Code no. (1)	Groups to which the MRLs apply	Examples of individual products within the groups to which the MRLs apply	Scientific name (2)	Melliferous capacity[2]
810040		Coriander seed	*Coriandrum sativum*	**No data available**
810040		Cumin seed	*Cuminum cyminum*	**Yes**
810060		Dill seed	*Anathum graveolens*	**Yes**
810070		Fennel seed	*Foeniculum vulgare*	**Yes**
810080		Fenugreek	*Trigonella foenum-graecum*	**Yes**
810090		Nutmeg	*Myristica fragans*	**No data available**
810990		Other spices (seeds)		**No data available**
820000	(ii) Fruits and berries	Spices (fruits and berries)		
820010		Allspice	*Pimenta dioica*	**No data available**
820020		Anise pepper (Japan pepper)	*Zanthooxylum piperitum*	**No data available**
820030		Caraway	*Carum carvi*	**No data available**
820040		Cardamom	*Elettaria cardamomum*	**Yes**
820050		Juniper berries	*Juniperus communis*	**No data available**
820060		Pepper, black and white	*Piper nigrum*	**No data available**
820070		Vanilla pods	*Vanilla fragrans* syn. *Vanilla planifolia*	**No data available**
820080		Tamarind	*Tamarindus indica*	**Yes**
820990		Other spices (fruit and berries)		**No data available**
830000	(iii) Bark	Spices (bark)		**No data available**
830010		Cinnamon	*Cinnamonum verum* syn. *C. zeylanicum*	**No data available**
830990		Other spices (bark)		**No data available**
840000	(iv) Roots or rhizome	Spices (roots or rhizome)		
840010		Liquorice	*Glycyrrhiza glabra*	**No data available**
840020		Ginger	*Zingiber*	**No data**

Code no. (1)	Groups to which the MRLs apply	Examples of individual products within the groups to which the MRLs apply	Scientific name (2)	Melliferous capacity[2]
			officinale	**available**
840030		Turmeric (Curcuma)	*Curcuma domestica* syn. *C. longa*	**Yes**
840040		Horseradish, root spices	*Armoracia rusticana*	**No data available**
840990		Other spices (roots)		**No data available**
850000	(v) Buds	Spices (buds)		**No data available**
850010		Cloves	*Syzygium aromaticum*	**No data available**
850020		Capers	*Capparis spinosa*	**No data available**
850990		Other spices (buds)		**No data available**
860000	(vi) Flower stigma	Spices (flower stigma)		
860010		Saffron	*Crocus sativus*	**Yes**
860990		Other spices (flower stigma)		**No data available**
870000	(vii) Aril	Spices (aril)		**No data available**
870010		Mace	*Myristica fragrans*	**No data available**
870990		Other spices (aril)		**No data available**
900000	9. SUGAR PLANTS	SUGAR PLANTS		
900010		Sugar beet (root)	*Beta vulgaris*	**No (Yes for seed production)**
900020		Sugar cane	*Saccharum officinarum*	**No**
900030		Chicory roots	*Cichorium intybus*	**No (Yes for seed production)**
900990		Other sugar plants		**No data available**
1000000	10. PRODUCTS OF ANIMAL ORIGIN-TERRESTRIAL ANIMALS	PRODUCTS OF ANIMAL ORIGIN - TERRESTRIAL ANIMALS		**Not applicable**
-	11. FORAGE PLANTS	FORAGE		

Code no. (1)	Groups to which the MRLs apply	Examples of individual products within the groups to which the MRLs apply	Scientific name (2)	Melliferous capacity[2]
	(i) Gramineous			**No**
		Rye grass for forage and silage		**No**
	(ii) Legumes/Leguminous for silage			**Yes**
		Alfalfa		**Yes**
		Birdsfoot		**Yes**
		Chick pea		**Yes**
		Clover (for forage and silage)		**Yes**
		Cow peas		**Yes**
		Esparcette		**Yes**
		Kudzu		**Yes**
		Lespedeza		**Yes**
		Sainfoin		**Yes**
		Sesbania		**Yes**
		Sulla		**Yes**
		Trefoil		**Yes**
		Turnip, especially cultivated for fodder		**Yes**
		Vetches		**Yes**
	12 AGROFORESTRY AND ORNAMENTALS	TREES		
	(i) Flowering trees			**Yes**
	(ii) Conifers			**Yes**
	13. FALLOW	FALLOW		
	(i) flowering plants			**Yes**
	(ii) Non flowering plants			**No**

Code no. (1)	**Groups to which the MRLs apply**	**Examples of individual products within the groups to which the MRLs apply**	**Scientific name (2)**	**Melliferous capacity[2]**
	14. PERFUME AND MEDICINAL PLANTS	PERFUME AND MEDICAL PLANTS		
	(i) Perfume plants	Perfume plants		
		Lavender		**Yes**
		Rose		**No**
	(ii) Medical plants	Medical plants		
		Poppy	*Papaver somniferum*	**No**
		Sage		**Yes**

APPENDIX III

Experimental studies via syrup feeding

1 Objectives

2 Test principles

2.1 Application of test substance(s)
2.2 Design of trials sites
2.3 Honeybee colony preparation
2.4 Duration of the trial
2.5 Sampling, method of analysis

3 Report

3.1 Summary
3.2 Objectives
3.3 Study setup and study details
3.4 Sample preparation
3.5 Extraction, clean-up, determination, evaluation
3.6 Results and conclusion

4 References

1 Objectives

The objective of these studies is to determine the inadvertent residues in honey arising from plant protection products (PPP) use, by determining a worst case transfer of pesticides into honey, in order to allow a dietary risk assessment and to establish scientifically-based MRLs.

2 Test principles

Principle of the trial is to provide sugar solution to honey bees with the aim that bees consume, process and store the sugar solution in cells on combs as "artificial honey". As no other food stores will be in hives before feeding, all food stores will consist of the given food solution, processed to "artificial honey" stores.

2.1 Application of test substance(s)

The residue of concern should be added to an aqueous sugar solution (at least 50% (w/v (weight/volume))), which is then called the feeding solution. The feeders filled with the feeding solutions should be implemented on top of each colony according to good beekeeping practice. A quantity of 2 L freshly prepared feeding solution should be placed in each hive once per day or as soon as the previously offered feeding solution is fully consumed (in case, feeding solution is not consumed). The administration of the spiked feeding solution should be done on four consecutive days, i.e. in sum an amount of 8 L feeding solution will be fed per colony. After the first 4 L of the original feeding solution have been fully consumed (which is ideally after 2 days), on the following two days, the remaining 4 L (2 L per day) will be administered with half concentration of the original feeding solution in 50% (w/v) aqueous sugar solution Thereafter, pure 50% (w/v) aqueous sugar solutions will be administered (approximately 3-5 times a week, about 2 L per feeding) until the first capped "artificial honey" cells are observed. The feed uptake should be measured and documented daily.
The concentration in the original feeding solution should ideally be based on the residues that are found in honey sacs from homing foragers on the day of application in a tunnel trial (the highest application rate according to Good Agricultural Practice (GAP) should be used). If no tunnel study is available, the concentration in the original feeding solution should be based on the residues that are likely in aerial parts of the treated crop according to the plant residue definition.

2.2 Design of trials sites

Beehives are placed in tunnels protected with an insect-proof net so that no residue dilution will occur in honey due to bee foraging on another nectar source. The covered tunnel area is empty of melliferous plants.

Each trial should consist of one control tunnel and four tunnels per tested item group. Each tunnel should contain one colony. The colonies should be placed in the tunnels approximately three days before start of spiked feeding solution in order to give the bees the possibility to acclimatise to the new environment inside the tunnels.

Bees should always have access to water.

The tunnel size should be at least 40 m^2.

Products containing the tested active substance must not be used as maintenance chemicals, both on treated and untreated plots. In the same way, products likely to cause ill effects on honeybees must be avoided. It must be ensured that active substance for which MRL is to be determined has not been used for veterinary treatment of the bees.
Capped honey needs to be obtained.

2.3 Honeybee colony preparation

Artificial swarm technique ("shook swarm method") is used. Therefore, at least about 10,000 bees are used. Worker bees are obtained from healthy colonies which are free of symptoms of diseases. A mated, egg-laying queen is added. All frames are made of new wax foundations. Next to pure bee wax foundations, it is also possible to use pre-built plastic frames; if necessary also a honey super can be added (queen excluder necessary). No combs with food stores are provided. The only available food source is the feeding solution.
Protein supplements/pollen (between 50 and 100 g/day) needs to be supplied to the colonies to avoid a drastic drop in protein sources; this step is essential that new larvae can be raised and the colony develop normally. Pollen can be administered inside (e.g. as patties or milled pollen), or outside the hives (e.g. milled pollen or

pollen from untreated flowering plants. If a pollen comb is provided, it is recommended to take all further honey samples from the other side of the colony.

No residue analyses are needed for pollen combs and patties as this steps serves to reduce unnecessary stress for colonies only, and it can be assumed that it is unlikely that relevant cross-contamination occurs. However, from each used pollen batch a retain sample should be taken, in order to be able to analyze the pollen for residue, while this is only considered necessary in case of any unexplainable residues in e.g. the control samples.

2.4 Duration of the trial

The honeybee colonies will remain in the tunnels until the “artificial honey” reached commercial maturity (comb-closure or the water content in the “artificial honey” is below 20%, to be measured with refractometer), which is usually after one to two weeks.

2.5 Sampling, method of analysis

The sample should be taken at 3 different spots on at least 2 different combs if possible and combined as one pooled sample per colony. The sample size for each sample should be 100 g or as close as possible to this. If a honey super is used, it is recommended to sample from the brood chamber only. The pooled samples per colony/tunnel will be divided into A- and B-samples. The B-samples will be stored until finalisation of the test.

According to the laboratory recommendations, honey can be sampled with a sharp tool such as plastic spoons. For each colony/sample a new tool will be used.

The control sample and the four replicates of the treated samples (from the four treated colonies) should be prepared and analysed separately.

To analyse honey for the relevant residue, a suitable validated analytical method is required. It is necessary to achieve an appropriate limit of quantification as low as possible. A value of 0.05 mg/kg or lower is favoured.

3 Report

A report on residues in honey should include all relevant data in a suitable format. The report for an entire residue study could, for example, be sub-divided into the following sections:

- Summary
- Objectives
- Study setup and study details
- Sample preparation
- Extraction, clean-up, determination, evaluation
- Results and conclusion.

3.1 Summary

This summarises the key results, the evaluation of these results and any anomalies of the study, with reference to the objective.

3.2 Objectives

The objectives section of the report again describes the aims of the study in detail and formulates the questions to be dealt with in the study.

3.3 Study setup and study details

This section of the report summarises the key points documented in the log book. The documentation should include information on

- Site parameters,
- Application details,
- Weather data during the entire trial periods,
- Duration of trials, incl. period prior to feeding,
- Number of replicates,

Reference should be made to the critical points of the trial.

3.4 Sample preparation

This section should be used to describe sampling techniques including nature, number and size of samples taken and, where appropriate, intermediate storage, processing of samples and the storage and dispatch of these.

3.5 Extraction, clean-up, determination, evaluation

This essentially describes the method used to prepare and measure the samples. This section of the report presents the residue levels in honey and, where needed, pollen.

3.6 Results and conclusion

This section of the report discusses and evaluates the reported measurements in the light of the questions outlined in the objectives section. The relevance of results should be discussed in relation to the proposed uses of the PPP, including a critical appraisal of the study and its results. In particular the following points must be addressed:

- A residue at or above the LOQ (a value of 0.05 mg/kg or lower is favoured) in control samples.
- MRL proposal, with reasoning.

4. References

Oomen PA, De Ruijter A & Van der Steen J (1992): Method for honeybee brood feeding tests with insect growth-regulating insecticides. Bulletin OEPP/EPPO Bulletin 22: 613–616.

Regulation (EC) No. 396/2005 of the European Parliament and of the Council on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC

APPENDIX IV

Field residue trials for MRL setting in honey

1 Objectives
2 Test procedure
  2.1 Application of test substance(s)
  2.2 Design of trials sites
  2.3 Honeybee colony preparation
  2.4 Number of trials
  2.5 Duration of field trials
  2.6 Sampling, method of analysis
  2.7 Health effects on honeybees
3 Report
  3.1 Summary
  3.2 Objectives
  3.3 Field part
  3.4 Sample preparation
  3.5 Extraction, clean-up, determination, evaluation
  3.6 Results and discussion
4 References

1 Objectives

The objective of these studies is to determine the inadvertent residue in honey arising from pesticide use, in order to allow a dietary risk assessment and to establish scientifically-based MRLs.

It is necessary to clearly establish:

- that colonies used are well defined, as homogeneous as possible, in good health and not affected by foraging in the treated area and no or only marginal honey flow from other sources within 2-3 km in the surrounding,
- as the bees are flying freely, that they have chiefly foraged plants treated according to critical GAPs (critical considering honey contamination so that it is a realistic indication of the highest bee exposure),
- that honey produced from treated plants is clearly identified,
- that dosing of residues has been achieved on “mature” and marketable honey and in conditions that allow full confidence in the analytical results.

2 Test procedure

2.1 Application of test substance(s)

The test substance should be applied in a realistic worst-case scenario with respect to residues in honey, as described for the design, preparation and realisation of residue trials in plants. The residue trials should be based on the highest authorised or proposed rate of application consistent with Good Agricultural Practice in a melliferous crop in the region(s) concerned.

2.2 Design of trials sites

As the bees are flying freely, the field size must be adapted to conditions of the surroundings to achieve results that are not influenced by these conditions. In the case of an isolated field with no other melliferous crops/production of honey dew around the trial site, a field size of 1 ha may be sufficient but larger fields are recommended as the chance of sufficient honey production increases with field size. As this may not normally be achieved, a field size of 3 ha with no other flowering crops within a 2 to 3 km radius should be sought (minimum 500 m radius in the case of less-attractive flowering crops compared to the treated crop).

The treated crop area in these trials is very large compared to standard supervised crop field trials. It is necessary to ensure that the bees are exposed to the plant protection product according to "realistic worst-case" conditions.

Products containing the tested active substance must not be used as maintenance chemicals, both on treated and untreated plots. In the same way, products likely to cause ill effects on honeybees must be avoided. It must be ensured that active substance for which MRL is to be determined has not been used for veterinary treatment of the bees.
Capped honey needs to be obtained.

2.3 Honeybee colony preparation

Healthy queen-right colonies are used with enough worker honey bees to cover all combs (at least 20 000 honey bees, depending on beehive types and on the season).
Each colony presents brood with all the different stages: eggs, larvae, capped brood as well as natural bee bread and honey stored by bees.
The colony will have at least seven brood frames containing all brood stages and food store frames.
Put the supers up not more than 2 days before application. 2-3 empty but built combs with cells that can immediately be used by bees to store honey should be provided. It is possible to use pre-built frames in plastic.
Before the application, all combs in the super containing fresh nectar can be removed but super should contain 2-3 built but empty combs at application.
Bees should always have access to water.

2.4 Number of trials

To achieve the objectives a minimum of four trial sites is necessary. In each trial site, for MRL determination purposes, two beehives per field should be used in order to collect sufficient number of honeycombs.

Trials from one growing season are sufficient but trials should be conducted in different geographical areas.

2.5 Duration of trials

For direct to crop spray applications the bee hives should be brought onto the field on the day of application of the plant protection product. For other application types application should be timed to ensure bees have foraged when residues are highest in aerial parts of the plant. After application of the plant protection product at the critical GAP the bee hives should be left within the field until the honeycombs are closed, i.e., the honey is mature (honey from the treated crop reached commercial maturity (comb-closure or the water content in the “artificial honey” is about 20%, to be measured with refractometer; normally 7-21 days after application or start of flowering).

2.6 Sampling, method of analysis

Beneath the general requirements concerning sampling and methods of analysis as described elsewhere, the following points should be taken into consideration:

At each site pollen traps should be used to collect pollen in order to analyse for pollen types. To analyse honey (pollen and the treated crop, if desired) for the relevant residue, a suitable validated analytical method should be chosen. It is desirable to achieve a limit of quantification as low as possible. A value of 0.05 mg/kg per analyte is favoured.

The sample should be taken at 3 different spots on at least 2 different combs per hive if possible and combined as one pooled sample per colony. According to the laboratory recommendations, honey can be sampled with a sharp tool such as plastic spoons. For each colony/sample a new tool will be used.
In case full honey supers are obtained, the honey samples can also be extracted according to normal bee keeping practice.

Honey can also be extracted by centrifuging de-capped broodless combs. The laboratory sample should contain at least 0.5 kg of honey.

2.7 Health effects on honey bees

The health of the colonies will be assessed prior to introduction to the fields and at the end of the trial when the honey has been collected.

The following parameters will be assessed:
- Strength of the colony (number of frames covered with bees),
- Presence of a healthy queen (i.e., presence of eggs or presence of queen cells),
- Visual assessment – percentage of frames containing pollen, nectar, and brood (eggs, larvae and capped cells). For these assessments, one frame of comb (both sides) will equal 100% and from this the percentages area of brood, pollen and nectar will be estimated. All frames in each colony will be assessed and the mean values for each colony will be calculated.

3 Report

A report on residues in honey should include all relevant data in a suitable format. The report for an entire residue study could, for example, be sub-divided into the following sections:

- Summary
- Objectives
- Field part
- Sample preparation
- Extraction, clean-up, determination, evaluation
- Results and discussion.

3.1 Summary

This summarises the key results, the evaluation of these results and any anomalies of the study, with reference to the objective.

3.2 Objectives

The objectives section of the report again describes the aims of the study in detail and formulates the questions to be dealt with in the study.

3.3 Field part

This section of the report summarises the key points documented in the log book. The documentation should include information on

- Site parameters, including crops growing in the surroundings,
- Application parameters,
- Weather data for the application and sample collection period,
- Duration of trial, incl. period prior to application,
- Number of beehives,
- Health effects.

Reference should be made to the critical points of the animal trial component, and special techniques and events should be described.

3.4 Sample preparation

This section should be used to describe sampling techniques including nature, number and size of samples taken and, where appropriate, intermediate storage, as well as the production of the laboratory or analysis samples and the storage and dispatch of these.

3.5 Extraction, clean-up, determination, evaluation

This essentially describes the method used to prepare and measure the samples. This section of the report presents the residue levels in honey and, where desirable, in pollen and the treated crop.

3.6 Results and discussion

This section of the report discusses and evaluates the reported measurements in the light of the questions outlined in the objectives section. The relevance of results should be discussed in relation to the proposed uses of the plant protection product, including a critical appraisal of the study and its results. In particular the following points must be addressed:

- A residue at or about the LOQ (a value of 0.05 mg/kg or lower is favoured) in control samples
- Adverse effects on health of the honey bees

4 References

BORNEMANN V. Personnel communication, 2003 (from Germany proposal).

Council of the European Communities. Council Regulation (EEC) No 2377/90 of 26 June 1990 laying down a Community procedure for the establishment of maximum residue limits of veterinary medicinal products in foodstuffs of animal origin. OJ N° L 10 of 18.8.1990, p. 1.

Council of the European Communities. Council Directive 2001/110/EC of 20 December 2001 relating to honey. OJ N° L 224 of 12.1.2002, p. 47.

European Commission. Proposal for a Regulation of the European Parliament and of the Council on maximum residue levels of pesticides in products of plant and animal origin, COM, 2003, 117 final, Brussels.

APPENDIX V

Tunnel residue trials for MRL setting in honey

1 Objectives
2 Trial design
  2.1 Application of test substance(s)
  2.2 Design of trials sites
  2.3 Number of trials
  2.4 Honeybee colonies
  2.5 Duration of field trials
  2.6 Sampling, method of analysis
  2.7 Health effects on honeybees
3. Report
  3.1 Summary
  3.2 Objectives
  3.3 Tunnel part
  3.4 Sample preparation
  3.5 Extraction, clean-up, determination, evaluation
  3.6 Results and discussion

1 Objectives

The objective of these studies is to determine the inadvertent residue in honey arising from pesticide use, in order to allow a dietary risk assessment and to establish scientifically-based MRLs.

It is necessary to clearly establish:

- that colonies used are well defined, as homogeneous as possible, in good health and not affected by foraging in the treated area,•
- that honey produced from treated plants is clearly identified,
- that dosing of residues has been achieved on “mature” and marketable honey and in conditions that allow full confidence in the analytical results.

2 Trial design

2.1 Application of test substance(s)

The test substance should be applied in a realistic worst-case scenario with respect to residues in honey. By confining them within tunnels, the proposed trial design ensures that bees are allowed to forage only on the treated crop, mimicking commercial situations in which large areas of crop may be grown and treated more or less simultaneously.
The residue trials should be based on the highest authorised or proposed rate of application consistent with Good Agricultural Practice in a melliferous crop in the region(s) concerned.
Application(s) should be made within the tunnels the day after introducing the hives.

2.2 Design of trials sites

The study should be conducted in tunnels placed in crop fields, to maximise exposure of the bee colonies to treated plants. Each trial site should consist of a control plot and one “treated” plot: one tunnel with one bee colony placed in a field treated with the relevant plant protection product and one tunnel with an untreated control.
The trial site must then be large enough to accommodate two tunnels.

The tunnel size should be at least 120 m^2 with one path of approximately 50 cm width in the middle, necessary for the application of the test substance. Smaller tunnel sizes are not recommend as the chance of sufficient honey production decreases with field size.
Bees should always have access to water.

Products containing the tested active substance must not be used as maintenance chemicals, both on treated and untreated plots. In the same way, products likely to cause ill effects on honeybees must be avoided. It must be ensured that active substance for which MRL is to be determined has not been used for veterinary treatment of the bees.
Capped honey needs to be obtained.

2.3 Number of trials

To achieve the objectives a minimum of four trial sites is necessary. Trials sites must be situated at different locations, at a minimum of 10 km apart. Trials from one growing season are sufficient.

2.4 Honeybee colonies

The colonies will be queen-right and contain enough bees to produce the requisite amounts of honey. The colonies can be either made as shook swarms with minimal food stores or normal, queen-right small colonies or of normal small colonies. Optionally it can be considered to remove some brood frames to reduce consumption of the nectar and to confine the queen to one brood frame. The colony will contain three to five empty frames. The colony will be kept in one brood chamber. Optionally, a super may be added in case the bees collect a volume of honey greater than that available in the storage area in the lower body.

For direct to crop spray applications the colonies should be brought in one brood chamber to the test site on the evening before the application, to avoid the collection of untreated nectar and reduce the duration of confinement

and, hence, bee stress. Applications should be timed before noon to ensure a maximum amount of hours of honey collection during the first day. For other application types application should be timed to ensure bees have foraged when residues are highest in aerial parts of the plant. In the evening prior to the application, or in the morning prior to the application, two to three empty combs should be placed in the brood body on places which were blocked with barriers. Although this measure is not in keeping with normal commercial bee-keeping practice, it will reflect the worst case, since all the honey taken afterwards will result from nectar collected from the treated plants.

After application, the bee hives should be left within the tunnels until the honey is ripe, or honey cell-closure (normally 7-14 days after introduction of the colonies in the tent), or the end of flowering, whichever is the earliest.

2.5 Duration of tunnel trials

Bee colonies will remain in the tunnels until honey cell-closure or the end of flowering until sampling is performed. If comb-closure occurs first or the water content in honey is below 20% (measured with refractometer), the residue samples should be collected and the trial ended. If comb-closure has not occurred or the water content in honey is above 20% by the time the crop has finished flowering, it will be necessary to move the colonies to remote locations (away from any crops treated with the active substance) and allow the bees to continue foraging until comb-closure occurs or the honey is mature (<20% water content) and the honey samples can be collected.

2.6 Sampling, method of analysis

Honey will be sampled when it has reached commercial maturity (comb closure or the honey water content is below 20%). Sufficient honeycombs must be collected to provide the required sample weight for analysis. For each sample, 100 g of honey will be taken, or as close as possible to this.

Honey should be removed from the sampled honeycomb by extraction of the de-capped broodless comb by each field phase.
The four replicates of the treated samples should be prepared and analysed separately. The replicates of the control can be prepared and analysed together.

To analyse honey (and the treated crop, if desired) for the relevant residue, a suitable validated analytical method should be chosen. It is therefore desirable to achieve a limit of quantification as low as possible. A value of 0.05 mg/kg per analyte is favoured.

2.7 Health effects on honeybees

The health of the colonies will be assessed prior to introduction to the tunnels and at the end of the trial when the honey has been collected.
The following parameters will be assessed:

- Strength of the colony (number of frames covered with bees),
- Presence of a healthy queen (i.e., presence of eggs or presence of queen cells),
- Visual assessment – percentage of frames containing pollen, nectar, and brood (eggs, larvae and capped cells). For these assessments, one frame of comb (both sides) will equal 100% and from this the percentages area of brood, pollen and nectar will be estimated. All frames in each colony will be assessed and the mean values for each colony will be calculated.

3 Report

A report on residues in honey should include all relevant data in a suitable format. The report for an entire residue study could, for example, be sub-divided into the following sections:

- Summary
- Objectives
- Tunnel part
- Sample preparation
- Extraction, clean-up, determination, evaluation
- Results and discussion.

3.1 Summary

This summarises the key results, the evaluation of these results and any anomalies of the study, with reference to the objective.

3.2 Objectives

The objectives section of the report again describes the aims of the study in detail and formulates the questions to be dealt with in the study.

3.3 Tunnel part

This section of the report summarises the key points documented in the log book. The documentation should include information on

- Site parameters,
- Application parameters,
- Weather data for the application and sample collection period,
- Duration of trial, incl. period prior to application,
- Health effects.

Reference should be made to the critical points of the animal trial component, and special techniques and events should be described.

3.4 Sample preparation

This section should be used to describe sampling techniques including nature, number and size of samples taken and, where appropriate, intermediate storage, as well as the production of the laboratory or analysis samples and the storage and dispatch of these.

3.5 Extraction, clean-up, determination, evaluation

This essentially describes the method used to prepare and measure the samples. This section of the report details the residue levels in honey and, where desirable, in pollen and the treated crop.

3.6 Results and discussion

This section of the report discusses and evaluates the reported measurements in the light of the questions outlined in the objectives section. The relevance of results should be discussed in relation to the proposed uses of the plant protection product, including a critical appraisal of the study and its results. In particular the following points must be addressed:

- A residue at or about the LOQ (a value of 0.05 mg/kg or lower is favoured) in control samples
- Adverse effects on health of the honey bees