



JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON METHODS OF ANALYSIS AND SAMPLING

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PROPOSED DRAFT PRINCIPLES FOR THE USE OF SAMPLING AND TESTING
IN INTERNATIONAL FOOD TRADE: EXPLANATORY NOTES AND PRACTICAL EXAMPLES
Comments at Step 3

(Comments of Australia, Canada, Costa Rica, Hungary, India, Japan, Norway, Peru, Switzerland and IDF)

AUSTRALIA

Specific Comments

Section 1 – Introduction

Australia is still concerned with footnote 1 linked to the Introduction. The 2nd sentence of this footnote is taken directly from the definition referenced for “Consignment” on page 2; and the 3rd sentence is an abbreviated sentence from that same definition. We would suggest the page 1 footnote, 2nd and 3rd sentences are removed and the next paragraph of the footnote moved to the explanatory notes under Principle 4.

Section 4 - Principle 1 Explanatory Notes, fourth and eleventh dot point

Where there is an applicable Codex guideline the explanatory note should consistently suggest compliance to that guideline and not just cite it as possible example to follow. Thus we recommend the following amendments:

- The specification of the principles concerning acceptance or rejection of a lot or consignment, **which should be done in accordance to the** ~~(e.g. GENERAL GUIDELINES ON SAMPLING (CAC/GL 50-2004))~~.
- The process for resolving disputes over analytical (test) results, **which should be done in accordance to the** ~~(for example~~ **GUIDELINES FOR SETTLING DISPUTES OVER ANALYTICAL (TEST) RESULTS** ~~(CAC/GL 70-2009).~~

Section 4 - Principle 3 - Explanatory Notes, eighth paragraph

Australia suggests deleting the term audit and modify the text for paragraph 8 i.e. ~~Auditing~~ **Prior experience, knowledge and confidence in the** of exporting country’s control system can lead to choosing a less strict sampling plan compared to the situation without prior knowledge. – The original text implied that you can only have confidence in the exporting country’s control system if you conduct an audit – which is not true. The amended text flows more logically with the paragraph below.

Section 4 - Principle 4: Explanatory notes, second paragraph

This paragraph refers to ISO documents, and in our opinion a more descriptive name of the standards is requires including the title, or where there is a series of parts - the title common to all those parts; i.e.

- ISO 2859 series of standards for: Sampling for inspection by attribute.
- ISO 3951 series of standards for: Sampling procedures for inspection by variable.
- ISO 10725: Acceptance sampling plans and procedures for the inspection of bulk materials.

Section 4 - Principle 5: Explanatory notes, last sentence

This note states “In all cases the key consideration during uncertainty estimation is the evaluation of all significant sources of uncertainty” and is presumably referring to sampling plus analytical uncertainty, which would be inappropriate under a heading of “Analytical measurement uncertainty”.

As we believe this sentence does not provide any additional information we recommend its deletion.

Principle 6 – Explanatory Notes: First dot point refers to compliance with ISO/IEC 17025:2005

As this standard is due to be reviewed and the actual CAC/GL 27-1997 refers to “ISO/IEC Guide 17025:1999”, we would suggest the year 2005 be removed, in which case the most up-to-date version automatically applies.

Principle 6, – Explanatory Notes: dot points under this principle

These dot points are actually various quality assurance guidance documents and not actually quality criteria. Thus we suggest the following amendment “The following quality **assurance guidance** should be adopted by **inspectors and/or** laboratories involved in the import and export control of foods.” Further, as compliance of testing with ISO/IEC 17025:2005 is mentioned, compliance to ISO/IEC 17020 GENERAL CRITERIA FOR THE OPERATION OF VARIOUS TYPES OF BODIES PERFORMING INSPECTION should also be considered.

Bibliography

Australia believes the Bibliography should be deleted as the references are fully cited in the text.

CANADA

General Comments:

In drafting the text for the Explanatory Notes section, the Working Group has been diligent in producing a document that is aligned with the text proposed during the 35th Session of CCMAS in CRD 19 and CRD 20. The new text integrated into the document is brief and to the point.

The Annex on Practical Examples has been drafted to include diverse and relevant examples. A variety of useful resources for sampling guidance has also been included.

Specific Comments:

Section 1 – Introduction, Paragraph 7:

If the draft text is retained, it appears to be missing the last word, “parties”. We suggest the following editorial revision:

“This document also provides explanatory notes for the principles, and practical examples in an Annex, to assist in assessing impacts of sampling and testing procedures on affected **parties**.”

The sentence is intended to introduce two elements into CAC/GL 83; explanatory notes and practical examples. As written, the two appear to be merged and could be more clearly separated to better indicate that the notes are embedded in the document and the examples are in contained in an Annex.

We suggest the following editorial revision:

To assist in assessing impacts of sampling and testing procedures on affected parties, this document also provides explanatory notes for the principles as well as practical examples in an Annex.

Section 2 – Scope, Paragraph 9:

We would suggest the following minor editorial revision:

The practical examples are presented for reference purposes, and sampling and testing ~~taken~~ **undertaken** by governments are not limited to these examples.

Principle 6: Fitness for purpose

We would suggest the following minor editorial revisions:

a. Use of an AQL of 0.1% may be inappropriate for a compositional ~~character~~ **characteristic** such as fat in whole milk powder because this is costly and difficult to achieve for the producer, and

b. Use of an AQL of 6.5% may be inappropriate for a hazardous ~~character~~ **characteristic** intended for a consumer because this does not adequately protect the consumer’s health

Bibliography:

Canada suggests that references already cited in the text may be deleted from the bibliography section.

Annex on Practical Examples:Example for Pesticide Residues in Apples for Compliance with MRL page 16

Decision:

Analytical results must be derived from one or more laboratory samples. The lot complies with a MRL (Pesticide Residues in Food and Feed, Codex Pesticides Residues in Food Online Database, FAO and WHO 2013) where the MRL is not exceeded by the analytical result(s) ~~taking into account the expanded measurement uncertainty~~. Where results for the bulk sample exceed the MRL, a decision that the lot is non-compliant must take into account: (i) the results obtained from one or more laboratory samples, as applicable; and (ii) the accuracy and precision of analysis, as indicated by the supporting quality control data.

Example for Fat Soluble Pesticide Residues in cattle carcasses for Compliance with MRL page 16

Decision:

Analytical results must be derived from one or more laboratory samples. The lot complies with a MRL (Pesticide Residues in Food and Feed, Codex Pesticides Residues in Food Online Database, FAO and WHO 2013) where the MRL is not exceeded by the analytical result(s) ~~taking into account the expanded measurement uncertainty~~. Where results for the bulk sample exceed the MRL, a decision that the lot is non-compliant must take into account: (i) the results obtained from one or more laboratory samples, as applicable; and (ii) the accuracy and precision of analysis, as indicated by the supporting quality control data.

Example for Residues of Veterinary Drugs in Packaged Fish page 17

Decision:

For purposes of control, the maximum residue limit for veterinary drugs (MRLVD) is applied to the residue concentration found in each laboratory sample taken from a lot. Lot compliance with a MRLVD achieved when the mean result for analysis of the laboratory test portions does not indicate the presence of a residue which exceeds the MRLVD ~~taking into account the expanded measurement uncertainty~~.

Canada's Rationale for the revisions:

The examples for pesticide residues draw from CAC/GL 33-1999, section 4, Criteria for Determining Compliance. The text we propose to delete does not appear to be contained in that section of the Guideline. Canada proposes these revisions so that the text used in the example is the same as the text used in section 4.3 of the Guideline. This would eliminate a discrepancy in text and the possible perception that CCMAS has made an unintended change to the Guideline. Additionally, Principle 5 and the Explanatory Notes deal more comprehensively with the treatment of measurement uncertainty. The text we propose to strikeout therefore seems unnecessary.

The example for veterinary drug residues in packaged fish draws from the CAC/GL 71-2009 section on "Results Interpretation in the Laboratory", paragraphs 24 and 25. Canada suggests striking out the text that does not appear in the Guideline for the same reasons as outlined in the revisions of the examples for pesticide residues.

COSTA RICA**In paragraph 5 of page 5 of the English document:**

- If the assessment procedure requires an estimate of lot ~~inhomogeneity~~ **homogeneity** (e.g. a standard deviation), the method that should be used to estimate it. If the ~~standard deviation~~ **homogeneity** is treated as "known", the assumed value should be scientifically based and accepted by both parties.

Justification:

It is proposed to change the word "inhomogeneity" to "homogeneity", which is the most appropriate term for referring to the uniformity characteristics of a lot. The second correction is because the term "standard deviation" is mentioned only as an example of an estimator of homogeneity, and it is therefore correct to use "homogeneity", which is the general concept.

Paragraph 1 of page 7 of the English document:

An error from document CAC/GL 50-2004 persists in its English version, where the numbering 2.3.4 was omitted for the section Random sampling procedure, which had been included in the Spanish version. The correct reference is therefore **(CAC/GL 50-2004)**, not ~~(CAC/GL 50-2004, 2.3.3)~~.

HUNGARY

Hungary would like to express her appreciation for the excellent working document prepared by the WG with the dedicated leadership of the Chair and Co-chairs. It is considered nearly ready and should be finalised during the forthcoming session of CCMAS for submission to CAC for adoption in 2015.

Specific comments/recommendations

1. The definitions of the terms listed in Section 3 should be included in the text with giving the reference to the source. It would make the understanding of the principles and explanatory notes easier, as the reader would not need to keep at hand a number of related documents.

2. Principle 5 Analytical measurement uncertainty

It should be defined what is understood under analytical measurement uncertainty as it may be interpreted differently by parties having experience in various areas.

Hungary recommends to insert a new 1st paragraph under Explanatory notes:

The analytical measurement uncertainty includes the contribution of all steps of the determination of the measurand in the sample delivered to the laboratory for testing compliance with the relevant specification. The steps of the determination procedure depend on the nature of the sample material and the mass of the sample. They may include sample size reduction, selection of portion of the commodity to which the corresponding specification refers to [for instance Portion of Commodities to which Codex Maximum Residue Limits Apply and which is Analyzed, (CAC/GL 41-1993)], homogenization of the sample material, extraction, removal of interfering materials, qualitative and quantitative determination, etc.

The rest of the explanatory notes should remain unchanged.

3. The examples given in the annex are providing a good starting point, but the annex should be open ended enabling inclusion of additional examples provided by the commodity and other committees.

INDIA

General comment

India appreciates the opportunity to comment on the proposed draft Principles. The Draft document has been drafted keeping the best interests of both the exporting and importing countries and also keeping in mind the larger interest of fair trade. Obtaining a representative sample is often the most important step in food analysis. Agreement by Member Countries on this document will require them to ensure the implementation of quality assurance measures in the testing laboratories of their Countries.

Specific comments

Principles 3: Probability of incorrect decisions

Explanatory Notes

Para 5:- The specification of acceptable..... fairness towards both the consumers and the producers.

The text may be modified as under:

The specification of acceptable..... fairness towards both the ~~consumers and the producers.~~ **exporting and importing countries.**

Rationale: to be consistent with term “exporting and importing countries” as used in the Principle 5 Explanatory Notes and also since this proposed document specifically refers to trade between two countries the term may be changed to “exporting and importing countries”.

Para 6:- Second last line-relatively lower sampling rates in cases where past records show that there is a low probability of non-compliance and higher sampling rates for other situations.

India requests the Committee to clarify on how to determine what is the lower/higher sampling rate? It should be defined somewhere in the document.

Para 7:- It may also be useful to take into account testing that has already been carried out in the exporter.

The Text may be modified as under:

It may also be useful to take into account testing that has already been carried out ~~in~~ **by** the exporter.

Rationale:- grammatical error.

Para 7:- Last line- However, non-stable or perishable foods may need special consideration.

India requests the Committee to clarify about the non-stable or perishable foods that needs special consideration as the mere statement “**However, non-stable or perishable foods may need special considerations**” is vague and needs to be elaborated.

Annex on practical examples

Table 1: Code of Examples

India suggests to include Meat/Meat products in the Analysis of Residues of Veterinary drugs. For the Analysis of Residues of Veterinary drugs, even the Meats/Meat products should be included, according to the CAC/GL71-2009. It can be labelled as M-R.

Table 2:- Example sampling plans

To update the table (Table 2: Example sampling plans) as follows, appropriately;

Examples	Criteria	Type of sampling	Sampling and Decision Reference
M-R	Residues of Veterinary Drugs in Meat/Meat products	Variables Plan sampling uncertainty not applicable	Consumer and Producer: CAC/GL71-2009: GUIDELINES FOR THE DESIGN AND IMPLEMENTATION OF NATIONAL REGULATORY FOOD SAFETY ASSURANCE PROGRAMME ASSOCIATED WITH THE USE OF VETERINARY DRUGS IN FOOD PRODUCING ANIMALS Sampling: see example F-R, The minimum quantity required for laboratory samples is 500 g (Table A I Group 030). Decision: see example F-R

India suggests, for the Analysis of Residues of Veterinary drugs, **Fats/Oil (Mammalian Fats) should be included,** according to the CAC/GL71-2009. It can be labelled as FO-R.

Table 2:- Example sampling plans

To update the table (Table 2: Example sampling plans) as follows, appropriately;

Examples	Criteria	Type of sampling	Sampling and Decision Reference
FO-R	Residues of Veterinary Drugs in Fat	Variables Plan sampling uncertainty not applicable	Consumer and Producer: CAC/GL71-2009: GUIDELINES FOR THE DESIGN AND IMPLEMENTATION OF NATIONAL REGULATORY FOOD SAFETY ASSURANCE PROGRAMME ASSOCIATED WITH THE USE OF VETERINARY DRUGS IN FOOD PRODUCING ANIMALS Sampling: see example F-R, The minimum quantity required for laboratory samples is 500 g (Table A II Group 031). Decision: see example F-R

JAPAN

Specific Comments

Paragraph 6

The sentence “These responsibilities are set out in committees’ terms of reference.” should be deleted. It is no need to refer to the responsibilities or TOR of Codex Committees’ as GL83 is not a guideline for Codex committees but for governments.

6. This document does not affect existing Codex provisions or the current way of setting those provisions. ~~These responsibilities are set out in committees’ terms of reference.~~ This document should be read in conjunction with the Guidelines for Food Import Control Systems (CAC/GL 47-

2003) and the Working Principles for Risk Analysis for Food Safety for Application by Governments (CAC/GL 62-2007).

Paragraph 7

We suggest that “to assist in assessing impacts of sampling ...” in the end of the paragraph should be deleted because the intention of appending Explanatory Notes and Practical Examples is already mentioned in the Scope, Para 9.

7. This document also provides explanatory notes for the principles, and practical examples in an Annex, ~~to assist in assessing impacts of sampling and testing procedures on affected~~.

Principle 1, 8th bullet point in the Explanatory Notes

We suggest that the examples of criteria should be retained for reference purpose of the users of GL83.

- *The specification of analytical methods including criteria of appropriateness in order to ensure equivalent measurements (e.g. applicability, limit of detection, limit of quantification, precision, recovery and trueness)*

Principle 5, first paragraph in the Explanatory Notes

We need to replace “statements” with “agreement” in the first paragraph because the second paragraph started with “This agreement ...”. The original sentence in CRD 19 of the last session of CCMAS started with the sentence: The exporting country and the importing country should reach agreement on how to take into account analytical measurement uncertainty.

We suggest that the sentence should be amended as follows:

The exporting country and the importing country should reach agreement ~~make available clear statements~~ on how the analytical measurement uncertainty is taken into account when assessing the conformity of a measurement against a legal limit.

Principle 6, first paragraph in the Explanatory Notes

CCMAS already used the term “probabilities of wrongly accepting or wrongly rejecting a lot or consignment” throughout the main body of GL83 instead of the term “consumers’ risk and/or producers’ risk” as the term “risk” has been always used in Codex documents to mean “health risk”, and to avoid confusion and misunderstanding. For this reason, the term “risk” shall not be used in Explanatory Notes and Practical Examples. We propose the following amendment:

In terms of developing a sampling plan, the number of samples and decision criterion are determined by the ~~risks~~ probabilities of wrongly accepting or wrongly rejecting a lot or consignment. In this context, fitness for purpose means that the sampling plan is commensurate with the ~~risks~~ potential loss posed to consumers from inappropriate acceptance of poor quality product and the ~~risks~~ potential loss posed to producers from inappropriate rejection of good quality product.

Practical Examples

We suggest that the sampling uncertainty applicability for each example in the column of “Type of Sampling Plan” in Table 2 should be removed because there is no reference to this issue in the main body of the Principle or in the Explanatory Notes.

Japan is of the opinion that further discussion is needed for Practical Examples as they are not yet substantially user friendly.

NORWAY

General comments

It was the impression of the Norwegian delegation that the explanatory notes elaborated on the CCMAS session 2014 (and presented in CRD 19) only could have minor changes (see REP 14/MAS para 54). We have read the explanatory notes in CX/MAS 15/36/4 (in gray), but it would have been an advantage to have an indication on what changes were made – if any- compared to CRD 19 (MAS 14).

The reference list is not exhaustive. CAC/GL 62-2007 and CAC/GL 72-2009 are referred to in the main text and should be included in the bibliography.

General comments to the annex on practical examples. The reference to CAC/GL 50 2004) is not included. Unless the CAC/GL 50 is outdated (and - in that case it should be revised) this reference should be included. The ISO standards on sampling are complicated and not easy to read for the target audience (e.g. food inspectors and others in the food agencies with the responsibility to making sampling plans – but with

no to little knowledge of statistics). In addition more than one standard is needed. The CAC/GL 50 is one document – and much easier to understand. Therefore a reference to this document should be made when appropriate, in addition to the references to the ISO standards.

Specific comments to the table 2 in the Annex.

Example FV-Q

- Isolated lot - after the ISO standard: add CAC/GL 50 section 3.1
- Isolated lot - Procedure A and Procedure B: Limiting quality should be (LQ) not (LO)
- Continuous series of lots - after the ISO standard: add CAC/GL 50 section 4.2 (table 10) and NMKL Procedure No 12, Annex – section 4 (table 5)

Example MI-Q

- ISO 3951-1:2008: this standard has been revised in 2013
- For the “s” method – add: CAC/GL 50 section 4.3 (table 14) and NMKL Procedure No 12, Annex – section 5 (table 6)
- For the sigma method – add: CAC GL 50 section 4.3 (table 17) and NMKL Procedure No 12, Annex – section 5 (table 7)

Example M-FH

- Add CAC/GL 50 section 3.2 and NMKL Procedure No 12, Annex – section 3 (tables 1 and 2)

Example F-FH

- Add CAC/GL 50 section 3.2 and NMKL Procedure No 12, Annex – section 3 (tables 3 and 4)

Example F-Q

For the recommended sampling plan: see Table 1 Sampling plans for prepackages in the document “OIML R 87 (Edition 2004): Quantity of product in prepackages”

Decision: for **fixed Risk Type (according to fixed AQL given in OIML R 87)** the lot is accepted if all.....

We cannot see that OIML R 87 does mention the option to choose certain sampling plans taking into consideration different AQL values. We therefore propose to add **given in OIML R 87** in the bold sentence above.

Other comments/suggestions

The OIML R 87 requires that a large number of samples are taken, at random, this is expensive and time consuming – but the rules of decision are quite specific and clear.

e.g. if using sampling plans as described by the sampling of “Variable sampling plans with unknown standard deviation (s) according to ISO 3951-1:2013, CAC/GL 50 section 4.3 (table 14) and NMKL Procedure No 12, Annex – section 5 (table 6)” – then less samples would be necessary and the possibility to reduce/increase the inspection level would be acceptable based on previous data (from same producer, same product). However, these sampling plans base the lot acceptance/rejection on the AQL and the s value. A pragmatic approach would be to use the following decision rules:

- acceptance number as described in the sampling plans
- no single item with a weight $w_n \leq (w_d - 2s)$ (w_d = declared value)
- criteria for the average weight difference between the declared weight and the weight of the samples taken

$$\bar{w}(\delta) = \frac{\sum_{i=1}^{i=n} |w_d - w_n|}{n} \geq w_d - s$$

Example C-C

- Add CAC/GL 50 section 5

Example MV-C

- Add CAC/GL 50 section 5

PERU

1. On page 5 it says "Acceptable Quality Level (AQL)", which should be "Acceptable Quality Limit (AQL)", as stated in the new version of ISO 2859-1:1999 Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot by lot inspection
2. Reference is made to the following standard ISO 3534, Statistics – Vocabulary and Symbols, which mentions "acceptance quality level", whereas now it is known as "acceptable quality limit"
3. Give examples where the guidelines would not be applicable for quality control of the end-product (including which, if any, is specific).
4. On page 6, where it says "The Guidelines are applicable for control at reception, but may not be applicable for quality control of end-products by manufacturers", it should be explained or stated clearly to which guidelines it is referring.
5. On page 8, Principle 6, it is suggested that Inspection Agencies also be considered when taking samples of lots.
6. Update the standards, such as for example: ISO 2859-1:1999

SWITZERLAND

General Comments

Switzerland believe that the explanatory notes have been improved and rendered easier to understand by the addition of practical examples and are now almost ready to be published with the following minor editorial changes.

Specific Comments

1. On page 2, the bullets points starting after "provision" should be shifted to the right:
 - Develop examples, including case-by-case advice of consideration of sampling uncertainty (definition), that fulfil the following criteria: matrix combinations vs measurand / provision:
 - Fruits/vegetables, fats/oils, fish/fishery products, milk/milk products, meat/meat products, natural mineral waters, cereals
 - Sensory inspection, food additives, food hygiene, pesticide residues, contaminants, residues of veterinary drugs
 - Packages/bulk material/foodstuff for consumption
2. Page 9, table 2: LO has to be replaced by LQ
3. Page 15, table 2: Symbols have been converted into □

International Dairy Federation (IDF)

General comment

The term "contaminants" is used several times in the description as a category or family of analytes different from Pesticides and Veterinary drug residues. This is confusing for the reader because pesticides and drug residues are both contaminants and then it is not clear what is left or included in the family of contaminants.

Specific comments

Section 1

Para 5 - end-point: sampling and testing is only one of methods, and programmes that ensure good food safety and quality (such as HACCP) are critical precursors.

Section 4

Appropriateness of methods - it is very difficult to agree on what are the acceptable risks of wrongly accepting /rejecting product when using sampling methods, but it should be noted that these risks (of incorrect acceptance or rejection of a lot) are different to e.g. food safety risks (the chance that people consuming the foodstuffs might become ill).

IDF also notes that repeated re-assessment has the potential to change the risks of acceptance or rejection of a parcel.

Re-assessment of a failed lot using a test method with a large test method error increases the chance that the re-assessment will pass the lot; conversely re-assessment of a parcel of product at multiple stages of the supply chain increases the risk of rejection.

The example used of AQL of 2.5-6.5% for compositional parameters (page 5) might be seen as implying an appropriate AQL is in that range. It should be highlighted that the ideal model is that the producer and consumer agree on a suitable plan for use by the consumer.

The guidelines point out that consideration of “individual lots or lots forming a continuing series” needs to be made – we note that in many industries (including dairy) the manufacturing process is a series of unit operations of which packing into either final consumer packs or into commodity packs of convenient size is the last stage of processing before being sold.

This means:

- There is a need to consider the possibility that consumer packs with distinctly different labelling appearance are nevertheless part of a continuing series of lots (i.e. the final form of the product might disguise the fact that it actually comes from continuous series of lots.)
- The tables typically used in standards including ISO 3951 are non-applicable for commodity products packaged in units/containers of convenient size as the number of samples to be used is indexed by the number of units in a lot.

Practical Examples

Regarding the example MI-Q (page 12-13), in our experience a modern dairy processing plant typically has very good process control meaning that often the measurement error is not negligible - often the measurement error standard deviation is more than 50% of the observed process standard deviation.

Section FV-Q: “LQ” is incorrectly shown as “LO”

Section MI-Q:

- It is not clear whether the requirement that “lots have not been previously screened” is required or relevant or could be carried out effectively, given milk products are a bulk material.
- The current CAC 50 Guidelines address only the inspection of bulk materials with respect to an average level, not in relation to a minimum or maximum level.
- For bulk materials, the definition of lot size is at best ambiguous because of the possibility that the same product might be packed in packs of different sizes, as mentioned above.
- In addition, as also noted above, fat in milk products is not an example where measurement error is negligible in relation to process variation.

Section FV-P, FV-C1

- Note that the inspection relates to compliance of the average level, as in Section C-C.
- There does not seem any difference in principle between the examples FV-P and FV-C1. Is it necessary to include both of them?

Section F-R

- The usual requirement is that sampling is conducted at random throughout the lot under inspection, although often systematic sampling is employed. This would seem preferable to the current text “statistically based, non-biased (unbiased?)”.