OVERVIEW OF A SERIES OF MISSIONS
CARRIED OUT BETWEEN 2003 AND 2005
IN FIFTEEN MEMBER STATES
CONCERNING THE EVALUATION OF THE CONTROL OF RESIDUES AND
CONTAMINANTS IN LIVE ANIMALS AND ANIMAL PRODUCTS, INCLUDING
CONTROLS ON VETERINARY MEDICINAL PRODUCTS
EXECUTIVE SUMMARY

This report provides an overview of the outcome of a series of missions carried out by the Food and Veterinary Office in fifteen Member States between October 2003 and June 2005. It excludes those Member States which acceded to the European Union in May 2004. The missions concerned the control of residues and contaminants in live animals and animal products, including the controls on the distribution and use of veterinary medicinal products and feed additives, the use of which may give rise to residues in such products. The evaluations were based on the standards set out in Council Directive 96/23/EC, and other applicable Community legislation relevant to the control of residues of pharmacologically active substances in food.

The objective of the missions was to assess the performance of the competent authorities and other officially authorised entities involved in residues and veterinary medicinal product controls and the legal and administrative measures put in place to give effect to the relevant Community requirements.

A number of conclusions can be drawn from the experience. This series of missions has demonstrated a mixed picture in the application of residues and veterinary medicines controls throughout the Member States. On the whole, planning, implementation of sampling and supervision of same operate effectively in the majority of Member States. There are improvements to be made in respect of each of these functions in some Member States – particularly those with highly decentralised administrative systems. The execution of follow up activities in general is effective and in several Member States was extremely good. Validation of analytical methods and accreditation of laboratories remain major tasks for the majority of Member States. Progress is being made but it is slow. Few deficiencies in the authorisation of veterinary medicinal products for food producing animals were seen, although, the ‘special licence’ systems established to address small internal markets for veterinary medicines, could result in consumers being exposed to residues of substances so authorised. Different approaches are also being taken with regard to medicated feedingstuffs, particularly concerning the requirements for monitoring homogenetly and stability of final product and the issue of top dressing. The issue of medicines controls, especially at the level of farm and veterinary practitioner, is one where there is particular divergence between Member States.

Following each of the individual reports, Member States were requested to produce ‘action plans’ to address the recommendations made. Action plans have been produced by all Member States. In the case of those Member States who submitted action plans in advance of the final report being issued, their plans have been published on the Commission’s website alongside the final report. In general the Member States have responded positively. Many of the more serious deficiencies identified (and highlighted in the present summary report) have already been dealt with promptly, resulting in a strengthening of the respective national control systems. Other corrective actions are being phased in over the longer term. The effectiveness of these measures will be subject to verification in future missions.

In summary this mission series has demonstrated the importance of on-the-spot inspections in evaluating the implementation and verifying the effectiveness of residues and veterinary medicines controls. Such inspections are an important tool in assessing Member States’ compliance with Community law. Allied with the co-operation of the Member States in addressing shortcomings, this mission series has contributed to the strengthening of official controls across the Member States.
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1. INTRODUCTION

The term ‘residue’ is defined in Article 2, paragraph c of Directive 96/23/EC as “a residue of substances having a pharmacological action, of their metabolites and of other substances transmitted to animal products and likely to be harmful to human health”. An alternative definition is ‘that portion of the administered dose of a veterinary medicine or other substance present in the tissues, body fluids, products or excreta of an animal arising from the treatment with or exposure of that animal to the substance in question.’ World-wide, residue control programmes have been established and refined over the last twenty-five years or so. The major objectives of such programmes are the protection of consumers (from exposure to chemical residue hazards) and facilitation of international and intra-Community trade.

This series of Food and Veterinary Office missions on residues controls was carried out between October 2003 and June 2005 and covered fifteen Member States. (See Annex I for details). The Member States which acceded to the EU on 1 May 2004 were not included. The report herein represents an attempt to summarise the main findings and conclusions made, thereby providing a balanced appraisal of the situation in the Member States visited. The report has identified a number of problem areas common to many Member States and, in so doing, should facilitate reflection on their underlying causes and hopefully, result in improvement.

2. OBJECTIVES AND SCOPE OF THE MISSION SERIES

The objective of this series was to evaluate the national measures put in place, and their operation, aimed at the control of residues and contaminants in live animals and animal products, including the controls on the distribution and use of veterinary medicinal products and feed additives, the use of which may give rise to residues in such products.

The standards used were Council Directive 96/23/EC and other applicable Community legislation in this field, including legislation on the authorisation and distribution of veterinary medicinal products for food producing animals.

The missions focused on the role of the competent authorities, the legal and administrative measures in place to give effect to the relevant EU requirements, controls with regard to residues of pharmacologically active substances and their operation, authorisation and distribution of veterinary medicinal products for food producing animals and their operation, and the performance of residue laboratories.

In pursuit of this objective, meetings were held with the relevant levels within the Competent Authorities and on-the-spot visits were made to sites such as wholesalers and retailers of veterinary medicinal products (e.g. veterinary pharmacies), residue laboratories, farms, feed mills manufacturing medicated feedingstuffs, slaughterhouses and veterinary practitioners.

3. LEGAL BASIS FOR THE MISSION SERIES

The mission series was carried out under the general provisions of Community legislation and, in particular:


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1 EU legal acts quoted in this report refer, where applicable, to the last amended version.
Commission Decision 98/139/EC \(^2\) of 4 February 1998, laying down certain
detailed rules concerning on-the-spot checks carried out in the veterinary field by
Commission experts in the Member States.

A full list of the legal instruments referred to in the reports of these missions is
provided in Annex II.

4. MAIN FINDINGS AND CONCLUSIONS OF THIS MISSION SERIES

4.1. RESIDUES LEGISLATION

Council Directive 96/23/EC lays out the requirements that each Member State must
meet in relation to the planning and execution of their national residue control plans
for live animals and products of animal origin. The principal objective of the
legislation is to ensure that Member States (a) detect the abuse of substances
illegally used in animal production, the misuse of authorised veterinary medicines
and (b) take appropriate actions to minimise recurrence.

The majority (thirteen) of Member States had transposed Council Directive
96/23/EC in its entirety. In the two Member States which had not transposed all of
the Articles, failure to transpose the provisions of Article 10 meant that veterinarians
were not required to record treatment in a register kept on the farm. (See also point
4.4.6.3 in record keeping).

4.2. NATIONAL RESIDUE CONTROL PLANS

4.2.1. Planning of the national residues control plans

Council Directive 96/23/EC obliges Member States to check live animals and
animal products for residues of veterinary medicinal products and contaminants.
These substances are categorised in several ‘substance groups’ (designated A and B)
which are listed in Annex I to the Directive. Group A substances comprise those
prohibited from use in livestock production (\textit{inter alia} for fattening purposes).
Group B includes residues of pharmacologically active substances which are present
in, \textit{inter alia}, authorised veterinary medicinal products (e.g. antimicrobials, anti-
parasitic drugs, sedatives etc) and contaminants, including residues of substances
which are unintentionally present in the food as a result of a contamination from the
environment.

The numbers of samples to be taken from each species/animal product are defined in
the Directive and in subordinate legislation (e.g. Commission Decision 97/747/EC).
Within certain animal species/commodity types, testing for analytes within certain
substance groups is mandatory. While the number of analytes to be tested for \textit{within}
each substance group/sub-group (i.e. the scope of analysis) is not defined, the
principal objectives of the legislation entail that Member States test for as wide a
range of relevant substances as is feasible. Indeed this message is reiterated in the
Commission-hosted twice-yearly meetings of expert Residues Working Group in
which representatives of each of the Member States discuss residue controls in the
EU and national residue control plans submitted by each of the Member States.

In general it was found that the planning of national residue control plans in the Member States was carried out well, with inputs from the various key players in the process e.g. national reference laboratories etc.

### 4.2.1.1. Selection of analytes and scope of testing

In the vast majority of Member States the primary criterion for inclusion of a certain residue in the national residue control plan is the ability of the laboratory (network) to analyse for it. The selection of analytes is sometimes also based on perception of what medicines within therapeutic categories are likely to be used in certain production sectors. Only one Member State had established a system detailing the use patterns of authorised veterinary medicinal products which would have allowed it to select residues in each of the livestock sectors on the basis of objective data, though the use of this information in formulating the national residue control plan was not foreseen until 2006. One other Member State had gathered data on the use patterns of antimicrobial veterinary medicines, however these data were not used in the planning process.

In the majority of Member States, FVO missions were critical of the narrow scope of analysis within some substance groups – in both Group A and Group B. Primarily this was related to a lack of analytical capability. In the case of certain Group B substances (e.g. Group B2a – anthelmintics), had objective evidence for the use patterns of authorised veterinary medicinal products in each of the species/commodities covered by the plan been available, such data could have been used to justify omissions of certain analytes from the scope of testing.

Two Member States had taken a decision to only test for a limited number of coccidiostats due to the current absence of Community Maximum Residue Limits (MRLs) for the majority of these compounds. Overall it was encouraging to note that there has been a general trend towards the utilisation of multi-residue analytical methods allowing a greater number of substances within each therapeutic category to be identified and/or quantified simultaneously.

### 4.2.1.2. Testing of mandatory substance group/species combinations

Six Member States did not fully comply with the requirements of Council Directive 96/23/EC i.e. they did not test for all mandatory substance groups in relevant animal species – such as equidae. However, it should be noted that in successive national residue control plans, such deficiencies have generally been rectified. Member States are obliged to test equidae or products therefrom even though no frequency or minimum number of samples has been established in Council Directive 96/23/EC. Only six Member States had either very limited, or no testing for horses.

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3 The majority of coccidiostats are classified in the EU as feed additives, not veterinary medicines. In accordance with recital 14 and pursuant to Article 9 (7) of Regulation No 1831/2003, the establishment of Community Maximum Residue Limits (MRLs) will be required for those feed additives, residues of which may have an adverse effect on human health. MRL elaboration will be linked to the re-authorisation of such additives.

4 In the twice yearly meetings of the Commission-chaired residues expert working group, at which each Member State is represented, the Commission has consistently stressed the desirability of utilising multi-residue methodology.
4.2.2. Implementation of the national residues control plans

4.2.2.1. Personnel involved in sampling

In twelve Member States, official (government) inspectors were responsible for sampling. In three Member States, private veterinary practitioners and other non-official entities were involved. This may result in a conflict of interest (i.e. testing of livestock belonging to their own clients).

4.2.2.2. Execution of sampling

In the majority of Member States, sampling was unannounced and carried out on different working days of the week and at different times of day, though at local level in two Member States farmers were given prior notice of inspections being carried out, thereby reducing the chances of detecting illegal treatment. Again this deficiency has been addressed by the Member States in question. (It should be noted that Article 3 (2) of Regulation (EC) No 882/2004 of the European Parliament and of the Council (official feed and food control Regulation) specifies that official controls shall be carried out without prior warning, except in cases such as audits where prior notification of the feed or food business operator is necessary. This Regulation was not in force in the period during which these missions were carried out).

In two Member States significant under-sampling (i.e. far fewer samples taken compared to the number stated in the national residue control plan) was seen. In the first Member State that was because of a conscious decision taken by the central competent authority. However, in the second Member State, due to a lack of supervision by the central competent authority it was not possible to identify in which region the under-sampling had occurred (see section below on supervision). In one other Member State sampling was not carried out evenly throughout the year – there were gaps of several months where no samples were taken.

4.2.2.3. Targeted, suspect and random sampling

The concepts of ‘targeted’ and ‘suspect’ sampling are defined in Commission Decision 98/179/EC. The aim of targeted sampling is to detect illegal treatment, and to control compliance with Community maximum residue limits for authorised veterinary medicines. Given this aim, targeted sampling should permit the selection of animals which are more likely to have received treatment (illegal or legal) on the basis of their type – e.g. cull cows and veal calves are more likely to have received treatment with antibiotics rather finishing steers.

A suspect sample is defined as one taken as a consequence of a non-compliant result in the national residue control plan, or in response to the outcome of random checks carried out by the competent authority, or on suspicion of illegal treatment. Some Member States had confused targeted and suspect sampling whereby, targeted sampling was considered to require the sampler suspecting illegal treatment (i.e. treatment with banned substances or misuse of authorised medicines) as a prerequisite for targeting. The net effect of this was that genuinely suspect samples were not reported as such – they were treated as targeted samples. 5

5 In the context of the Commission’s Reflection Paper on Residues in foodstuffs of animal origin http://ec.europa.eu/comm/food/food/chemicalsafety/residues/reflection_en.htm and measures being
Five Member States did not employ any targeting criteria at all, using instead random selection of farms and/or animals. In two Member States, targeting criteria were clearly laid out in staff instructions issued from central level but animals were still selected randomly by sampling staff. In two Member States, the fact that the samplers did not know which analyte was to be tested, undermined the effectiveness of centrally-issued instructions for targeted sampling. Furthermore, in one Member State, even when samples had been taken according to targeting criteria, the decision (at laboratory level) to test these samples for other analytes (for which the animals had not specifically been targeted) negated the targeting approach to a certain extent.

Two Member States were notable in that they detained animal carcases taken under their targeted testing programme pending a laboratory result. This strategy is not required under Council Directive 96/23/EC. Such an approach requires considerable resources e.g. space for the detention of carcases and sufficient laboratory capacity for the prompt processing of samples.

4.2.2.4. Turnaround times (from sampling to reporting of a result)

Examination of turnaround times from sampling until receipt of a laboratory result revealed large differences between the Member States. In seven Member States, target turnaround times were laid out, ranging from four to eight weeks. In two Member States substantial delays were observed at various stages during the process e.g. collection of samples over several months before submission to the laboratory, long term storage of samples within the laboratory until a sufficient number were available for a single analytical run etc. Individually and cumulatively, such practices undermine the effectiveness of residues controls, negating the usefulness of follow-up investigations and actions taken in respect of non-compliant results.

4.2.3. Supervision of implementation

Differences in the extent and level of supervision of implementation were observed throughout the Member States. In those Member States with a highly decentralised system, the central competent authority was rarely in a position to know at any given time whether sampling in each of the regions was being carried out according to the plan, though this information tended to be known by the competent authorities at regional level. Targeted sampling was most effectively implemented in the Member States which had systems in place allowing the central competent authority to know when (in real time) samples were taken (and from where), which allowed reallocation of sampling in the event of under-sampling. In six Member States, the central competent authorities relied on six-monthly or annual collation of results from regions and consequently did not have an up-to-date overview on the progress of sampling.

In several Member States the laboratory network had a crucial role in chasing up unco-operative samplers and keeping the regional and central competent authorities updated.

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drawn up by the Commission to progress this initiative, the issue of sampling strategies is being addressed.
4.2.4. Follow-up of non-compliant results and enforcement actions

The majority of Member States followed up non-compliant results in a timely, efficient and consistent manner. In particular, four Member States demonstrated excellent examples in the application of prompt and effective enforcement actions. However, the time taken to generate results and initiate follow-up actions again varies greatly between Member States. In general the absence of a specific reference in Community legislation as to what constitutes an ‘acceptable’ time span which is compatible with implementing effective controls, is one reason for the huge variations observed.

Clearly, delays of several months between the taking of samples, generation of a result and initiation of follow-up, are not compatible with effective control. Examples of such delays were seen in five Member States; three Member States did not have standard procedures in place for dealing with non-compliant results and two Member States were weak in terms of enforcement activities.

Differences in the approach taken to follow-up were common. With regard to prohibited substances (listed in Group A of the Annex I to Council Directive 96/23/EC), one Member State did not take actions as detailed in Articles 16-19 of said Directive.

Malachite green is a dye which is classified in Group B3e of Annex I to Council Directive 96/23/EC. Its use in food producing animals is prohibited according to Article 14 of Council Regulation (EEC) No 2377/90. It is effective in the treatment of certain fungal infections in fin-fish and residues of malachite green have been detected in aquaculture products in the EU.

Two Member States took firm action including destruction of fish from affected farms. However three Member States considered the possibility of malachite green residues occurring due to environmental contamination (from the period during which the substance was not specifically prohibited). In these countries, fish from the affected farms were either released onto the market, or were subject to a test and release policy (provided that the residue concentration detected did not exceed the Community minimum required performance limit - MRPL). This latter approach is consistent with the policy applied to imports from third countries as detailed in Commission Decision 2005/34/EC.

With regard to residues of those substances classified in Group B (mainly veterinary medicines and agrochemicals) exceeding permitted limits, the majority of Member States did carry out investigations on-farm as to the cause of the non-compliant result. However in three Member States subsequent consignments of animals from the farm in question were not subject to sampling at slaughterhouse level in order to prove that the advice given had been complied with.

4.2.5. Other residue controls

Four Member States operate additional (publicly funded) residue control programmes which focus on defined livestock production sectors and/or retail sectors of particular interest to the Member State in question.

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6 This is an issue which has been discussed in the context of the Commission’s Reflection Paper on Residues in foodstuffs of animal origin. (See footnote 5).
With the exception of one Member State, the competent authorities required that they had to be informed of non-compliant results of residue controls carried out within industry-organised auto-control programmes (e.g. in the dairy and pig meat sectors).

4.3. LABORATORIES

4.3.1. Laboratory accreditation

In the residues field, accreditation of official control laboratories to ISO standard 17025 has been mandatory under Community law since January 2002 (see Annex to Commission Decision 98/179/EC and recital 4 to Commission Decision 2002/657/EC). In eight Member States, all laboratories involved in the national residues control plan were accredited. Of the remaining seven Member States, four had one or more National Reference Laboratories which were not accredited and in two Member States the vast majority of residue control laboratories were not accredited at all.

During this series of missions, three distinct approaches to accreditation were observed.

4.3.1.1. Accreditation of individual methods

This approach is used in the majority of Member States. Individual methods must be assessed by the accrediting body before they may be included within the ‘scope’ of accreditation. The laboratory may of course use methods which are not included within the scope (indeed this is the norm), however, the laboratory must state clearly on the analysis certificate that the result has been achieved using a non-accredited method.

4.3.1.2. Flexible scope accreditation

The fundamentals of this approach are that laboratories are accredited for individual methods as described above. If they wish to add a new method, using an analytical approach similar to one already used for an accredited method, the accrediting body can agree to the new method being included within the scope of accreditation on the basis of trust. This is based of course on the fact that the pre-existing method, which has been assessed by the accrediting body, offers sufficient evidence of expertise being available in the laboratory. The newly added method will usually be assessed during the next audit of the accrediting body and such audits usually take place every 2-4 years.

4.3.1.3. ‘Technical Competence’ accreditation

This approach was seen in one Member State where two accreditation bodies (neither of which were members of either European Co-operation for Accreditation or the International Laboratory Accreditation Co-operation – ‘umbrella organisations’ in which member accreditation bodies demonstrate their competence through participation in a peer evaluation system) had accredited all of the residue control laboratories. The accreditation scope was based on so-called ‘technical

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7 According to Article 12 (2) of Regulation (EC) No 882/2004 of the European Parliament and of the Council, accreditation is now a mandatory requirement for all official laboratories.
competence’ rather than ‘method by method’. In this system the laboratories had to have the correct equipment in place and a quality system in operation – indeed this was the case in the laboratories inspected by the FVO. However, the key criterion ‘the analytical method’s fitness for purpose’ (as described in section 5.4. of the ISO standard) did not appear to have been checked by these accreditation bodies given that many of the methods in these laboratories were not fit for purpose – some did not meet the validation criteria (including selectivity and decision limit) specified in Commission Decision 2002/657/EC for certain Group A compounds.

4.3.2. Validation of analytical methods

4.3.2.1. Application of Commission Decision 2002/657/EC

In the area of validation of analytical methods for residues, it is clear that the majority of Member States have had great difficulty in meeting the deadlines and standards required by Commission Decision 2002/657/EC. The Decision has generated much debate within the analytical community with variation in the validation approaches and interpretation of the Decision’s requirements. Advice and training on validation of analytical methods according to this Decision has been offered in workshops organised by the Community reference laboratories (CRLs) for the benefit of the national reference laboratories (NRLs) under the CRL-NRL framework. 8

Furthermore many Member States appeared to have underestimated the time and effort required to meet the new standard. Even more than one year after the deadline (1 September 2004) for validation of Group A methods to this standard, very few Member States were fully compliant and, on the basis of the progress observed during the missions, several will require a much longer period to fully validate Group A methods. 9

In one Member State, methods had been properly validated (within-laboratory) in accordance with Commission Decision 2002/657/EC in the relevant national reference laboratories and had been transferred to the routine field control laboratories with no requirement for validation in these laboratories. Consequently, the routine field control laboratories could not prove that the method worked reliably in their hands (since in many cases they were using different equipment, ...

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8 The Commission convened a working group of experts in July 2004 with the purpose of clarifying certain aspects of the Decision. Recommendations/guidelines were formulated to facilitate a harmonised implementation of the Decision. The guidelines were distributed and endorsed by the Standing Committee of the Food Chain and Animal Health (SCoFCAH) on 16 November 2004 (SANCO/2004/2726) and were further distributed through the CRL-NRL network. Following revision and subsequent presentation at SCoFCAH on 17 May 2006, the latest guidelines have been published on the Commission’s Health and Consumer Protection Directorate-General website at: http://ec.europa.eu/comm/food/food/chemicalsafety/residues/lab_analysis_en.htm

9 In November 2004 and July 2005, the Commission has requested updates from each of the Member States on progress being made with the implementation of Commission Decision 2002/657/EC. This exercise showed that progress was being made in each of the Member States. In the forum of the residues expert working group (see footnote 4), the Commission has consistently stressed that the validation of methods according to Decision 2002/657/EC is a priority for Member States in relation to the approval of (their) national residue monitoring plans. In the meeting held in July 2005, the Commission indicated that Member States which had no validated methods for a particular substance or food commodity should send their samples to another Member State with appropriately validated methods.
reagents and of course, operators). Such an approach is only acceptable when methods have been subjected to a collaborative trial.  

The practical consequence of failure to validate methods to the new standard is that the success of resulting legal actions may be compromised, even if based on laboratory validation data complying with older (and repealed) Community legislation – Commission Decision 93/256/EEC.

4.3.2.2. Validation of screening and confirmatory tests for residues of antimicrobial drugs

Antimicrobial medicines are probably the most commonly used therapeutic category in animal production, world-wide. Regarding the screening tests utilised for the detection of antimicrobial residues, thirteen of the Member States were using a variety of antimicrobial growth inhibition tests which have not been fully validated using either incurred (naturally contaminated) or artificially fortified animal tissues. Those Member States using ‘single plate’ growth-inhibition tests can only detect a relatively narrow range of antimicrobial residues; such tests are consequently unsuitable for detecting residues from a broad range of commonly used antimicrobial drugs. Furthermore, even if the bacterium used in the test is sensitive to a range of antimicrobials, this does not guarantee that the test will be sufficiently sensitive to detect residues of these antimicrobials at concentrations at and above their respective Community Maximum Residue Limits.

The ‘Four Plate Test’ is the most commonly used screening test for antimicrobial residues. However, the Member States using this regarded the test as being ‘standardised’ without any consequent need for in-house validation. Whilst the performance of this test using antimicrobial standard solutions is well known, deficiencies in the scope of analytes detected and sensitivity in naturally incurred samples have not been addressed by the majority of Member States.  

With regard to the availability of chemical confirmatory tests for antimicrobial residues (allowing the identification and quantification of residues relative to applicable Community Maximum Residue Limits), the majority of Member States had confirmatory methods in place for several antimicrobial ‘families’ including *inter alia* beta-lactams, tetracyclines and sulphonamides. However there was generally a need to establish confirmatory methods for a number of ‘families’ including aminoglycosides, cephalosporins, macrolides, diaminopyrimidines and pleuromutilins.

4.3.3. National Reference Laboratories

The roles and responsibilities of National Reference Laboratories are detailed in Article 14 and Article 15 (2) of Council Directive 96/23/EC. Member States are obliged to designate at least one national reference laboratory. A given residue or residue group may not be assigned to more than one national reference laboratory. Such laboratories are obliged to coordinate the work of the other national laboratories responsible for residue analysis, in particular by coordinating the

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11 The Community Reference Laboratory (CRL) responsible for antimicrobial veterinary medicines organised a workshop on validation of screening methods in 2005. All four CRLs are preparing guidelines for validation of screening methods.
standards and methods of analysis for each residue or residue group concerned, ensure that national laboratories observe the limits laid down, assist the competent authority in organising the national residues monitoring programme, periodically organise comparative tests for each residue or residue group assigned to them, disseminate information supplied by Community reference laboratories and ensure that their staff are able to take part in training courses organised by the Commission or by Commission reference laboratories.

4.3.3.1. Competence

Every Member State (with the exception of one Member State which utilises the national reference laboratory in another Member State) has nominated at least one national reference laboratory. There are a total of thirty nine national reference laboratories. In only four Member States did the national reference laboratories (eight in all) have analytical methods in place covering all of the compounds for which they were responsible. Consequently, for the majority of Member States, their national reference laboratories could not test for one or more substance groups for which they had analytical responsibility and were not in a position to meet the requirements of Council Directive 96/23/EC. Notwithstanding a lack of laboratory accreditation in several Member States, it was clear that in three Member States, at least some of the national reference laboratories did not have sufficient resources or indeed, competence to warrant their nomination as national reference laboratories.

4.3.3.2. National reference laboratory functions

Only in two Member States did their national reference laboratories receive specific funding to enable them to carry out tasks such as organisation of proficiency tests and workshops for the benefit of routine field laboratories. In these two countries, the system worked well with clear cascading of information from the Community reference laboratories through to the routine field laboratory network.

In some Member States national reference laboratory activities (proficiency tests, workshops etc) were not carried out at all, either because these laboratories also functioned as the major routine field laboratory or because there were insufficient resources allocated within the national reference laboratories for these functions. Indeed, in those Member States with a single national reference laboratory, six of these were insufficiently resourced to meet all of their national reference laboratory obligations.

Other specific problems observed included a lack of co-ordination of the activities of national reference laboratories in several of those Member States with more than one national reference laboratory. In one Member State the process used by the competent authority to procure laboratory services meant that the national reference laboratories and routine field laboratories had to periodically compete with each other for the right to supply routine analytical services to the competent authority. This arrangement served as a disincentive to co-operation and technology transfer between the various laboratories.

4.3.4. Routine Field Laboratories

There were around one hundred and seventy routine field laboratories involved in residues controls in all of the Member States. In the three largest Member States the number of laboratories providing analytical services ranged from twenty six to more than fifty.
The range of analyses for which routine field laboratories are responsible varied greatly. In the three largest Member States, most of the laboratories were responsible for a wide range of analyses. In one of these Member States there was evidence of consolidation whereby specific routine field laboratories specialised in certain methods of analysis, exchanged samples with their fellow laboratories. This sensible initiative lessened the validation burden on participating laboratories. However, in the Member State with the largest number of routine field laboratories, these laboratories functioned as stand-alone units with responsibility for a wide range of analyses. There was little evidence of interaction or co-operation between these laboratories and the majority were not accredited.

As was the case for the national reference laboratories, the competence and performance of the routine field laboratories covered a very wide spectrum. In several Member States the national reference laboratories could not compel routine field laboratories to use appropriate analytical methods, nor in some cases did the national reference laboratory know which methods were actually being used in the routine field laboratories.

4.4. VETERINARY MEDICINAL PRODUCTS AND MEDICATED FEEDINGSTUFFS


**Directive 2001/82/EC**, the so called “veterinary code” specifies the conditions governing the manufacture, authorisation and distribution of veterinary medicinal products (including the manufacture of medicated premixes) within the European Union. A subsequent Directive (2004/28/EC) amending the provisions of Directive 2001/82/EC had to be transposed by 30 October 2005, after the mission series had been completed – none of the Member States were judged against the requirements of this latter Directive. The Articles of Directive 2001/82/EC which are of particular relevance in the context of residues controls are:

- **Article 6**: Specifies that veterinary medicinal products may only receive a marketing authorisation (for administration to food-producing animals) provided that the pharmacologically active substances contained therein are listed in Annexes I, II or III to Council Regulation (EEC) No 2377/90;

- **Article 11**: Specifies the provisions of the ‘cascade’ which in exceptional circumstances and under the veterinarian’s responsibility allows the use in certain species of food-producing animals, of *inter alia*, veterinary medicinal products without a valid national marketing authorisation for the species in question. It should be noted that the cascade is not applicable to honey bees;

- **Articles 58, 59 and 60**: Specify labelling requirements for veterinary medicinal products;

- **Article 65, 66 and 69**: Specify record keeping requirements for wholesalers and retailers of veterinary medicinal products and farmers.

- **Article 67** specifies the prescription status for veterinary medicinal products.

**Council Regulation (EEC) No 2377/90** lays down the conditions for the elaboration of Community Maximum Residue Limits for pharmacologically active substances. Such limits represent the maximum concentration of a residue that is
legally permitted or acceptable in or on a food to protect consumer health. A scientific evaluation of the pharmacologically active substances and residues thereof is carried out by the European Medicines Agency’s Committee for Veterinary Medicinal Products. Pursuant to the evaluation, the Committee will (or will not) recommend the establishment of maximum residue limits in order to protect consumer health. Based on that scientific assessment the European Commission will then propose Community Maximum Residue Limits for adoption. Under the terms of Council Regulation (EEC) No 2377/90, pharmacologically active substances are listed in four categories or Annexes to this Regulation: Annex I (permanent maximum residue limit elaborated on the basis of sufficient data being available to fully assess the compound); Annex II (no maximum residue limit required to protect consumer health); Annex III (provisional maximum residue limit – the data which has been supplied should be completed and/or validated within a proposed deadline by which time further information must be supplied); Annex IV (a maximum residue limit cannot be assigned due to unacceptable risks to human health). Examples of substances placed in Annex IV include chloramphenicol, nitrofurans and the nitroimidazoles.

With regard to (feed) additives authorised for use in animal nutrition by Regulation (EC) No 1831/2003 of the European Parliament and of the Council, Article 8 of this regulation describes the process for the setting of maximum residue limits for such additives.

Council Directive 96/22/EC specifically prohibits the use of substances with a hormonal action and of beta-agonists for growth promotion in food-producing animals. The Directive specifies the conditions under which therapeutic or zootechnical treatment of food-producing animals with hormonal products may be authorised. An amendment to this Directive (Directive 2003/74/EC), which further restricts the conditions for zootechnical use had a target date for full implementation by the Member States of 14 October 2004 – midway through the series of missions.

The preparation, marketing and use of medicated feedingstuffs is governed by Council Directive 90/167/EEC. In Article 3 of this Directive it is stated that medicated feedingstuffs may only be manufactured using authorised medicated premixes (i.e. a type of authorised veterinary medicinal product).

Article 4 of said Directive states that manufacture of medicated feedingstuffs may only take place in approved premises which have already been approved for the production of feedingstuffs containing additives in accordance with Council Directive 95/69/EC. This prerequisite approval requires that measures are taken to minimise cross contamination of feedingstuffs (Chapter 1 (3) (a) of the Annex to Council Directive 95/69/EC).

Article 4 (2) of the Council Directive 90/167/EEC also allows Member States to permit the production of medicated feedingstuffs on farms, provided that certain requirements (detailed in Article 4 (1) of the Directive) are satisfied. These requirements include regular checks by the producer on the homogeneity and stability of feedingstuffs so produced. Furthermore it is incumbent on producers to ensure that there is no possibility of any undesirable interaction between veterinary medicinal products, additives and feedingstuffs (Article 4 (1) (c), third indent (i)). Taken together with the Council Directive 95/69/EC requirements to minimise cross contamination there is a clear requirement for producers to ensure that cross contamination of (medicated) feedingstuffs is controlled.
4.4.1. Transposition of veterinary medicines legislation.

The majority (fourteen) of Member States had fully transposed Council Directive 96/22/EC. In the remaining case, steps were in already in hand to rectify the lack of transposition of several articles at the time of the mission.

Directive 2001/82/EC was fully transposed in twelve Member States. Two Member States had transposed the preceding Directives codified by Directive 2001/82/EC. In one Member State several articles of the Directive had not been transposed at the time of the mission but draft legislation had been produced.

Council Directive 90/167/EEC had been fully transposed in twelve Member States. In two Member States, Article 4 had not been fully transposed and in one Member State the Directive was not transposed at all, though draft legislation addressing this deficiency was in preparation.

4.4.2. Authorisation of veterinary medicinal products

By and large the systems for authorisation of veterinary medicinal products in each of the Member States appear to function properly, though there were two notable exceptions to this generality. In two Member States a parallel licensing system (so-called ‘special licence system’) was in place. The systems were in place to address relatively small markets for veterinary medicinal products in each of the countries – indeed in one of these countries there were no nationally authorised veterinary medicines for aquaculture fish. Neither system complied with Directive 2001/82/EC. The medicines ‘authorised’ under these systems did not have a valid marketing authorisation in either country and in some cases did not even have an existing marketing authorisation in any other Member State.

In three other Member States, there were a number of veterinary medicinal products authorised for one or more food-producing species which contained pharmacologically active substances not listed in Annexes I, II or III to Council Regulation (EEC) No 2377/90 for the relevant species. Examples included veterinary medicines for cattle and pigs containing phenylbutazone. This is not in line with Community requirements.

Reassuringly in none of the Member States was there any evidence of veterinary medicines containing expressly prohibited pharmacologically active substances being authorised for food-producing animals (i.e. Annex IV compounds). However, there is a caveat to this remark. In two Member States, nitroimidazole-containing medicines are authorised for use in ‘sport’ (racing) pigeons, which end up being slaughtered for human consumption. In neither country was there any verifiable system in place to ensure that animals so treated were excluded from the food chain, in accordance with Community law. Furthermore, in relatively few cases, veterinary medicines containing Annex IV substances were authorised for use in non-food-producing species (companion animals), but in package sizes inappropriately large for those species.

One other frequently observed problem (in five Member States) was the authorisation of medicated pre-mixes for use as “top-dressing” agents (for sprinkling on top of animal feedingstuffs). Such use is not foreseen in Community legislation (Council Directive 90/167/EEC) where medicated pre-mixes are meant to be used only for the manufacture of medicated feedingstuffs in an authorised feed mill. The problem with the practice of top-dressing medicated premixes is that it
does not guarantee the correct therapeutic dosage, especially if applied to groups of animals. Four Member States had expressly prohibited the practice of top dressing.

Two Member States permitted the marketing of medicated premixes containing anthelmintics without prescription. According to Article 8.2. of Directive 90/167/EEC, the derogation allowing this expired in 1995.

4.4.3. Use of the cascade provisions for the treatment of honey bees

There are presently no antibiotics with Community Maximum Residue Limits for honey. As the cascade principle does not apply in principle to honey bees, in particular because no standard withdrawal period for honey has been established. Consequently antibiotic treatment of honey bees for European or American Foulbrood should not be permitted in any Member States. 12

Two Member States had authorised veterinary medicinal products containing the antibiotic fumagillin (not listed in Annexes I, II or III to Council Regulation (EEC) No 2377/90) for the treatment of honey bees. One other Member State had authorised the treatment of honey bees with tetracyclines under the cascade, adopting a six month honey withholding time prior to harvesting and a second Member State had allowed the use of tetracyclines in honey bees on condition that the honey was destroyed. Notwithstanding that no checks had been made by the competent authority in question to verify that such destruction had taken place, such use of antibiotics in honey bees is prohibited under Community law.

4.4.4. Equine passport (Commission Decision 2000/68/EC)

One of the aims of the equine passport is to clearly identify those animals which are destined for the food chain. For these animals, medicines records are obligatory. During this mission series (at the time of the missions), five Member States had fully implemented the Decision, though, several Member States had plans to have the Decision fully implemented by the end of 2005. In two Member States there were no checks of any sort on the implementation of the medicines records requirements of the equine passport.

Four Member States had ‘lists’ of veterinary medicinal products containing pharmacologically active substances not listed in Annexes I, II or III to Council Regulation (EEC) No 2377/90, which could be used in horses destined for human consumption, provided that a six month withdrawal period was observed. The Member States in question claimed that this was in line with footnote 4 of Table IIIb and recital 9 of Commission Decision 2000/68/EC. Technically this explanation would be acceptable if the Commission had drawn up a common list of such substances in accordance with Article 10 (3) of Directive 2004/28/EC. Whilst such a list was not produced during the period in which the mission series was carried out, a list was drawn up and issued for public consultation in December 2005.

4.4.5. Distribution of veterinary medicinal products

The most recent amendment of Article 67 to the Community veterinary code requires that all veterinary medicinal products destined for use in food-producing animals are dispensed to the public only on the basis of a veterinary prescription.

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12 This is an issue which has been discussed in the context of the Commission’s Reflection Paper on Residues in foodstuffs of animal origin. (See footnote 4).
However Article 67 (aa) provides that Members States may grant exemptions to that general rule according to the criteria to be established and adopted before 31st December 2006. The Commission is currently working with Member States to establish a proposal for those criteria. If the proposal fails to be adopted before 31st December 2006, a veterinary prescription would be mandatory to dispense all veterinary medicinal products to the public which are destined for use in food-producing animals. Nevertheless this legislation was not in force during the period in which these missions were carried out. It is worth stating though that in any case, seven Member States had already mandated that all veterinary medicinal products for use in food-producing animals were prescription-only.

Various distribution models for veterinary medicinal products are used in the Member States. These range from veterinarians prescribing and dispensing medicines to situations where the veterinarian may only prescribe (but not dispense, except in emergency cases). In the latter case, livestock owners may access medicines from a (veterinary) pharmacy or an agricultural co-operative by presenting an appropriate prescription. Regardless of the distribution model, or indeed who administers the medicines to the animal, all Member States are obliged to require the maintenance of a treatment register on farm in accordance with Article 10 of Council Directive 96/23/EC. In two Member States this requirement was not strictly respected. One did not require bee keepers to keep medicines records and the other only obliged the keeping of records (in farm animals) for a period of two months prior to slaughter.

4.4.6. Competent authority controls on veterinary medicines

4.4.6.1. Controls at wholesale and retail levels (pharmacies and veterinary practitioners)

In Community veterinary medicines legislation (Directive 2001/82/EC), neither the frequency nor the precise nature of control activities to be performed by competent authorities is specified. In relation to veterinary pharmacies for example, Article 66 of the Directive only states that records (of transactions) should be kept for three years and be available for inspection by the Member States.

Generally competence for carrying out controls at each point in the veterinary medicines supply chain is split between several agencies or ministries in the Member States. Usually, controls at the level of the farm and private veterinary practitioner are carried out by the ‘veterinary’ services whereas controls on manufacturers, wholesalers, and (veterinary) pharmacies are carried out by the ‘health’ services.

Overall controls carried out at wholesale and retail level tend to focus on storage of medicines, temperature control, expiry dates etc. In virtually no cases were any checks made to establish if the pharmacologically active substance(s) incorporated in the medicines were permitted to be included (on the basis of being listed in either annexes I, II or III to Council Regulation (EEC) No 2377/90). Indeed during on the spot visits to wholesalers and pharmacies in several Member States, inappropriately labelled and/or authorised medicines were detected by Food and Veterinary Office inspectors.

The frequency of controls varied significantly between Member States with, for example wholesalers being subject to inspection every 1-5 years. Target frequencies for inspection were established in thirteen Member States. In one Member State (with a highly decentralised system) it was seen that the regional competent authority had no legal basis to carry out control activities – and had not
done so. In four Member States, no documented checks on veterinary pharmacies (including private veterinary practitioners with dispensaries) were carried out at all and in a fifth Member State, no checks were carried out in one large region.

One issue which was consistently detected in several Member States was the failure to ensure that batch numbers of outgoing medicines were recorded (for pharmacovigilance purposes) as required by Articles 65 and 66 of Directive 2001/82/EC.

4.4.6.2. Controls on the manufacture of medicated feedingstuffs

As stated, Article 4 of Council Directive 90/167/EEC lays down the conditions for the production of medicated feedingstuffs including requirements for the checking of homogeneity and stability of final product.

Seven Member States had established set frequencies for checking feed mills authorised for the production of medicated feedingstuffs. These ranged from annually to every three years. In five Member States, no checks were made on the homogeneity and stability testing obligations of producers. In one case this was due to Article 4 of the Directive not having been transposed. The other Member State had interpreted the medicated feedingstuffs Directive differently for home-mixers, erroneously arguing that the feed produced was not being ‘placed on the market’, thus removing any obligation of home-mixers to meet the detailed requirements of Article 4. With regard to stability testing, this was not carried out in nine Member States. These countries have argued that since stability assessment is already a requirement for issuing a marketing authorisation for the medicated premix used to produce the medicated feedingstuff, and that since such feedingstuffs tend to be prepared, sold and used within a relatively short time, there is no need to address this issue.

Three Member States have prohibited the production of medicated feedingstuffs on farms. In two further Member States there is no legal basis for production on-farm (Article 4.2. of Council Directive 90/167/EEC has not been transposed), however in both cases, medicated feedingstuffs were produced on-farm. In general, those Member States permitting on-farm production tend to be less stringent with farmers when it comes to checking and enforcing the ‘Article 4 requirements’ compared to the approach taken with ‘commercial’ producers.

One Member State had a system in place (not required by Community law) to regularly assess the concentration of pharmacologically active substances in medicated feedingstuffs produced in authorised feed mills. There were national tolerances in place which were related to the intended concentration of the substance in the final product.

4.4.6.3. Controls at farm level

As for situation described above for wholesalers and veterinary pharmacies, Directive 2001/82/EC does not specify the frequency or the precise nature of control activities in respect of veterinary medicines which are to be performed by competent authorities on farms.

Article 69 of Directive 2001/82/EC requires Member States to ensure that farmers can provide proof of purchase, possession and administration of (most) veterinary medicines. Article 10 of Directive 96/23/EC and Articles 4 and 5a of Directive 96/22/EC require owners of food-producing animals to maintain medicines records which include details of the treatments administered, identity of animals so treated and the corresponding withdrawal periods. Directive 98/58/EC requires that “the owner or keeper of the animals shall maintain a record of any medicinal treatment given”.

During each of the missions, farms in various production sectors were visited. In all Member States, farm medicines records were kept, however one Member State had not transposed Article 10 of Council Directive 96/23/EC and did not require the private veterinary practitioner to sign the on-farm treatment register. In another Member State, medicines records were only required for the last two months prior to slaughter.

In eight Member States a proportion of farms to be checked annually (for veterinary medicines) had been established. This ranged from 0.6% - 10%. However, within Member States there were significant differences between regions – those regions with a degree of autonomy from central government established their own frequency of inspection. In two Member States not all types of farms were checked – only dairy farms and aquaculture farms.

5. OVERALL CONCLUSION

This series of missions has demonstrated a mixed picture in the application of residues and veterinary medicines controls throughout the fifteen Member States. On the whole, planning, implementation of sampling and supervision of same operate effectively in the majority of Member States. There are improvements to be made in respect of each of these functions in some Member States – particularly those with highly decentralised administrative systems. The execution of follow up activities in general is effective and in several Member States was extremely good. Validation of analytical methods and accreditation of laboratories remain major tasks for the majority of Member States. Progress is being made but it is slow. Few deficiencies in the authorisation of veterinary medicinal products were seen, although, the ‘special licence’ systems established to address small internal markets for veterinary medicines, could result in consumers being exposed to residues of substances so authorised. Different approaches are also being taken with regard to medicated feedingstuffs, particularly concerning the requirements for monitoring homogeneity and stability of final product and the issue of top dressing. The issue of medicines controls, especially at the level of farm and veterinary practitioner, is one where there is particular divergence between Member States.

Following each of the individual reports, Member States were requested to produce ‘action plans’ to address the recommendations made. Action plans have been produced by all Member States. In the case of those Member States who submitted action plans in advance of the final report being issued, their plans have been published on the Commission’s website along side the final report. In general the Member States have responded positively. Many of the more serious deficiencies identified (and highlighted in the present summary report) have already been dealt with promptly, resulting in a strengthening of the respective national control systems. Other corrective actions are being phased in over the longer term. The effectiveness of these measures will be subject to verification in future missions.
In summary this mission series has demonstrated the importance of on-the-spot inspections in evaluating the implementation and verifying the effectiveness of residues and veterinary medicines controls. Such inspections are an important tool in assessing Member States’ compliance with Community law. Allied with the co-operation of the Member States in addressing shortcomings, this mission series has contributed to the strengthening of official controls across the Member States.

6. ACTIONS ENVISAGED AND/OR TAKEN BY THE COMMISSION SERVICES

A number of actions have been taken by the Commission services in light of the findings made during this mission series. These are referred to in the footnotes to this report.
### ANNEX I

**FVO missions regarding residues and veterinary medicines controls in the ‘old’ 15 Member States.**

<table>
<thead>
<tr>
<th>Member State</th>
<th>Dates of mission</th>
<th>Report reference number</th>
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<tr>
<td>Italy</td>
<td>7-15/9/2004</td>
<td>DG(SANCO)7263/04</td>
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APPICLABLE COMMUNITY STANDARDS:

Residues monitoring and sampling


Residues monitoring and sampling - financing


Laboratories


Laboratory analytical methods

- Commission Decision 93/256/EEC of 14 April 1993 laying down the methods to be used for detecting residues of substances having a hormonal or a thyrostatic action. Official Journal L 118, 14.05.1993, pp. 64-74.

Bans on the use of hormones and beta-agonists for growth promotion


Maximum residue limits for veterinary medicines in foodstuffs of animal origin


Maximum residue limits for residues of additives used in animal nutrition in foodstuffs of animal origin

Maximum Residue Limits for pesticides in foodstuffs of animal origin


Maximum Limits for Contaminants


Minimum Required Performance Limits for residues of banned substances


Authorisation of veterinary medicinal products


Medicated feedingstuffs and additives


Sampling methods and methods of analysis for contaminants in foodstuffs


Sampling methods for pesticides in foodstuffs

Horse identification (passport)


Medicines records requirements (see also Directive 2001/82/EC AND Council Directives 96/22/EC and 96/23/EC)


Feed and food control