

**Report on the Review
of
Public Analyst Arrangements
in
England and Wales**

October 1998

REPORT ON THE REVIEW OF PUBLIC ANALYST ARRANGEMENTS IN ENGLAND AND WALES

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FOREWORD AND ACKNOWLEDGEMENTS

In presenting this Report I wish to thank members of the Review Group for their contributions, their support and for breaking into busy schedules so that we could meet the time constraints imposed on us. I am also grateful for the assiduity with which they considered the submissions, undertook visits and actively participated in the taking of oral evidence.

On behalf of the Group and myself, I would also express appreciation for the support and advice we received from the secretariat drawn from the Joint Food Safety and Standards Group in MAFF, who made all of the arrangements, usually at short notice, and kept us to our terms of reference.

All of us, however, thank the many interested parties that submitted written views. We thank the Institute of Trading Standards Administration, the Local Government Association, the Local Authorities Co-ordinating Body on Food and Trading Standards and the Association of Public Analysts for facing our direct questions in the oral evidence session. We are especially grateful to those public analysts and the Government Chemist whose laboratories we visited and who provided direct evidence of the services that they provide and the sorts of problems with which they have to contend.

A number of our recommendations for action are based on the assumption that the proposed Food Standards Agency will be given responsibility for the oversight of enforcement. Until the Agency is established, we urge the Ministry of Agriculture Fisheries and Food, to take forward action on the recommendations through the Joint Food Safety and Standards Group, wherever possible.

Finally, it should be noted that this report enjoys the complete support of all members of the Review Group, on whose behalf I commend it to your attention.

Alan Turner OBE
Chairman
Public Analyst Review Group
October 1998

GLOSSARY

Abbreviations

APA	Association of Public Analysts
DTI	Department of Trade and Industry
EU	European Union
FAC	Food Advisory Committee
FDF	Food and Drink Federation
ITSA	Institute of Trading Standards Administration
LGA	Local Government Association
LACOTS	Local authorities Co-ordinating Body on Food and Trading Standards
LGC	Laboratory of the Government Chemist
MAFF	Ministry of Agriculture Fisheries and Food
MChemA	Mastership in Chemical Analysis
PHLS	Public Health Laboratory Service
RSC	Royal Society of Chemistry

Definition

"Food analyst" is defined in section 30(9) of the Food Safety Act 1990 to mean "a public analyst or any other person who possesses the requisite qualifications to carry out analyses for the purposes of this Act".

EXECUTIVE SUMMARY

The Group was set up in April 1998 "To review Public Analyst arrangements in England and Wales and to make recommendations on how best to provide the scientific and technical support needed by food authorities in respect of their food law enforcement responsibilities, taking account of the concerns of other interested parties, arrangements in other parts of the UK and EU considerations".

The Group considered submissions from thirty-four organisations and individuals, visited various laboratories and took oral evidence from four organisations.

It reached the preliminary conclusion that no major legislative changes are required but that some minor changes could be helpful and, as requested, submitted interim advice on this in July 1998 as at Annex 1.

Having completed its considerations, the Group makes the following recommendations:

1. The present legislative requirement for food authorities to appoint one or more public analysts should be retained (paragraph 33).
2. Food authorities should consider whether they are making optimum use of scientific competencies available to them through their appointment of public analysts (paragraph 33).
3. All stages of the evaluation and analysis of samples and interpretation of the results should continue to be under the control of the local authority's public analyst but some elements of the work could be sub-contracted by him to other laboratories, under the control of another public analyst, or food analyst as defined in the Food Safety Act 1990 (paragraph 33).
4. Action should be taken centrally to improve levels of co-operation between the different parties in the food standards enforcement system (paragraph 33).
5. The Food Standards Agency be given responsibility for the co-ordination of a national sampling programme (paragraph 43).
6. A logically derived system for establishing appropriate sampling rates should be developed centrally in consultation with food authorities. This should be based upon planned premises inspection and sampling, complaint and other ad hoc local investigations and border control point inspections. It will require

the following subordinate actions:

- (i) the completion of the revision of Code of Practice No. 8, setting out the criteria for ranking food premises along the food chain in order of inspection priority;
- (ii) the classification of the food and food materials producers in their areas by food authorities in accordance with these criteria and the preparation of a rolling inspection programme using this information;
- (iii) the preparation of inspection guidelines indicating the likely sampling demands generated by each category of premises and perhaps based on the experience of authorities already running significant inspection programmes;
- (iv) the development of a systematic approach to the assessment of the risks presented by different types of foodstuffs and associated materials;
- (v) the development of systems for the arrangement and co-ordination of national programmes for the chemical analysis of foodstuffs and associated materials.

(Paragraph 46)

7. Local authorities should investigate developing food safety and standards teams. Where the necessary skills and experience are outside the scope of enforcement officers, food specialists or public analysts should be involved (paragraph 48).
8. As a matter of priority, information systems to support and utilise the output from all sampling programmes should be developed, operated and co-ordinated centrally to improve consumer protection across the UK. This would take the form of a national database which should be made available, free of charge, to food authorities and their public analysts to facilitate planning and follow-up action (paragraph 49).
9. MAFF surveillance work should continue to be offered by open tender and information derived from this work should be included in the proposed national database (paragraph 51).
10. Screening laboratories should be re-examined more closely by food authorities to ascertain whether they achieve genuine cost effectiveness with reliable sample documentation, accreditation and

quality assurance of the methodology and a clear understanding of any analytical or legal uncertainties in the results (paragraph 53).

11. Public analysts should adopt a more positive approach to screening methods and consider whether they can offer a supplementary service in this area (paragraph 54).
12. Guidelines should be prepared to ensure that specialist, but non-accredited, laboratories can be used when they offer the highest level of available expertise and to ensure that their results are equivalent, with respect to analytical quality, to results from laboratories which are formally accredited; assistance in developing such guidelines should be provided centrally (paragraph 55).
13. The availability of resources in relation to the density and type of food businesses in the food authority's area should be taken fully into account when developing enforcement policy and performance criteria associated with national food law enforcement activities (paragraph 58).
14. If funding is to continue to be locally controlled, it should be linked with a logical and transparent process for the determination of realistic sampling rates, together with the publication of the level of achievement of the objectives (paragraph 60).
15. It should be a task for the Food Standards Agency to consider the application of benchmarking to the public analyst service, in consultation with relevant bodies, due account being taken of the other recommendations that we make (paragraph 63).
16. Individual public analysts should explore the development of links between their laboratories on a regional basis (paragraph 68).
17. The Food Standards Agency should have the role of helping to develop and oversee a rational and equitable framework for a rearrangement of public analyst laboratories (paragraph 68).
18. Contractual arrangements should be drawn up between individual food authorities and public analysts; assistance should be provided centrally in developing model working arrangements (paragraph 69).
19. Ministers should issue appropriate guidance to authorities and public analysts on the interpretation of the existing constraints on conflicts of interest and be empowered to regulate if necessary to prevent such conflicts arising (paragraph 76).

20. The MChemA should remain as a prescribed qualification for public analysts and food analysts and the present provision whereby Ministers may prescribe or approve qualifications should also remain (paragraph 83).
21. In relation to the MChemA, the RSC should consider:
 - i) reviewing the scope of the qualification;
 - (ii) possible sources of bursaries;
 - (iii) awarding an interim qualification at an earlier stage and the elevation of the MChemA to doctorate level.

(Paragraphs 87 and 88)
22. The APA and the RSC consider making continuing professional development a requirement for holders of the MChemA (and any successor qualification) (paragraph 89).
23. Three-part sampling should be retained (paragraph 92).
24. The referee analyst provisions should remain unaltered. Where referee analyses under the Food Act 1990 are carried out in the Laboratory of the Government Chemist, a food analyst should be directly involved (paragraph 95).
25. The Food Standards Agency should be empowered to consider nominating a different Referee Analyst if the current arrangements with the Government Chemist (particularly the funding of the service by the Department of Trade and Industry) should change significantly (paragraph 95).
26. The provisions relating to the handling of agricultural samples in the Agriculture Act 1970 should be aligned with current arrangements for food samples which allow for samples to be passed outside of the current public analyst system if the necessary technology exists elsewhere (paragraph 101).

INTRODUCTION

1. On 23 April 1998 the Minister for Food Safety, Mr Jeffrey Rooker, formally announced a review of public analyst arrangements in England and Wales, in line with the undertaking given by the Government in "The Food Standards Agency - A Force for Change" White Paper¹. The undertaking was given as a result of recommendations concerning the chemical monitoring and analysis of food made by Professor Philip James in his report on the remit and processes involved in establishing a food standards agency in the UK².

Terms of Reference

2. The Review Group's terms of reference were:

"To review Public Analyst arrangements in England and Wales and to make recommendations on how best to provide the scientific and technical support needed by food authorities in respect of their food law enforcement responsibilities, taking account of the concerns of other interested parties, arrangements in other parts of the UK and EU considerations.

In particular, the review will consider:

1. The effectiveness (including cost effectiveness) of the present arrangements and the best means of providing food authorities with analytical and technical services in relation to the chemical aspects of food legislation.
2. The needs of food authorities in relation to the establishment of relevant sampling, surveillance and monitoring programmes; the interpretation of the results of food analysis; and provision of expert evidence in Court.
3. Arrangements for the appointment and qualification of Public Analysts, taking account of the requirements of Council Directive 93/99/EEC on additional measures concerning the official control of foodstuffs.
4. The need for any changes in current national legislation.
5. The extent to which these issues are relevant to laboratories' role as agricultural analysts under Part IV of the Agriculture Act 1970.

¹ The Food Standards Agency - A Force for Change CM 3830 January 1998

² Food Standards Agency - An Interim Proposal by Professor Philip James 30 April 1997

6. The role of the designated Referee Analyst, and any other directly relevant matters."
3. The Group was asked to submit preliminary advice on the need for any legislative changes by the end of June 1998 and to make its final report well before the end of the year. The exchange of letters concerning the Group's preliminary advice is at Annex 1.

Membership of Review Group

4. The Group comprised:

Chairman

Mr Alan Turner OBE - Independent consultant on food science, technology and law; former senior examiner for the MChemA (public analyst qualification); Past President of the Institute of Food Science and Technology.

Members

Professor Edward Abel CBE - University of Exeter, President of the Royal Society of Chemistry (RSC).

Councillor Neil Bonnar, JP - Member of South Tyneside Metropolitan Borough Council; former Chairman of the Local Authorities Co-ordinating Body on Food and Trading Standards.

Mrs Dorothy Craig MBE, JP - Member of the Food Advisory Committee (FAC); member of the Executive Committee of the National Federation of Consumer Groups; Chair of Food and Agriculture Working Party of Consumers in Europe Group.

Dr Tom Gorsuch OBE - Former FAC member; former chairman of the Food Processing Research Consultative Committee, participant in two Audit Commission reviews on food safety enforcement and Past President of the Institute of Food Science and Technology.

Dr Catherine Humphries - Chief Scientific Adviser, Co-operative Wholesale Society Ltd; member of the FAC and the British Retail Consortium Food Technical Advisory Committee

Mrs Valerie Saint - Legal Advisor to Unilever UK Ltd; Chairman of the Labelling Sub-Committee of the Food and Drink Federation and Chairman of the Legislation and Technical Committee of the Ice Cream Federation.

CONSULTATION PROCESS

5. The review was publicly announced and was particularly drawn to the attention of forty-three organisations thought to have an interest. All interested parties were invited to submit evidence by 2 June 1998. In the event submissions were received from a total of thirty-four organisations and individuals (Annex 2).

6. As well as considering the written submissions, members of the Review Group visited a number of public analyst laboratories (Annex 3) and also the Laboratory of the Government Chemist. Oral evidence was taken on 7 July from representatives of the Institute of Trading Standards Administration (ITSA), the Local Government Association (LGA)/Local Authorities Co-ordinating Body on Food and Trading Standards (LACOTS) and the Association of Public Analysts (APA).

PRESENT ARRANGEMENTS

7. Local authorities are responsible for enforcing provisions in the Food Safety Act 1990 (and most legislation made under it) within their areas. Their inspectors have wide powers to inspect all stages of the food production, manufacturing and distribution chain and to take samples for analysis or examination. Port health authorities also have enforcement functions under the Act and for these purposes are included with local authorities in its definition of "food authorities".

8. There are 460 food authorities in England and Wales comprising 34 County Councils, 238 District Councils, 46 Unitary Authorities, 33 London Boroughs, 36 Metropolitan District Councils, 45 Port Health Authorities and the Isles of Scilly in England and 22 Unitary Authorities and 5 Port Health Authorities in Wales.

9. County Councils, London Boroughs, Unitary Authorities and Metropolitan District Councils are responsible for enforcing the legislation on food standards, additives and contaminants, composition and labelling. Enforcement is carried out within County Councils by Trading Standards Departments as part of their general consumer protection work. In some London Boroughs, Unitary Authorities and Metropolitan Districts however, environmental health officers may carry out this work with or without the involvement of trading standards officers. Both trading standards officers and environmental health officers have a range of duties in addition to those in the food area.

10. The local authorities fund the work from the resources available to them from council taxes, from the uniform business rate and from revenue support grant payments from the Government. Although the last element

is based on an aggregate standard spending assessment derived from a series of indicators for the authority concerned, the authority is responsible for determining its own priorities on the utilisation of the grant.

11. The Act draws a distinction between "analysis" and "examination" where analysis refers to chemical analysis and examination to microbiological examination. Only the former comes within the scope of this review. The Act requires "analysis" to be undertaken under the direction of a public analyst who must possess a specified qualification, the Mastership in Chemical Analysis (MChemA) awarded by the RSC, or, in special situations, other qualifications which may be prescribed by the Minister. "Examination" is undertaken by a food examiner who must possess one of a number of qualifications and have work experience in one of a number of specified laboratories as detailed in the Food Safety (Sampling and Qualifications) Regulations 1990. Public analysts are also qualified as food examiners by virtue of their MChemA but in England and Wales most food examination is undertaken by the Public Health Laboratory Service (PHLS) which is centrally funded.

12. Each food authority (apart from the non-metropolitan district councils) is required to appoint one or more public analysts who are qualified food analysts, as defined in the Act by virtue of holding the MChemA. Samples taken under the Act for analysis must be submitted to the public analyst for the area in which they are taken whether or not the samples are analysed by that public analyst or, at his discretion, by another public analyst or food analyst under the "handing on" procedure defined in the Act.

13. There are currently twenty-six public analyst laboratories in England and Wales located as indicated on the map at Annex 4. They employ about fifty public analysts. Sixteen of the laboratories are local authority owned and their staff are local authority employees. The remainder are privately owned and analyse samples submitted by food authorities usually on a fee paid basis.

14. A public analyst is required to give the results of the analysis, together with an opinion and relevant observations, on a certificate the form of which is prescribed in the above mentioned Regulations (Annex 5). A public analyst is recognised as an expert witness by the courts. He is responsible for the personal presentation of results in court when required. Otherwise his Certificate of Analysis is sufficient evidence of the facts stated in it.

15. The Act also allows Ministers to provide for circumstances in which samples or parts of samples may, or must, be submitted for analysis to the Government Chemist or to such other food analyst or examiner as he may direct. Provision has been made in the Food Safety (Sampling and

Qualifications) Regulations 1990 requiring official samples to be divided into three parts: one part for the sampling officer, one part for the owner of the food and one part to be retained by the food authority. In the case of a disputed analysis, if the officer and the owner agree, or if a court so orders, the retained part is sent for analysis to the Government Chemist or to such other food analyst as the Government Chemist may direct. Data on the number of such samples and costs are at Annex 6.

16. Local authorities may also submit a wide range of samples to their public analysts under other Acts. Data on work undertaken for local authorities in 1997 provided by the APA are at Annex 7 and a list of the Acts that specifically mention public analysts is at Annex 8. However, the work under these other Acts, apart from that of agricultural analysts under the Agriculture Act 1970, is outside the scope of this review.

17. Council Directive 89/397/EEC on the official control of foodstuffs laid down the general principles on which Member States must carry out such official control. Sampling and analysis are included in the operational requirements against which performance is to be judged. However the Directive did not lay down quality standards for laboratories undertaking food analysis or examination.

18. Under the Directive on additional measures concerning the official control of foodstuffs (Council Directive 93/99/EEC), food control laboratories are required, as from November 1998, to meet certain quality standards. Essentially they must become accredited to the EN 45000 series of standards, participate in proficiency testing schemes and use validated methods of analysis. All public analyst laboratories in England and Wales are expected to be fully compliant in time to be included in the list of official food control laboratories that the UK is required to submit to the European Commission.

19. Under the 1993 Directive, Member States must also ensure that competent authorities have, or have access to, a sufficient number of staff suitably qualified and experienced in areas that include chemistry, food chemistry, food technology and law so that the controls referred to in Directive 89/397/EEC can be carried out adequately.

EFFECTIVENESS (INCLUDING COST EFFECTIVENESS) OF PRESENT ARRANGEMENTS

20. The criticisms in the James Report, regarding the current structures for handling the chemical safety of food, do not seem to be borne out by the responses to the consultations. No general agreement was evident, either for or against the proposition that they are "chaotic". Indeed, no consensus emerged at all regarding suitable measures for assessing the

effectiveness of the current structures, nor of the public analyst service that operates within them.

21. Most respondents claimed to be reasonably content with the service, although many considered that there is room for improvement and a few considered the service to be poor. In general, the analytical capabilities of the laboratories were considered to be adequate for the majority of tasks encountered but very few of the laboratories were considered to be equipped to perform leading edge techniques. However, it was not clear how great the demand for such specialised techniques might be.

22. There was virtually unanimous recognition that the public analyst service has suffered from severe underfunding and some respondents noted that this has led to a diminishing flow of work. It was further contended that this has led to increased unit costs, difficulties in maintaining capital investment and damage to career prospects, all of which have affected the efficiency of the service. If it is to be improved, then the problem of underfunding must be addressed.

23. ITSA questioned the need for food authorities to appoint public analysts (or agricultural analysts) at all but this proved to be a minority view. All the advisers on the LACOTS Food Standards Focus Group that considered the issue, believed that any such move would undermine both the services that food authorities receive and their ability to discharge statutory duties. UNISON also made the point that any move to abolish the requirement to appoint public analysts would be inadvisable in the present climate of concern about food quality. In this context it is also worth noting the comments in the House of Lords Select Committee report in November 1985, regarding Science & Technology in local government³ that was included with one submission. The report made the point that "...an authority cannot go to outside consultants without the expertise to brief, supervise and assess the work of the consultants; it must be an informed customer before it can run a customer/contractor relationship effectively". ITSA claimed that trading standards officers are capable of meeting the requirements of the "informed customer" on their own. Whilst we accept this may be true in some cases, we believe that the recent changes in local authority structures are likely to lead to increased generalisation of trading standards staff. We do not believe that the increasing complexities of food composition and its analytical control can be adequately directed by generalists with a wide range of other responsibilities outside food.

³ House of Lords Select Committee on Science and Technology Session 1985-86 1st Report Science and Technology in Local Government 13 November 1985

24. ITSA argued that "Accreditation of laboratories of necessity deals with the skills and competencies required of those engaged in scientific services. Local authorities should be able to choose to send samples to laboratories that are competitive in terms of price and quality of service i.e. reporting times". We believe that this statement represents a very simplistic view of what is involved in the work of public analysts.

25. When a public analyst is faced with an enforcement question concerning the legality of a food, he must go through at least the following seven stages:

- (i) Evaluate the suitability and state of the sample.
- (ii) Evaluate the options that are available for obtaining the answer. This will involve at least scientific, legal and financial considerations and assessments of the analytical uncertainty.
- (iii) Select the preferred option.
- (iv) Arrange for the work to be carried out using qualified staff and accredited methods. In some instances this may involve an element of method development.
- (v) Review the analytical results and use them to derive the compositional information required by the original question.
- (vi) Certify the results, provide an opinion based on the results and observations on aspects relevant to the analysis and assist the Courts.
- (vii) Ensure that all the administrative work required to guarantee the integrity of the sample and the analysis is properly completed.

26. At present the whole chain of activity is handled by the public analysts and the analyses are usually carried out in laboratories under their direct control. It is appropriate for us to consider whether any change in these procedures is possible, necessary or desirable.

27. We have already quoted the House of Lords Select Committee report in pointing out that "an informed customer" is essential for a successful customer/contractor relationship and the public analyst is undoubtedly the best qualified among food authority officers to discharge this role (steps (i), (ii) and (iii) above).

28. The ability to carry out the actual analytical work (step (iv)) is certainly more widely available now than it has been in the past and the widespread accreditation of methods has improved the position further. It would therefore seem reasonable for some of the analytical enforcement work to be carried out in non-public analyst laboratories if this gives scientific or commercial benefits and provided that the laboratories are appropriately accredited and are directed by a suitably qualified person. This currently means the holder of the MChemA or such equivalent qualification as Ministers may decide.

29. It is, however, important to recognise the limitations of method accreditation as a guarantee of quality. Accreditation is concerned only with the procedures used to obtain analytical results, to the standard selected by the laboratory and agreed with the accreditation agency; it is not a warranty for any absolute level of quality. Just because a laboratory uses methods that are within its scope of accreditation, it does not automatically follow that all the results from that laboratory, using that method, will be acceptable. Method accreditation cannot always be assumed to guarantee expertise or adequate comparability of results and it does not address the interpretation of results.

30. Steps (v) and (vi) in paragraph 25 would again seem to be the province of the public analyst whilst step (vii) applies to everyone involved.

31. LACOTS has proposed a mission statement for food standards enforcement that includes "to ensure that foods and food packaging meet the relevant standards for quality, composition and labelling". Achieving these objectives is essentially dependent on verification by scientific measurement. The provision of a system to ensure that the right scientific measurements are reliably carried out and properly interpreted is an essential part of the food authority's responsibility. The FDF supported this view: "...experienced, interpretative analysts continue to be needed as essential participants in the enforcement system. Public Analysts continue to fulfil this role and uniquely so".

32. Our conclusion is that there is, of course, room for improvement in the provision of analytical and technical services needed by food authorities in relation to the chemical aspects of food legislation but that responsibility for the present shortcomings cannot all be laid at any single door. The problem of funding is clearly important but there also seems to be a lack of mutual respect between the disciplines involved in food standards enforcement and a failure to elevate the common goal of consumer protection above the struggle for organisational dominance.

33. We think that, on balance, there are advantages in retaining the present legislative requirement for food authorities to appoint one or more

public analysts and we recommend that the provision be retained. We also recommend that food authorities should consider whether they are making optimum use of scientific competencies available to them through their appointment of public analysts. We consider that all stages of the evaluation and analysis of samples and interpretation of results should be under the control of the local authority's public analyst but that some elements of the work could be sub-contracted by him to other laboratories, under the control of another public analyst or food analyst as defined in the Food Safety Act 1990. We recommend that this approach is encouraged. We also recommend that action should be taken centrally to improve levels of co-operation between the different parties in the food standards enforcement system.

SAMPLING AND SURVEILLANCE

34. We were also asked to consider the needs of food authorities in relation to the establishment of relevant sampling, surveillance and monitoring programmes

Sampling Rates

35. The consultation process demonstrated widespread recognition that the flow of samples to public analysts had reduced very significantly in recent years and that this reduction had had adverse effects. It was also widely recognised that the flow of samples had become less reliable and less consistent within this diminishing trend so that planning by public analysts had become very difficult. There also seems to be evidence that public analysts in the private sector have suffered more than those employed by local authorities. As the analysis of samples is central to the enforcement of food standards and as the funding of independent public analyst laboratories is mainly through the charges for analysing samples, this might be considered to be a dangerous situation. However, the position is clouded by the absence of any logical calculation of the "right" level of samples to be taken for analysis, so that it is impossible to say whether the present sampling rate is appropriate or unreasonably low, or even unreasonably high. There was a tendency among some respondents to regard sampling as an end in itself whereas it is clearly just a means towards the end of consumer protection.

36. Many respondents cited a figure of 2.5 samples per 1000 population as an appropriate target sampling rate but no explanation or justification of that figure was forthcoming. In any event, we are not convinced that a population based figure is logical, despite contentions that such figures are used elsewhere in the EU. A sampling rate based upon an analysis of enforcement mechanisms seems more reasonable.

37. There are five main enforcement tools that involve the analysis of samples:

- (i) planned inspection of food premises;
- (ii) investigation of complaints;
- (iii) planned sampling of foodstuffs and associated materials along the food supply chain;
- (iv) ad hoc local investigations; and
- (v) inspection at border control points.

38. Quite clearly, the number of samples taken and analysed will influence both the effectiveness of enforcement and its cost, so it is important to try to establish an optimum sampling rate. A possible mechanism for calculating a realistic sampling rate can be derived from a consideration of the number of samples likely to be generated by each of the enforcement tools listed above.

39. The workload generated by inspections of food premises will be affected by:

- (i) the number of premises where food is produced, using "produced" in a wide sense. All food authorities have a register from which this can be derived.
- (ii) the frequency of inspection; Code of Practice No. 8⁴ sets out criteria for ranking food businesses in order of priority for inspection, within a five year inspection cycle: these criteria are under review.
- (iii) the number of samples taken at each inspection; it is feasible to develop inspection protocols for different types of premises that will give guidance on this: Lancashire County Council finds that this number ranges from 1 to (very rarely) 10 samples per inspection, with 4 being about the average and their work could provide a basis for the development of national guidelines.

40. Using these three factors it should be possible to calculate and plan for, the number of samples to be expected from the premises inspection programme.

⁴ Food Safety Act 1990 - Code of Practice No. 8: Food Standards Inspections (Revised July 1996)

41. Complaint samples cannot be planned in the same way but most authorities will have a reasonable idea of the numbers to be expected in a year, in the light of past experience.

42. Foodstuffs and related materials in the food chain do not all present the same degree of risk, in a food standards sense. Products from premises that are regularly inspected by a food authority and found to be satisfactory, should present less of a risk than products from premises about which there is no information. Some foods and processed products are, by their nature, more susceptible to fraud than others and some products offer potentially greater rewards to the fraudster. Taking these and other factors into consideration it should be feasible to develop a risk scoring system to provide priorities for sampling.

43. It is important to note that many products in the UK are fully national in their distribution so that it is reasonable to develop the risk ratings for them on a national scale. For the same reason there is a strong argument for planning and co-ordinating the sampling programmes on a national scale, using national priorities, although the sampling and analysis would be done locally. Many respondents noted that there is duplication of this type of sampling work among local authorities and better co-ordination is required. We recommend that the Food Standards Agency be given responsibility for the co-ordination of a national sampling programme.

44. Many authorities carry out sharply focused investigations, either alone or in co-operation with neighbouring authorities, to resolve problems of local significance. These investigations are valuable and should be continued. Samples arising from such investigations must be included in the analysis programme and will form part of the total workload.

45. Inspection of imports at border control points is carried out by port health authorities and follows much the same pattern as for the sampling of foodstuffs and related materials, in that some degree of risk assessment is possible, although the flow pattern can be unpredictable. In some instances the inspection is deferred to inland depots and becomes the responsibility of the relevant local authority.

46. We recommend that a logically derived system for establishing appropriate sampling rates should be developed centrally in consultation with the food authorities. This should be based on the enforcement activities outlined in the preceding paragraphs and will require the following subordinate actions:

- (i) the completion of the revision of Code of Practice No 8, setting out the criteria for ranking food premises along the food chain in order of inspection priority;

- (ii) the classification of the food and food materials producers in their areas by food authorities in accordance with these criteria and preparation of a rolling inspection programme using this information;
- (iii) the preparation of inspection guidelines indicating the likely sampling demands generated by each category of premises and perhaps based on the experience of authorities already running significant inspection programmes such as Lancashire County Council;
- (iv) the development of a systematic approach to the assessment of the risks presented by different types of foodstuffs and associated materials; and
- (v) the development of systems for the arrangement and co-ordination of national programmes for the chemical analysis of foodstuffs and associated materials.

47. When the required procedures listed in the previous paragraph have been developed, food authorities should be able to predict and plan for their sampling and analytical requirements. The combination of the three locally derived sampling rates, covering inspections, complaints and special investigations, plus the local share of the national sampling programme, will give the expected sampling and analysis load for an individual authority. When the authority is also responsible for deferred border inspections, the consequent samples and analysis would need to be accommodated.

Premises Inspections

48. From the analysis of the available enforcement mechanisms set out above, particularly if the product sampling programme is co-ordinated nationally, it appears that the most powerful tool for the enforcement of food standards at the local level, is the premises inspection. This is proactive and preventive in nature, rather than reactive and investigative, it can be effective far beyond the boundaries of the inspecting authority and its effects are cumulative, rather than one off. Nonetheless, it seems to have been rather under exploited. One problem, perhaps, is that inspections need to be carried out by staff with food related skills and experience. Where the necessary skills and experience are outside the scope of enforcement officers, we think that food specialists or public analysts should be involved. We conclude that the inspection of food premises should be encouraged and we recommend that local authorities investigate developing food safety and standards teams.

Co-ordination and Information Technology (IT)

49. There are many tens of thousands of food products on the UK market and information relevant to food standards enforcement is being generated about them in a piecemeal fashion across the whole country. The need for co-ordination of the sampling of products in national distribution has already been mentioned and an early task should be to examine the ways in which all the resulting information can be collated centrally and used to improve consumer protection across the UK. This will inevitably involve the development of an IT system which should be accessible to food authorities and their public analysts free of charge to facilitate planning and follow-up action. As far as possible, the system should also be compatible with any existing databases dealing with food standards. We recommend that, as a matter of priority, information systems to support and utilise the output from all sampling programmes should be developed, operated and co-ordinated centrally.

MAFF Surveillance

50. Another common observation by respondents to the consultation process was that there is a significant overlap between the local authorities' surveillance sampling work and that carried out by MAFF. There was also an implicit suggestion, from some respondents, that all of the MAFF chemical surveillance work should be channelled through public analyst laboratories. The Ministry's response to this is two-fold. Firstly, they state that all of their surveillance work is put out to tender and is awarded to those who meet the quality criteria; public analysts seldom put in bids. This seems to be a powerful argument. The second Ministry comment is that their surveillance work is not directly concerned with enforcement but this seems a little disingenuous. At the very least MAFF surveys can act as the trigger for enforcement activity and it seems reasonable to expect all surveillance results to be included in the proposed national database.

51. We have noted that public analysts tend not to bid for MAFF surveillance work and have tried to identify the reasons for this. One of the major reasons is that there has been a contraction in the range and volume of work that public analysts have been required to carry out and so it has become disproportionately expensive to maintain and demonstrate analytical proficiency in all areas. This is particularly true for analyses that are infrequently carried out and we believe that it will limit the range of fully accredited methods that individual public analysts can offer to their local authorities are thereby losing some of their ability to carry out similar analyses for their local authorities. We would expect the organisational changes that we propose elsewhere to improve the position. We recommend that MAFF surveillance work should continue to

be offered by open tender and information derived from this work should be included in the proposed national database.

Screening Laboratories

52. A further topic that has generated considerable debate is the use by some local authorities of screening laboratories, generally set up as a development of the test facilities already found in trading standards departments. These laboratories have extended their work from the largely physical testing required for dealing with electrical products, toys etc., to the determination of the chemical composition of products such as the levels of fat in ice-cream or of meat in meat products. The claims made by the supporters of screening laboratories include improved cost-effectiveness and faster reporting. The criticisms by their opponents include doubts about rigour of the cost accounting, the lack of any form of quality assurance within the laboratories and the risk to the consumer of falsely negative results through the use of methods without adequate discrimination. There is also serious concern about the diversion of funds from the public analyst service, with an increase in the unit costs for remaining samples and the reduction in training opportunities. Much of the debate seems to be characterised by the failure of the two sides to discuss the matter between themselves.

53. There is undoubtedly a case for the use of screening methods, particularly in factory inspections. Portable equipment such as pH meters, refractometers and, no doubt, an increasingly sophisticated range of equipment in years to come, all have a place in on-site work but they need to be used by people who understand both the process being inspected and the strengths and weaknesses of the test methods. The benefits of off-site screening procedures are less clear cut. If screening can combine genuine cost effectiveness with reliable sample documentation, accreditation and quality assurance of the methodology and there is a clear understanding of any analytical or legal uncertainties in their results, then we think that screening procedures must have a place. However, inaccurate and inappropriate analytical results are wasteful, no matter how little money they cost to produce. The role of screening laboratories must be reviewed in the context of these requirements and on a like for like basis. We recommend that food authorities re-examine their screening laboratories more closely to ascertain whether they achieve these criteria.

54. One valuable contribution towards resolution of the problem would be for public analysts and trading standards officers to discuss the costs, speed of response and reliability of analytical services at a variety of levels. We recommend that public analysts adopt a more positive approach to screening methods. If a problem does not require a sophisticated solution, public analysts may be able to provide a lesser

solution at a lower price while still providing the reassurance of accredited methods and trained staff. Alternatively, public analysts should consider whether they can offer a supplementary service in this area, perhaps by providing advice or supervision of a screening laboratory.

Use of Specialist Non-Accredited Laboratories for Food Control Analyses

55. We have noted that there will be a requirement for all official food control analyses to be carried out using accredited laboratories as from 1 November 1998. Concern has been expressed that there may be some infrequent instances, involving very specialised or developing methodologies, when the public analyst service will not be able to undertake the analyses within the service, and thus within an accredited environment. The sample will then need to be passed on to a specialist laboratory which may not be accredited and which will not seek accreditation because the cost benefits of accreditation will not be favourable. However, we note that the public analyst will be able to supervise the analysis, i.e. it will be carried out "under the direction" of the public analyst as required under the Food Safety Act 1990. We recommend that guidelines should be prepared to ensure that specialist, but non-accredited, laboratories can be used when they offer the highest level of available expertise and to ensure that their results are equivalent, with respect to analytical quality, to results from laboratories which are formally accredited. Assistance in developing such guidelines should be provided centrally.

Funding

56. One of the most common responses from the consultation process was that the public analyst service has suffered, and is suffering, from progressive underfunding. In a sense this has been inevitable during a period when financial stringency has coincided with increasing pressures for expenditure in other areas. When authorities are judged by their performance against defined indicators then it will not be surprising if the funding of services with no specific performance indicators suffers. Having said that, it is no function of the food authorities to provide a living for public analysts but it is their function to provide consumer protection services. The need is to define more clearly the link between the two.

57. It is understandable that local authorities should seek to stretch their funds as far as possible and to approach funding priorities in the light of competing local needs. However, it was a matter of concern to us to learn that the move towards unitary authorities seems to have resulted in an overall reduction in food enforcement work, including that involving the public analyst. We were surprised at the relatively small sums allocated

to such work by some authorities, not necessarily the smaller sized authorities. It became evident to us that the funding of food law enforcement in respect of food standards work demands attention. We were informed of instances where, to ease resources and minimise costs, some authorities are collaborating on a regional basis in enforcement activities. It was observed by the LGA representative in his oral evidence that regional co-operation between local authorities was becoming a general trend reflecting Government policy. We welcome this trend.

58. The effectiveness of an authority in enforcing food law will be conditional on its availability of resources in relation to the density and type of food businesses in the authority's area. We attach importance to these aspects. They have a bearing on the utilisation of the public analyst service and the apportionment of the proposed national food sampling programme. We recommend that these issues are taken fully into account when developing enforcement policy and performance criteria associated with national food law enforcement activities.

59. The main funding for public analysts comes from the analysis of enforcement-related samples and there were many calls for an increase in the rate of sampling. However, we have already pointed out that sampling is not an end in itself but must be linked to improved levels of consumer protection. We have also proposed a method for calculating an appropriate level of sampling for individual food authorities, based upon the number and types of food producing premises within the authority's area; the number of food standards complaints expected and an agreed share of national surveillance sampling programmes. If this, or some comparable mechanism, were validated and accepted, then achievement of the agreed scheduled sampling should both improve consumer protection and provide a more consistent flow of samples for analysis against which public analysts could plan, budget and schedule their work.

60. Respondents to the consultation exercise commented widely on mechanisms for ensuring that funds for the analysis of samples were used for this purpose. Ring fencing was a popular option for many but was strongly opposed by local authorities who see the need for local control. Central funding was widely supported. Comparisons were drawn with the "free" examination of microbiological samples by the PHLS whereby local authorities take samples for testing and the cost of the testing up to a set level is borne by the Department of Health. However, if funding is to continue to be locally controlled, we recommend that it should be linked with a transparent process for the determination of realistic sampling rates, as described above, together with the publication of the level of achievement of the objectives. This will increase the pressure on food authorities to fund appropriate sampling levels. If sampling rates that optimise consumer protection can be defined, and if food authorities provide the resources to meet those rates, then the problem of funding

public analysts will be resolved and public analyst arrangements stabilised. This proposal makes no prejudgement regarding the optimum sampling rates, except that they must be related to the protection of the consumer.

ORGANISATIONAL CHANGES

Regionalisation issues

61. It is important that priority be given centrally to determining the level of enforcement activity. Once the service level has been established so will be the overall size of the public analyst resource needed across the country. The present resource will, in time, self-adjust to match the imposed demands.

62. Public analysts will need to remain competitive if they want to retain their appointments. Such competition should be within a reasonably predictable enforcement environment if the level of co-operation and collaboration between public analysts necessary to draw the service together is to be achieved. Direct information exchange, joint methodology development, sharing of analytical specialisms, combined training initiatives etc. are all desirable examples.

63. As there is a requirement for food authorities to appoint public analysts, it is important that the competition between public analysts should be measured against an externally referenced standard. Benchmarking of the public analyst service would provide an objective measure of the standard of the service and offer potential for effecting improvements and delivering best value. We recommend that it should be a task for the Food Standards Agency to consider the application of benchmarking to the public analyst service, in consultation with relevant bodies, due account being taken of the other recommendations that we make.

64. Some rationalisation of the present service is inevitable if economies are to be gained and cost effectiveness improved. There are a number of courses of action available to bring this about:

- (i) take no action and let market forces operate;
- (ii) bring about some grouping of existing laboratories into larger units; or
- (iii) replace the existing system with a number of new, purpose built regional laboratories.

65. Market forces might be too slow and the outcome too capricious to be acceptable, given that the overall objective of the service is the protection of the public. Building new laboratories would be too disruptive, much more expensive than planned and, given the inevitable disputes over the number and siting of new laboratories, unacceptably dilatory. It would probably also result in the wrong answer and be insufficiently flexible an arrangement.

66. The most realistic solution in our view is to build on the strengths of the present arrangements and to try to minimise their weaknesses. The strengths include a highly qualified pool of professional staff, a flexible structure, capable of carrying out a wide range of analyses and a unique combination of analytical, legal and forensic expertise. All this needs to be retained. On the debit side there is the need for each laboratory to undertake a wide range of analyses, with all the costs of accreditation and competence testing, coupled with an inconsistent work flow. Taken together, they add up to high overheads and unreliable income that limit the opportunities for capital investment and method development and adversely affect the career prospects of the staff. The problems of funding are discussed elsewhere but structurally, we suggest that the existing laboratories should be actively encouraged to form links between themselves, leading to the establishment of (probably regional) groupings of laboratories. These could share the costs of accreditation, competence testing and equipment purchase. Each laboratory would carry out routine analyses whilst individual laboratories would specialise in, and undertake on an agreed basis, the less common analyses and/or specialise in particular screening techniques. For rare or innovative types of analysis, a few laboratories might provide a specialist national service that could be utilised by other public analysts. Where appropriate, regions could offer specialisations reflecting food technologies prevalent in the region, or the presence of centres of excellence relating to those technologies.

67. Moves in collaborative directions are already taking place. For example, Hampshire Scientific Services and Kent Scientific Services have entered into an agreement whereby each undertakes particular specialisms for both services. A similar arrangement exists between the Staffordshire and the Hereford and Worcester laboratories.

68. There will obviously be problems in combining laboratories under very different forms of ownership, but we consider that the present arrangements are capable of such development and would be much improved by it. We have been assured by the APA of the willingness of public analysts to move in this direction. In our view there is little choice to proceed otherwise. The initiatives taken so far look hopeful and provide valuable experience on which to draw and we recommend that individual public analysts explore the formation of groupings of laboratories on a regional basis. We also recommend that the Food

Standards Agency should have the role of providing help in developing and overseeing a rational and equitable framework for a rearrangement of public analyst laboratories along the lines we have indicated. Grouping laboratories and increasing their specialist resources should, additionally, enable public analysts to bid more successfully for centrally programmed food surveillance work and analytical development funds. Importance was particularly attached by LACOTS to public analysts being able to undertake development work related to enforcement needs.

Contracts/Performance Indicators

69. We have noted that close liaison between the inspectorate and the public analyst is of value to both functions through mutual understanding and maximisation of each other's contributions, so benefiting their overall effectiveness. Some of the authorities owning the public analyst's laboratory secure this benefit by combining the functions. Where public analysts are appointed at a distance, this advantage can be lost unless it is contractually arranged. We recommend that contractual arrangements be drawn up between individual food authorities and public analysts and that assistance should be provided centrally in developing model working arrangements. We think that these should include aspects such as those exemplified in Annex 9. As indicated in the Annex, we consider it essential that any arrangements should include realistic performance criteria.

70. In building on the present arrangements, we seek to retain as far as possible a competitive element and to widen the scope of public analyst laboratories. We are also mindful of the need to prevent conflicts of interest arising.

Conflicts of interest

71. A public analyst is deemed to be an officer of a food authority whether or not he is employed by, or contracted to, that authority. It is important that the public analyst avoids conflicts of interest. Section 27 of the Food Safety Act 1990 prohibits anyone from acting as a public analyst for an area that contains a food business in which they are directly or indirectly engaged.

72. Criteria serving to disqualify a public analyst are contained in the Food Safety (Sampling and Qualifications) Regulations 1990. No director, owner or employee of a food business, or partner in a food business, shall act as a public analyst for the area in which such a business is situated, or analyse or examine any sample which he knows is taken from that business.

73. The above regulations go some way, but not completely so, towards interpreting what is meant by being engaged directly or indirectly in any food business which is carried on in the area of the public analyst's appointment. Whilst we have found no evidence of conflicts of interest occurring, there are some circumstances where the potential for conflicts of interest exists or is unclear. These include:

- (i) carrying out occasional analyses for a company;
- (ii) carrying out regular checks of a company's products for due diligence purposes;
- (iii) participating in factory inspections on a consultancy basis;
- (iv) providing regulatory advice on analyses carried out for companies; and
- (v) carrying out work for a company based outside the area of his appointment whose products may be sold inside the area but analyses on them may be required by the local authority.

74. We wish to encourage closer working relationships between food authorities and public analysts, as officers of the authorities, in the interests of consumer protection. This means, or should mean, the sharing of future enforcement plans and enforcement concerns so requiring complete confidentiality and integrity on both sides. At the same time, we do not want to restrict the competitive and commercial scope of laboratories. This is a delicate balance and due regard has to be paid to the public interest. Although no instance of a conflict of interest has been drawn to our attention, some public analysts see the danger and do not take in private work.

75. Several Member States of the EU prevent official laboratories from acting other than for official purposes and the public analysts directly employed by some UK authorities deliberately shun private work. We view this as a rather inflexible approach but to enjoy greater flexibility calls for clearly understandable checks to be built into the system if the best of both worlds is to be enjoyed without prejudice to the public interest.

76. We recommend that Ministers issue appropriate guidance to authorities and public analysts on the interpretation of the existing constraints on conflicts of interest and be empowered to regulate, if necessary, to prevent such conflicts arising.

QUALIFICATIONS FOR APPOINTMENT

Alternative approaches

77. The need for a prescribed qualifying standard for public analysts and food analysts was questioned during the course of our review. The view was expressed that laboratory accreditation under EN 45002 in accordance with Council Directive 93/99/EEC adequately meets food law enforcement needs, making separate accreditation of the analyst unnecessary.

78. The primary objective of EN standards 45001 and 45002 is to ensure the technical competence of testing laboratories. The qualifying standard for the technical manager who has overall responsibility for the technical operations of the laboratory is only broadly stated in EN 45002. However, it requires a testing laboratory to keep the training of its personnel up-to-date and to maintain records of the relevant qualifications, training and experience of its technical personnel.

79. It is also worth noting that the approach to required qualifications for official food analysts varies between Member States. In all instances, such analysts must be good quality science graduates or post-graduates with varying periods of structured and supervised practical experience of analysis and food analysis in a regulatory context. Specific project work or a thesis may be a requirement. Appraisal by peers or an examination completes the process. Some Member States then take steps to ensure that official analysts undertake continuing professional development in order to accord with the provisions of EN 45002.

80. Laboratory accreditation only partially indicates the suitability of a testing laboratory for food law enforcement purposes since it does not seek to establish any particular level of competence. Nor does it take account of the need for an appropriately qualified and experienced expert. Over and above the ability to carry out analyses there is a need:

- (i) to set the analytical standards to be accredited;
- (ii) to interpret the results obtained, having regard to all relevant factors and influences;
- (iii) to put results into a legal context;
- (iv) to certify results in a form suited to legal proceedings; and
- (v) to be able to act as an expert witness.

81. The need for the public analyst to have these additional skills was recognised in a number of submissions. LGA/LACOTS observed that many authorities would continue to wish to use the services of public analysts in any future arrangements because of the public analysts' unique competencies. The FDF, in commenting on the need to ensure that analytical chemists eligible for appointment as public analysts have the necessary expertise, experience and technical skills, stated that the qualification presently required (MChemA) continues to enjoy the confidence of the food industry. The Institute of Food Science and Technology regarded the MChemA as the essential and mandatory qualification for public analysts. Similar views were expressed in a number of other submissions.

82. However, it was commented by some that the present qualifying benchmark for public analysts should be kept under review and be supplemented by a commitment to continuous professional development. EN 45002 would certainly seem to require this.

83. Analysis for official purposes goes beyond the determination of facts. The context of the analysis and the test results have to be interpreted by scientists having the qualifications and experience to provide soundly based expert opinion that is recognised and acknowledged by the courts. Such scientists need to be overtly benchmarked if confidence is to be placed in their expertise by all the parties affected by their work. The MChemA qualification uniquely defines public analysts. This is not surprising since this benchmark has been finely honed over several years to fit this particular purpose. We recommend that it remains as a prescribed qualification for public analysts and food analysts and that the present provision remains whereby Ministers may prescribe or approve qualifications essential for the appointment of public analysts. However, we consider that aspects of the MChemA merit urgent attention and these are referred to in the following section.

The Mastership in Chemical Analysis (MChemA)

84. The MChemA is administered and awarded by the RSC, assisted in regard to training and other practical matters by the APA. An intending candidate must be a Graduate, Member or Fellow of the RSC who has undertaken a post-graduate period of appropriate, counselled professional experience. Candidates are formally examined in the theory and practice of analytical chemistry and its particular application to food, agricultural products, water and materials associated with environmental and consumer safety controls. Candidates must demonstrate adequate knowledge of relevant chemical and technological matters and relevant law, and also show ability to act as an expert in legal proceedings. A

Mastership in Analytical Chemistry gains exemption from that part of the examination dealing with analytical theory and general analysis.

85. The MChemA has existed in its present form since 1990. Its roots were laid down in 1898 by the then Institute of Chemistry. The examination has evolved steadily in line with advances in analytical science, relevant technologies and legislative requirements. It is important that it continues to evolve and reflect technical and regulatory developments.

86. The main criticism made in a few submissions during the review was that it is too restrictive and overly prescriptive to be the requirement for appointment as a public analyst. We concluded in the previous section that the MChemA should remain as a statutory requirement for appointment as a public analyst. Since it is a post-graduate qualification designed for a specific purpose, it is inevitably prescriptive to a certain extent and needs to involve an examination by a neutral and respected party, such as the RSC, in order to ensure the necessary level of competence and degree of confidence in it.

87. However, we question the need for the qualification to go beyond the analytical and related competencies needed to support the enforcement of the Food Safety Act 1990 and subordinate legislation. The present breadth of the qualification must deter potential candidates, which is a matter of concern to us. We recommend that the RSC reviews the scope of the qualification and also the extent to which University based modules and qualifications could provide "building blocks" in the earlier stages of the qualification and form a significant part of its foundations.

88. Being a specialist qualification of considerable depth and breadth that calls for a high level of commitment from intending candidates in dedication, time and costs, the numbers applying each year have always been small. We view the present level of recruitment for the MChemA as presenting a threat to the future viability of the public analyst service to food authorities. We recommend that the RSC should consider possible sources of bursaries for candidates during their studies. We also recommend that the RSC should consider awarding an interim qualification at an earlier stage of the MChemA that may have wider attraction. In view of the length and depth of post-graduate study required for the MChemA, we further recommend that consideration be given to it being awarded at doctorate level.

89. Analytical sciences and food technology are subject to continuing development and advances. It is important that public analysts keep abreast of change. We recommend that the APA and the RSC consider making continuing professional development a requirement for holders of

the MChemA (or any successor qualification), and that it should be subject to formal arrangements in order to retain confidence in the maintenance of competence and to ensure compliance with EN 45002.

THREE-PART SAMPLING

90. A few respondents questioned the need for three-part sampling and referee analyses and the appropriateness of the Government Chemist as the named referee analyst. They emphasised that three-part sampling and referee analysis is not a requirement in respect of product safety legislation where courts resolve disputed facts on the weight of the evidence provided. Another view was that the continuing need to allow for referee analyses was redundant since only accredited laboratories can be used by food authorities. It was also pointed out that it is not an EU requirement nor a practice followed by all Member States.

91. Although an aim of accreditation is to remove analytical inconsistencies between laboratories, it is an objective that collaborative analytical exercises suggest will not be completely realised because of variation in personal skills, analytical complexities and sample and sampling variations. It is also the case that samples get mislaid, or are inadequately stored by the vendor, or for one reason or another are not available to the manufacturer to whom the complaint is passed back by the vendor. The availability of a sample for referee analysis is protective to the public analyst as well as to the affected food business whose resources, as was firmly emphasised to us, may far outweigh those of the food authority.

92. For these reasons, and taking account of the extent to which other respondents were supportive of the present provisions, we recommend that three-part sampling be retained.

THE REFEREE ANALYST

93. It is imperative that the person acting as the referee analyst is impartial and independent from the analysts concerned with the other two parts of the sample, a point made by a number of respondents. Historically, the Government Chemist has filled this role. Although the appointment of Government Chemist remains independent, now that the Laboratory of the Government Chemist (LGC) is in private hands it is under the direction of the Government Chemist acting in a separate capacity as the Head of the Laboratory. The need for the Government Chemist to be seen to be independent and to avoid any conflicts of interest remains important.

94. The LGC is subject to a number of contractual constraints imposed by the Department of Trade and Industry (DTI) in order that the

Government Chemist can responsibly fulfil the various regulatory roles imposed on that office. The RSC, a part owner of the laboratory, has been given a continuing monitoring and reporting responsibility. A particular DTI requirement is that the necessary analytical competencies to fulfil the role of the referee analyst must be maintained by the LGC. It was noted that the LGC is funded by the DTI specifically to carry out referee analyst work, the costs of which are not fully passed on. It was evident to us, after visiting the laboratory, that it is at the leading edge of analytical sciences, that it values its neutral position and possesses a training capability of some considerable use to public analysts and food analysts.

95. We concluded that the present legislative provisions do not need to be changed. We recommend that the Government Chemist should remain as the referee analyst but that referee sample work undertaken under the Food Act 1990 should be carried out under the control of a food analyst. However, there will be times when the required expertise may not readily be available in the LGC and so we would draw the attention of the Government Chemist particularly to the provision enabling him to direct a disputed sample to another food analyst. We think that the Government Chemist, should, as a matter of course, keep Government Departments and, in future, the Food Standards Agency, informed of his relevant referee analyst activities. We recommend that the Agency should be empowered to consider nominating a different referee analyst, if the arrangements with the Government Chemist, particularly the DTI funding for the service, should change significantly.

AGRICULTURAL ANALYSTS

96. The Agriculture Act 1970 and subordinate legislation, which now also enact various EC Directives, control the composition, labelling, sampling and analysis of fertilisers and animal feedingstuffs, including pet foods. In England and Wales, the same food authorities that carry out food standards enforcement are generally the same authorities who are required to enforce the legislation on animal feedingstuffs and fertilisers. Besides appointing public analysts, they are also required, by virtue of the Agriculture Act, to appoint an agricultural analyst. The latter may be appointed for the areas of two or more enforcement authorities that act jointly in the matter.

97. The 1970 Act contains detailed provisions governing the taking of samples and their submission for analysis to the agricultural analyst. Unlike food law enforcement where samples are divided into three parts, the Agriculture Act allows for four part sub-division i.e. one part for the inspector, one for the vendor, one for the manufacturer if he is not the vendor, and a part set aside for referee analysis should this be requested. The referee analyst is the Government Chemist.

98. Qualifications for agricultural analysts are prescribed in the Feeding Stuffs (Sampling and Analysis) Regulations 1982. An agricultural analyst or a deputy agricultural analyst must be a Chartered Chemist, a Fellow or Member of the RSC and whose experience of the analysis and examination of feedingstuffs must be attested by another agricultural analyst or deputy agricultural analyst. Historically, because of close analytical and regulatory similarities between animal feedingstuffs and foodstuffs for human consumption, public analysts have been appointed as agricultural analysts and the MChemA qualification has reflected agricultural analytical needs. It is customary for agricultural analysts to use the MChemA as the benchmark when attesting the professional credentials of scientists seeking appointment as agricultural analysts.

99. The general provisions and the extensive prescriptive detail in the law applicable to animal feedingstuffs and fertilisers reflect mainly the economic importance of the major inputs to agriculture and also the safety implications of these product sectors. It is important that the scientific service supporting the enforcement of these regulatory controls continues to be of high quality. A trade association for the fertiliser sector particularly expressed the view that any decline in the standards of the service would weaken the safeguard offered to both consumers and manufacturers.

100. We note, however, that the volume of work for agricultural analysts is in decline and have been advised of a need for specialised methods which would make the regionalisation of the agricultural analyst service a more urgent issue than that of the public analyst service in general.

101. Other than applying the improvements we have recommended to enhance the efficiency of public analyst arrangements to the arrangements for agricultural analysts, we were not persuaded of a need for major legislative changes in respect of agricultural analysts. However in view of the increased complexity of agricultural sampling we recommend that the provisions relating to the handling of agricultural samples in the Agriculture Act 1970 should be aligned with current arrangements for food samples which allow for samples to be passed outside of the current public analyst system if the necessary technology exists elsewhere.

EXCHANGE OF LETTERS ON INTERIM ADVICE

Mr Jeffrey Rooker MP
Minister for Food Safety
MAFF
Ergon House
17 Smith Square
London
SW1P 3JR

27 July 1998

Dear Minister

REVIEW OF PUBLIC ANALYST ARRANGEMENTS IN ENGLAND AND WALES

The following is in response to your request that the Group carrying out the above review should provide you with preliminary advice by the end of June on the need for any legislative changes, having particular regard to the terms of reference of the review.

Based on the submissions received, a programme of visits by the Group to laboratories and the taking of oral evidence, we conclude that the present provisions governing the appointment and qualifications of public analysts and agricultural analysts, the taking and routing of samples should remain unchanged; similarly so with the appointment of the Government Chemist as the Referee Analyst.

Whilst we have no evidence that conflicts of interest are arising at the present time, the likelihood of such conflicts has increased because of changes in enforcement approaches, food industry cutbacks and the need to allow the public analyst service to be competitive and as openly available as possible. We therefore recommend that Ministers be empowered to make regulations if necessary that amend the present provisions aimed to prevent conflicts of interest arising. However, for the present only, clearer guidance on interpretation of the existing constraints is indicated.

Improving the effectiveness and efficiency of public analysts lies mainly in the practicalities. We shall be recommending in our report the direction that organisational changes should take. Meanwhile, to bring consistency, stability and accountability into the system and thereby to raise effectiveness and improve efficiencies, we recommend that the Agency be empowered to make statutory codes that:

- set principles of approach to and rates of food standards sampling
- set standards capable of being monitored for the performance of public analysts in their service provision and for food authorities in respect of food standards enforcement
- set criteria for contractual arrangements between public analysts and food authorities
- call failing food authorities to account.

The progress of the review is such that we should be submitting our final report to you in October.

Yours sincerely

[signed]

Alan Turner
Chairman
Public Analyst Review Group

31 July 1998

[Salutation]

REVIEW OF PUBLIC ANALYST ARRANGEMENTS IN ENGLAND AND WALES -
PRELIMINARY ADVICE ON THE NEED FOR LEGISLATIVE CHANGES

Thank you for your letter of 27 July 1998, giving the Public Analyst Review Group's preliminary advice on the some of the changes which may be needed.

I have read this with interest and was pleased to note the importance the Group attached to the future role of the Food Standards Agency. I believe this is fully consistent with the approach to food standards enforcement detailed in the White Paper and your advice will be of assistance to us as we take forward our preparations for the setting up of the Agency.

I look forward to receiving the Review Group's final report in due course.

[signed]

JEFF ROOKER MP

LIST OF THOSE WHO MADE SUBMISSIONS TO THE REVIEW GROUP**Representative organisations:**

Association of Public Analysts
 Biscuit Cake Chocolate and Confectionery Association
 British Retail Consortium
 Federation of Small Businesses
 Fertiliser Manufacturers Association
 Food and Drink Federation
 Institute of Food Science and Technology
 Institute of Trading Standards Administration
 Laboratory of the Government Chemist
 Local Government Association/LACOTS (joint submission)
 Royal Society of Chemistry
 Specialist Cheesemakers Association (Scientific Sub-Committee)
 UNISON (Local Government Service Group)
 Welsh Local Government Association

Others:

A H Allen and Partners (public analysts)
 Analytical Services (South Wales) (public analyst)
 Derbyshire County Council (Community and Public Protection Committee)
 Mr N M Griffiths, Monitor Group (former public analyst)
 Mr A J Harrison OBE (former public analyst)
 Mr S Hollington, CPA Laboratories
 Humber Authorities Scientific Services
 Kent County Council (Regulatory Services Board)
 Kingston Upon Hull City Council (Public Protection Division)
 Lancashire County Council (Land, Buildings and Public Protection
 Sub-Committee)
 Professor Tim Lang, Centre for Food Policy, Thames Valley University
 Mersey Port Health Authority
 Mr Brian McLean (former public analyst)
 Pattinson Scientific Services (public analysts)
 Reading Scientific Services Ltd
 Dr Alastair Robertson Director of Technical Operations Safeway Stores plc
 Shropshire County Council (Trading Standards Service)
 Somerset County Council ((Public Protection Committee)
 Staffordshire County Council (County Analyst)
 Worcestershire County Council (Trading Standards and Scientific Services

LIST OF PUBLIC ANALYST LABORATORIES VISITED

Managed by local authority:

Consumer and Scientific Services, Durham County Council

Hampshire Scientific Service, Hampshire County Council

County Analyst's Laboratory, Leicestershire County Council

County Laboratory and Scientific Services, Staffordshire County Council

Managed by consultants:

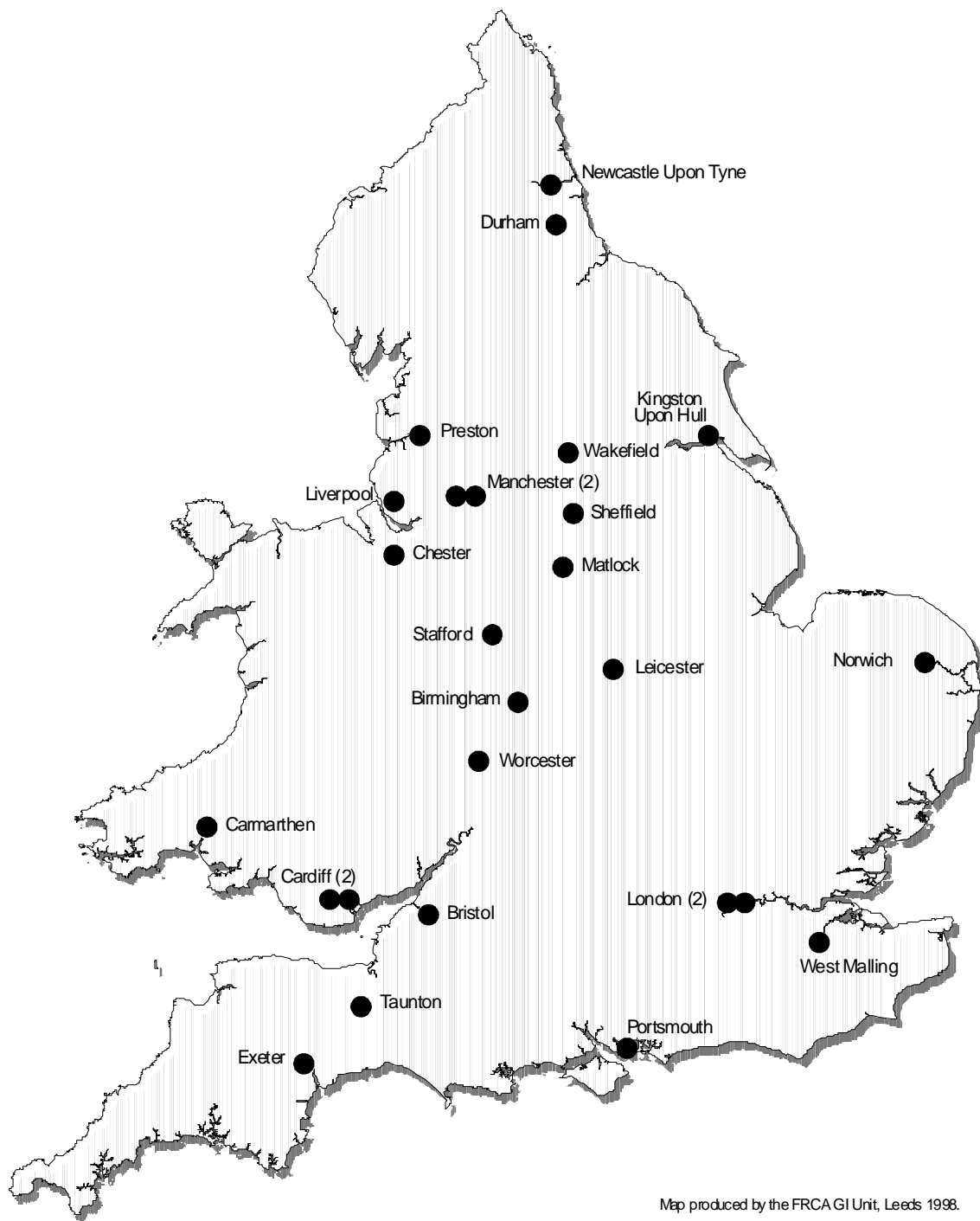
Central Scientific Laboratories (London)

Lincolne, Sutton and Wood Ltd (Norwich)

Pattinson Scientific Services (Newcastle-upon-Tyne)

Hereford and Worcester Scientific Services (Worcester)

Location of Public Analyst Laboratories in England and Wales



Certificate of Analysis or Examination carried out under the Food Safety (Sampling and Qualifications) Regulations 1990

To:

(name and address of person who originally submitted the sample)

I, the undersigned food analyst

Certify that at (time)

on the (date)

day

month

year

the sample marked:

Date sample taken	Reference number, description, etc.	Weight or measure <small>This column may be left blank if the sample could not be weighed or measured or measurement is not material to the result</small>

was received by me:

* from you (the person named above)

OR * from

(insert the name and address of the analyst / examiner to whom the sample was first submitted)

I certify that the sample was analysed by me, or under my direction and the results are as follows:

My opinion and observations are:

(if deemed appropriate by analyst / examiner)

I further certify that the sample has undergone no change which would affect my results, opinion or observations.

(This statement is required if the sample has been analysed. It should be deleted if the certificate relates to food examination.)

Certified by me this

day of

at (place)

Signature

Status

Name in BLOCK LETTERS

Official address

Formal Samples Received by the Government Chemist

	Total	Food Safety Act	Agriculture Act
1994-95	33	28	5
1995-96	44	36	8
1996-97	44	24	20
1997-98	38	24	14

Government Chemist Programme (Financial year 1997-98)

	£'000	% of activity
Management, committee work, liaison activity, technology transfer	37	10%
Method Development	33	9%
Analysis of Formal Samples	240	65%
PT Schemes	37	10%
Non-labour	21	6%
Total	368	

Source: Laboratory of the Government Chemist

Data returned by laboratories for local authority work 1997

Type	Number of samples
Foods - all formal	23341
Foods - all informal	52296
Foods - complaints	8652
Foods - bacteriological	6067
Potable waters (other than bottled)	25689
Swimming pool waters	5534
Pollution ware, effluents, tip leachates	12893
Soils	3094
Workplace monitoring (excl. asbestos)	2201
Asbestos (bulk and airborne)	32720
Atmospheric samples	39671
Feedingstuffs	4576
Fertilisers	451
Toys (Safety) Regulations	5644
Cosmetics (Safety) Regulations	1243
Other Consumer Safety Act work	3253
Trade Descriptions	1041
Radiation monitoring	6163
Coroners/Toxicology	3128
Building materials	407
All other	11341
TOTAL SAMPLES	249405
Total samples for analysis (planned plus complaints)	84289
Total foods bacteriological	6067
Total waters excl. environmental	31223
Total Agriculture Act	5027
Total Consumer Protection & Trade Descriptions	11181
Total environmental samples	55658
Total workplace samples	34921
Total other samples	21039
Emergency call outs	217
Factory inspection - foods	936
Factory inspection - other	0

Source: APA Annual Report and Statistics for 1997

PRIMARY LEGISLATION RELATING TO THE WORK OF PUBLIC ANALYSTS

Transport and Works Act 1992

Food Safety Act 1990

Road Traffic Offenders Act 1988

Hydrocarbon Oil Duties Act 1979

Poisons Act 1972

Agriculture Act 1970 (when appointed as an agricultural analyst)

Medicines Act 1968

Farm and Garden Chemicals Act 1967

**TOPICS TO BE ADDRESSED IN WORKING ARRANGEMENTS
BETWEEN PUBLIC ANALYSTS AND LOCAL AUTHORITIES IN
RELATION TO FOOD**

A The role of the public analyst as an officer of the food authority

- (i) The availability of scientific advice to the authority
- (ii) The nature of the support services to be provided (including any direct involvement in enforcement activities such as factory inspections)
- (iii) Other uses of official laboratory facilities and staff time
- (iv) The official requirements under which public analysts operate
- (v) Arrangements for the appointment of public analysts

B Workload agreements

- (i) The laboratory budget
- (ii) Sample throughput and consistency
- (iii) Service level requirement, including different levels of service to meet different requirements (such as screening)

C Service provision agreements

- (i) Sample reporting times
- (ii) Procedures for the passing on of samples
- (iii) Procedures for dealing with completed samples

D Administrative provisions

- (i) Form and terms of any agreement
- (ii) Provision for termination of contract
- (iii) Performance review of the agreement
- (iv) Nominated contacts between the public analyst, the food authority and the Food Standards Agency, and reporting relationships

Notes:

1. The determination of the terms of the agreement is a strategic exercise and should involve all the appropriate parties.
2. The headings and items listed above should not be regarded as exclusive: there may be other important points to be covered.