
<tr>
<td>9. The expiration time of 24 months for pesticide standard solutions is not documented</td>
<td>01.02.2002</td>
<td></td>
</tr>
</tbody>
</table>

All non-compliances completed:

Date: ___________________________  Signature: ___________________________
### Non-compliance No.: 1

**Description of the non-compliance (Lead assessor or technical assessor):**

Identifications of improvements of potential sources to non-conformities is not carried out.

**Reference to the laboratory's quality system:**

ISO 17025, section 4.11.1

**Reference to accreditation criteria:**

TF __________ section __________

**Reference to DANAK's checklist, if convenient**

Item __________

**Non-compliance observed (initials for assessor):** AKS

**Signatures:**

(from laboratory) 

(lead assessor) 

(date) 7/12/01

**Reason for non-compliance (lab), if convenient:**

**Corrective actions planned by the laboratory (lab arranged with LA/TA):**

Identification of non-conformities at initial reviews to non-conformities will be corrected and

**Time limit (accepted by LA):**

February 1, 2002

(date) 6/12/2001

(Signature of head of laboratory)

**Documentation for completion of corrective actions (LA):**

(date)
Non-compliance No.: 2

<table>
<thead>
<tr>
<th>Description of the non-compliance (Lead assessor or technical assessor):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer a new text is not identified in the revised documents.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference to the laboratory's quality system:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 17025, section 4.2.3.3</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference to accreditation criteria:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF. --- section --- Item ---</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference to DANAK's checklist, if convenient</th>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Non-compliance observed (initials for assessor):</th>
</tr>
</thead>
<tbody>
<tr>
<td>BFI</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Signatures:</th>
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<tbody>
<tr>
<td>(from laboratory)</td>
</tr>
<tr>
<td>(lead assessor)</td>
</tr>
<tr>
<td>(date)</td>
</tr>
<tr>
<td>Time for Team 7/12/01</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Reason for non-compliance (lab), if convenient:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Corrective actions planned by the laboratory (lab arranged with LA/TA):</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the future observed and tested will be identified.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time limit (accepted by LA):</th>
</tr>
</thead>
<tbody>
<tr>
<td>07.02.01</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>(Signature of head of laboratory)</th>
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</thead>
<tbody>
<tr>
<td>(date) 07.12.2001</td>
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</table>

<table>
<thead>
<tr>
<th>Documentation for completion of corrective actions (LA):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(Signature of lead assessor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(date)</td>
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</tbody>
</table>

Accreditation No.: 436
Laboratory: Health Protection Inspectorate, Central Laboratory
Tartu Department, Chemistry Laboratory

Page 5 of 7
Date: 2001.11.30
Case: 2000-720-328/ AKS
Non-compliance No.: 3

Description of the non-compliance (Lead assessor or technical assessor):

Identification of sample from extraction to detection is unsafe

Reference to the laboratory’s quality system:
ISO 17025, section 5.8.2

Reference to accreditation criteria:
TF section __________

Reference to DANAK’s checklist, if convenient:
Item __________

Non-compliance observed (initials for assessor) EU.

Signatures:
(from laboratory) (lead assessor) (date)

Reason for non-compliance (lab), if convenient:

Corrective actions planned by the laboratory (lab arranged with LA/TA):
Send immediate cassay again

Time limit (accepted by LA): [Signature of head of laboratory] (date)

Documentation for completion of corrective actions (LA):

(signature of lead assessor) (date)
Non-compliance No.: 1

<table>
<thead>
<tr>
<th>Description of the non-compliance (Lead assessor or technical assessor):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Misleading statement from external maintenance of UUSD</td>
</tr>
</tbody>
</table>

Reference to the laboratory’s quality system:
Reference to accreditation criteria: ISO 17025, section 8.5
Reference to DANAK’s checklist, if convenient Item

Non-compliance observed (initials for assessor) EU

Signatures:
(from laboratory) [Signature]
(lead assessor) [Signature] 7/12/01 (date)

Reason for non-compliance (lab), if convenient:

Corrective actions planned by the laboratory (lab arranged with LA/TA):

Time limit (accepted by LA): [Signature of head of laboratory] 01.12.2001 (date)

Documentation for completion of corrective actions (LA):

[Signature of lead assessor] (date)

Accreditation No.: 436
Laboratory: Health Protection Inspectorate, Central Laboratory
Tartu Department, Chemistry Laboratory

Date: 2001.11.30
Case: 2000-720-328/AKS
Non-compliance No.: 5

<table>
<thead>
<tr>
<th>Description of the non-compliance (Lead assessor or technical assessor):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal quality of control is only made for selected an USDA, despite a range of pesticides are accredited.</td>
</tr>
</tbody>
</table>

Reference to the laboratory’s quality system: ISO 17025, section 5.9

Reference to accreditation criteria: TF unit, section ?

Reference to DANAK’s checklist, if convenient

Non-compliance observed (initials for assessor) FJ

Signatures:

(from laboratory) (lead assessor) 7/12/01 (date)

Reason for non-compliance (lab), if convenient:

Corrective actions planned by the laboratory (lab arranged with LA/TA):

Introduction of client services for different pesticides.

Time limit (accepted by LA): 02.1.2002 07.12.2002 (Signature of head of laboratory) (date)

Documentation for completion of corrective actions (LA):

( signature of lead assessor) (date)
Non-compliance No.: 6

Description of the non-compliance (Lead assessor or technical assessor):

Internal calibration of balances not in place.

Reference to the laboratory’s quality system:

Reference to accreditation criteria: ISO 17025, section § 6

Reference to DANAK’s checklist, if convenient

Non-compliance observed (initials for assessor)

Signatures:

(from laboratory) [Signature]

(lead assessor) [Signature] 7/12-01

Reason for non-compliance (lab), if convenient:

Corrective actions planned by the laboratory (lab arranged with LA/TA):

[Signature] 10/12-00

Time limit (accepted by LA): 2000-10-00

(Documentation for completion of corrective actions (LA):

[Signature] (Signature of head of laboratory) (date)

[Signature] (signature of lead assessor) (date)
Non-compliance No.: 7

<table>
<thead>
<tr>
<th>Description of the non-compliance (Lead assessor or technical assessor):</th>
</tr>
</thead>
<tbody>
<tr>
<td>The accept criteria for TREP can not be derived as a function of ongoing registration.</td>
</tr>
</tbody>
</table>

Reference to the laboratory’s quality system:
Reference to accreditation criteria: ISO 17025, section 5.9
Reference to DANAK's checklist, if convenient: Item

Non-compliance observed (initials for assessor) EK
Signatures: (from laboratory) (lead assessor) (date) 7/12-01

Reason for non-compliance (lab), if convenient:

Corrective actions planned by the laboratory (lab arranged with LA/TA):

Correct criteria are corrected from previous registered data.

Time limit (accepted by LA): Feb. 1, 2002 (Signature of head of laboratory) (date)

Documentation for completion of corrective actions (LA):

( signature of lead assessor) (date)
Non-compliance No.: 6

<table>
<thead>
<tr>
<th>Description of the non-compliance (Lead assessor or technical assessor):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume control of GPC test procedure</td>
</tr>
</tbody>
</table>

Reference to the laboratory’s quality system: ISO 17025, section 5.8
Reference to accreditation criteria: TF ____________ section ____________
Reference to DANAK’s checklist, if convenient: Item ____________

Non-compliance observed (initials for assessor): BN
Signatures:  
(from laboratory) ____________ (lead assessor) ____________ (date) 7/12/01

Reason for non-compliance (lab), if convenient:

Corrective actions planned by the laboratory (lab arranged with LA/TA):
Procedure for GPC volume control will be written.

Time limit (accepted by LA): 2/22/02  
(Signature of head of laboratory) ____________ (date) 2/22/02

Documentation for completion of corrective actions (LA):

( signature of lead assessor) ____________ (date)
Non-compliance No.: 9

Description of the non-compliance (Lead assessor or technical assessor):

The expiration time on 24 months for pesticide standard solutions is not documented.

Reference to the laboratory's quality system:

Reference to accreditation criteria: ISO 17025, section C.6

Reference to DANAK's checklist, if convenient: TF ---, section ---

Item ---

Non-compliance observed (initials for assessor) Qu.

Signatures:

(from laboratory) (lead assessor) 7/12/01

(date)

Reason for non-compliance (lab), if convenient:

Corrective actions planned by the laboratory (lab arranged with LA/TA):

Data will be documented.

Time limit (accepted by LA): Feb. 1, 2002

Signature of head of laboratory: 6/7/2002 (date)

Documentation for completion of corrective actions (LA):

( signature of lead assessor) (date)
## ANNEX 4: Assessment of Proficiency test's carried out since last visit

<table>
<thead>
<tr>
<th>Provider/Matrix</th>
<th>Number of samples</th>
<th>Parameter</th>
<th>Method</th>
<th>&quot;true value&quot;</th>
<th>LOD</th>
<th>Performed by</th>
<th>TA/LA assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fagas 09-27</td>
<td>Baby food</td>
<td>Poisoned</td>
<td>T26A</td>
<td>around 21</td>
<td>21</td>
<td>P.H.</td>
<td>Failed to detect \n</td>
</tr>
</tbody>
</table>

**Remarks of the Laboratory and corrective actions**

- Accreditation No. 436
<table>
<thead>
<tr>
<th>Provider/Matrix</th>
<th>Number of samples</th>
<th>Date</th>
<th>Parameter</th>
<th>Method</th>
<th>&quot;true value&quot;</th>
<th>LOD</th>
<th>A. N.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks of the laboratory and corrective actions**

**ANNEX 4: Assessment of Proficiency test’s carried out since last visit to the laboratory**

<table>
<thead>
<tr>
<th>Provider/Matrix</th>
<th>Number of samples</th>
<th>Date</th>
<th>Parameter</th>
<th>Method</th>
<th>&quot;true value&quot;</th>
<th>LOD</th>
<th>A. N.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### ANNEX 1. Assessment of Proficiency test's carried out since last Visit

<table>
<thead>
<tr>
<th>Provider/Matrix</th>
<th>Parameter</th>
<th>Method</th>
<th>&quot;true value&quot;</th>
<th>LOD</th>
<th>Performed by</th>
<th>TA/LA assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foppas</td>
<td>Diclofopmos T26A</td>
<td>Not in sample</td>
<td>A.N.</td>
<td>Signal present in both ECD and MS!</td>
<td>1.1 x LOD (LOQ)</td>
<td></td>
</tr>
<tr>
<td>closing: 08.06.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheat flour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks of the Laboratory and corrective actions**

- It was revealed that an interfering compound was the reason. Only found on one column.

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**Accreditation No.** 436

**Page 3 of 3**
Dear Arne

Hereby the report from the surveillance visit in Tartu December 7, 2001.

During my inspection in the laboratories I focussed also on the ability of Peeter Lauman to manually perform the sample extraction, clean up and final dilution in vial ready for detection.

Naturally Peeter knew the procedure of sample preparation but it was also clear that Peeter did not have the routine in performing the job. This is understandable because it is not his daily job, but he must, as the only substitute for Helve Uus, be able to step in and perform the job.

During the demonstration of the analysis it was revealed that the identification of the individual sample could be endangered due to the use of several labels for the same sample as it went through the process*). Re-writing the ID is a risk for confusing. The volume control of the GPC was made but not documented*).

The procedure for the analytical balance was missing indication for interval for external calibration*), although it was performed with acceptable interval. Internal calibration was made, documented and satisfactorily.

It has been a rather difficult job for me to find the changes in the new methods of analysis used in the accreditation and it appeared it was for Peeter too! One of the changes was an expanded time period of using the standard pesticide solutions from 12 to 24 months, without documentation*). The logbook and the actual standard solutions were checked and the vials found to be without any more space above the liquid for evaporation than 30% of total volume of the vial.

Maintenance of the MS was good but signature for the external maintaining was missing at several occasions*). The storage of data was found in accordance with the standard.
Criteria’s for acceptance of the detection (response), was only made for Aldrin*). The way the criteria was made was not in accordance with the purpose of having such criteria, because it was generated on basis on the present status of the performance of the instrument!*)

The physical state and environmentally conditions in the laboratory was evaluated as satisfactorily.

The status from the last visit by DANAK with respect to validated number of pesticides and matrixes was in general the same. Nothing has happened since. This is not satisfactorily for the laboratory in the long run. I would like to call for some “move”, for example as a method validation plan for the future and actual method validation of more pesticides and matrixes differing in nature. The problem was illustrated in a re-reviewed report where a range of the detected pesticides was not accredited.

At the proficiency tests there were indications on failing quality at the level of quantification. The problem is normal in a range of similar laboratories probably due to the way the LOQ has been calculated so far (but generally accepted), namely at a too long distances from the actual spiked level, often 5 times higher.

*) Deviation from ISO 17025

Best regards

Erik Kirkkel

Annex 6

Observations made by the lead assessor during the surveillance visit at the laboratory, accreditation No. 436, 07.12.2001.

Assessment of management requirements

During the assessment attention was paid on description of management requirements and implementation of these requirements according to EN ISO/IEC 17025, 1. edition approved 27.04.2000.

In general it was noticed that all the management requirements was well described and from random check’s it was concluded that the laboratory act according to the quality manual and the procedures which very well cover all the requirements in the above mentioned standard.

No complaints from the clients within the accreditation scope have been received since accreditation was given. A revised form for registration and solving of complaints and proposals is received as agreed upon during the visit.

A minute from the management review is received as well.

Internal audit horizontal as well as vertical is performed, however protocol of internal audit from 19.11.2001 is not received (DANAK received some documents in estonian which could not be understood).

A plan for education of Peeter Pricks is to be send.

The laboratory has worked out a new version of the quality manual (Version No.: 3.1), dated 15.01.2002 as agreed upon during the visit with minor changes in e.g. structure of the laboratory and matters arising from the non-compliances:

Arne Kjær Sørensen
Annex G

Pictures of analytical equipment installed in Trzebnica