
This is the 3rd of 4 training modules developed in the Energy Efficiency Compliant Products 2014 (EEPLIANT) programme.

EEPLIANT is a programme of coordinated activities being undertaken by market surveillance authorities across the EU.

Much more detail on EEPLIANT is available on www.eepliant.eu

The materials covered in the 4 training modules are based on the document Best Practice Guidelines. Users of these training materials need to download a copy of these from http://eepliant.eu/index.php/knowledge-base in order to maximise the benefit from using this and training modules A, B, & D.

The Project is funded by the European Union

# Overview of this Module

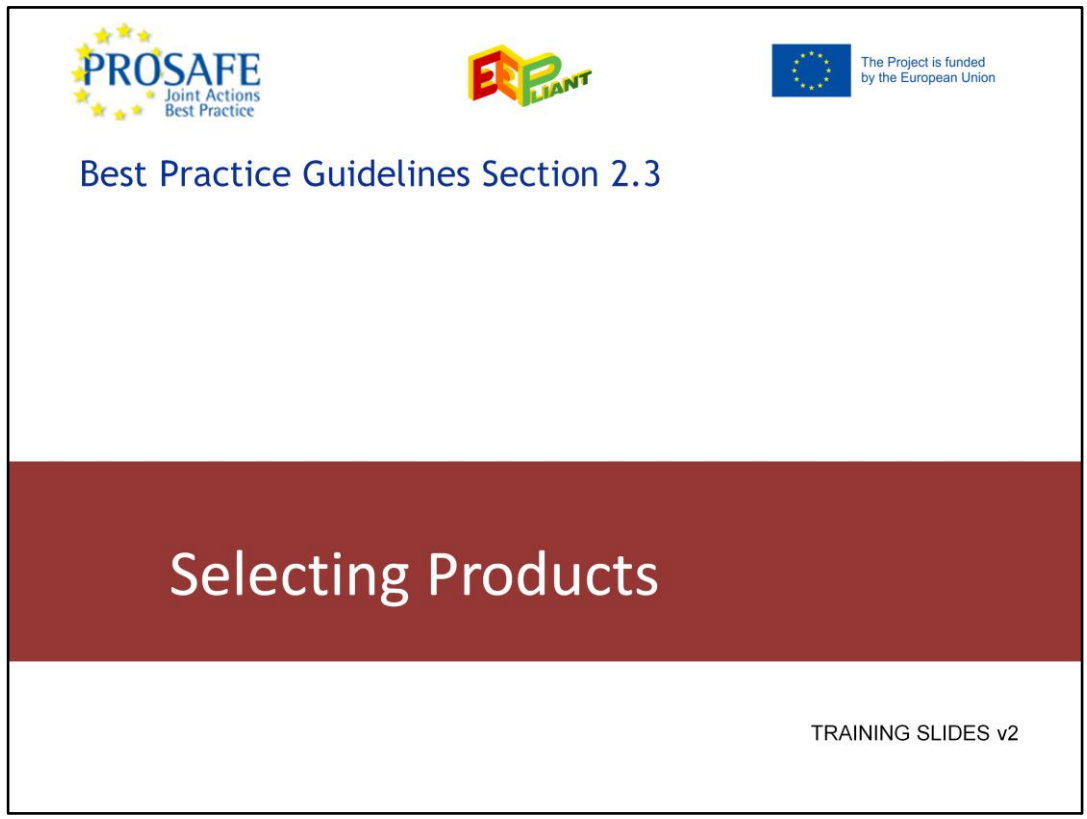
- Selecting Products for surveillance
  - Sampling techniques
- Identifying product numbers and models
  - Overcoming issues with equivalent models
- Document inspection and procedure
  - Requirements
  - Example protocol

Discussion

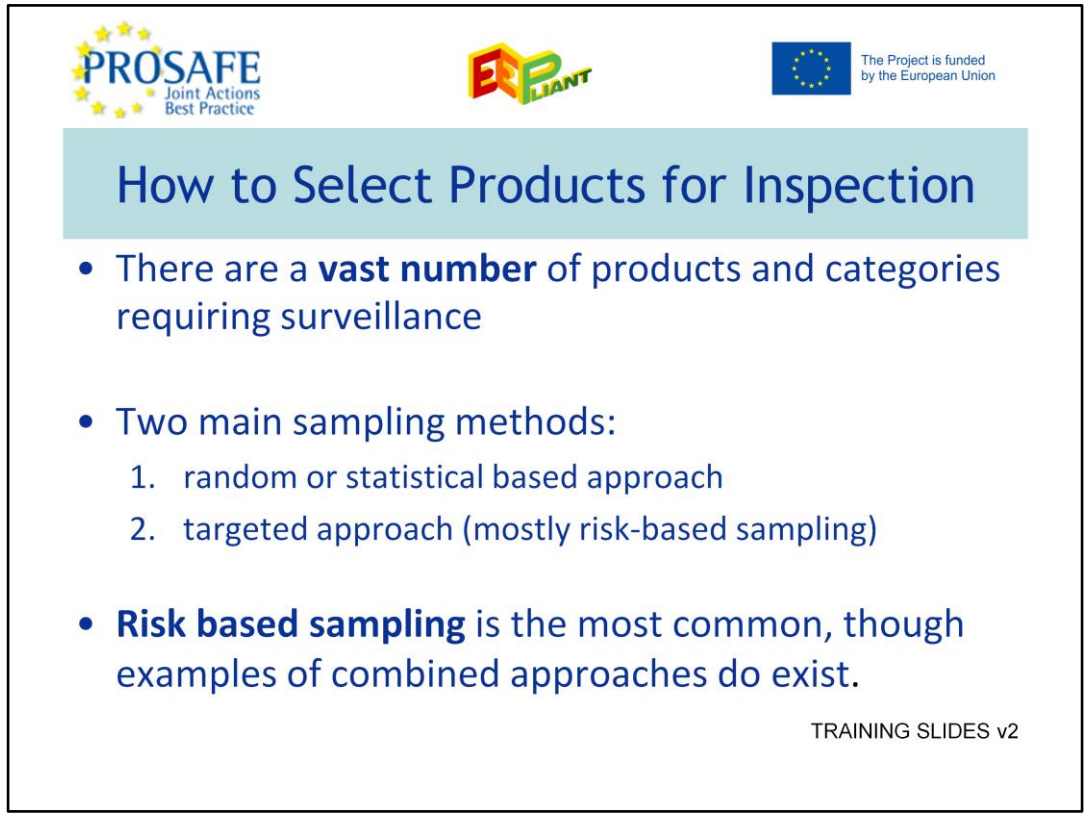
- Testing products and using laboratories

Discussion

TRAINING SLIDES v2

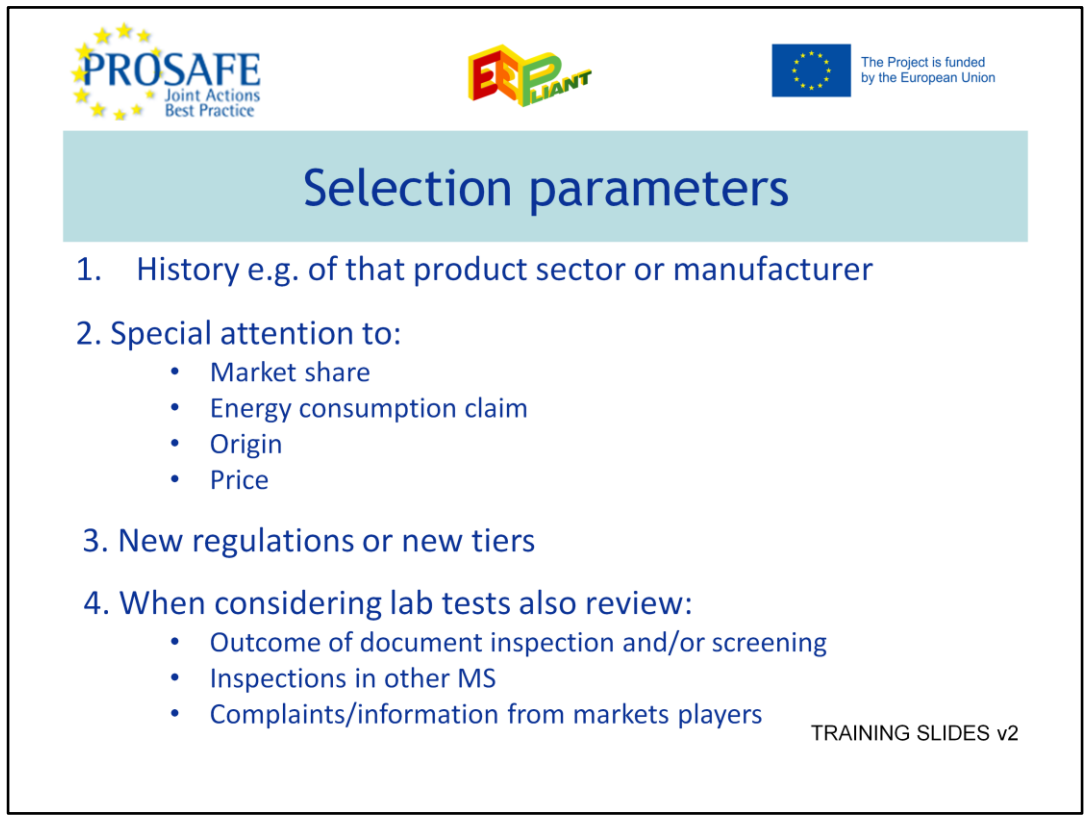



The following group of slides is covered in detail in Section 2.3 of the Best Practice Guidelines

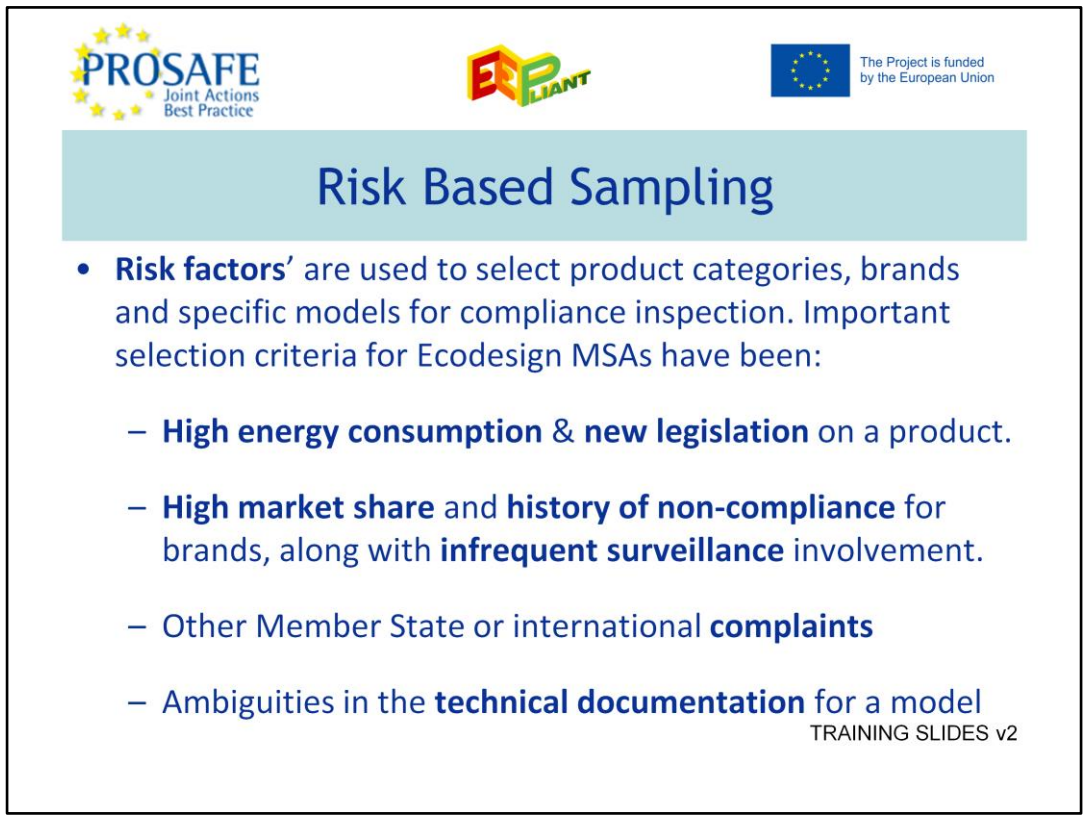



Ecodesign and energy labelling MSAs have to deal with a wide range of product categories and brands and models. Therefore, it is necessary for the MSAs to carefully select products to be inspected. There are different techniques to use when selecting products. These have different benefits and effectiveness, depending on the specific objective of the inspections.

Risk-based sampling is a selection approach for products, brands and/or models based on a set of factors related to a perceived increased risk of failing the compliance requirements. In general, it is more common to select products according to a set of criteria rather than choose a random sample for testing – especially where resources e.g. budgets for testing, are constrained.




The selection criteria listed on this slide have been found to be frequently used by Ecodesign MSAs (and are expected to be equally applicable to energy labelling).

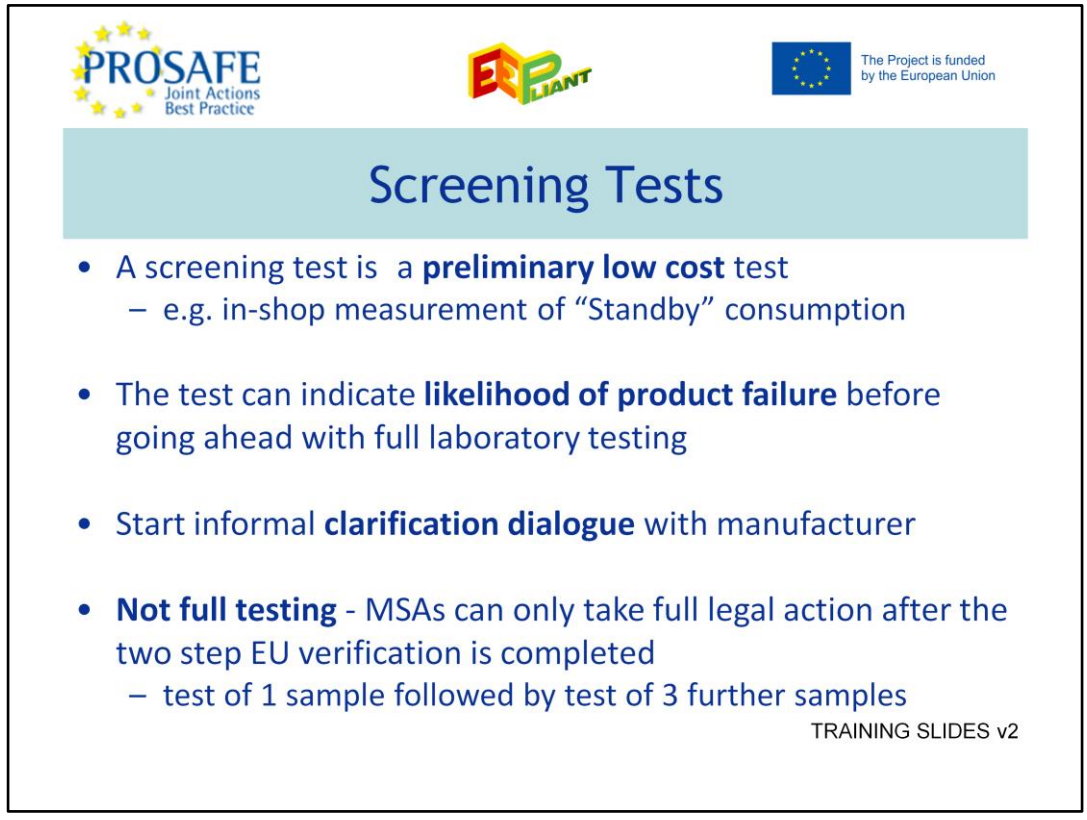



When it comes to brand and model selection, the MSAs that worked together in the ECOPLIANT programme considered the following criteria to be of most importance:

- Brand with a history of non-compliance
- Brand involved in international complaints
- Brand with a high market share
- Brand in low price segment of the market.

And for models…

- Model highlighted by other Member State complaints
- Model highlighted by intelligence or complaints from consumer groups and/or individuals
- Model for which the technical documentation indicates possible risks for technical non-compliance
- Model highlighted from findings of other organisations i.e. environmental NGOs, EU projects, etc.
- Model with high market share, new technology, smaller size, unusual design features




A working definition for *screening tests* based on that used previously in the ECOPLIANT project is: "preliminary low cost test, used to assess the likelihood that a model will fail full compliance testing, before deciding whether to proceed with the full compliance testing in appropriately skilled/accredited laboratories. Screening tests can be carried out in the field or by MSA personnel, rather than in a sub-contracted laboratory where all relevant parameters could be controlled".


These RECOMMENDATIONS are those given at the end of Section 2.3 of the Best Practice Guidelines. They draw attention to the key topics that MSAs need to consider when developing their product sampling strategies.

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# Recommendations

**Sampling methods**

- *Random and targeted product selection can be successfully combined with a market share approach.*
- *Product documentation inspection can be used as a product targeting technique prior to a lab test.*
- *Complaints or reports about possible non-compliant products from outside parties can be an important targeting method.*
- *Screening tests can also be a tool for the selection of products that have a higher probability of being non-compliant.*

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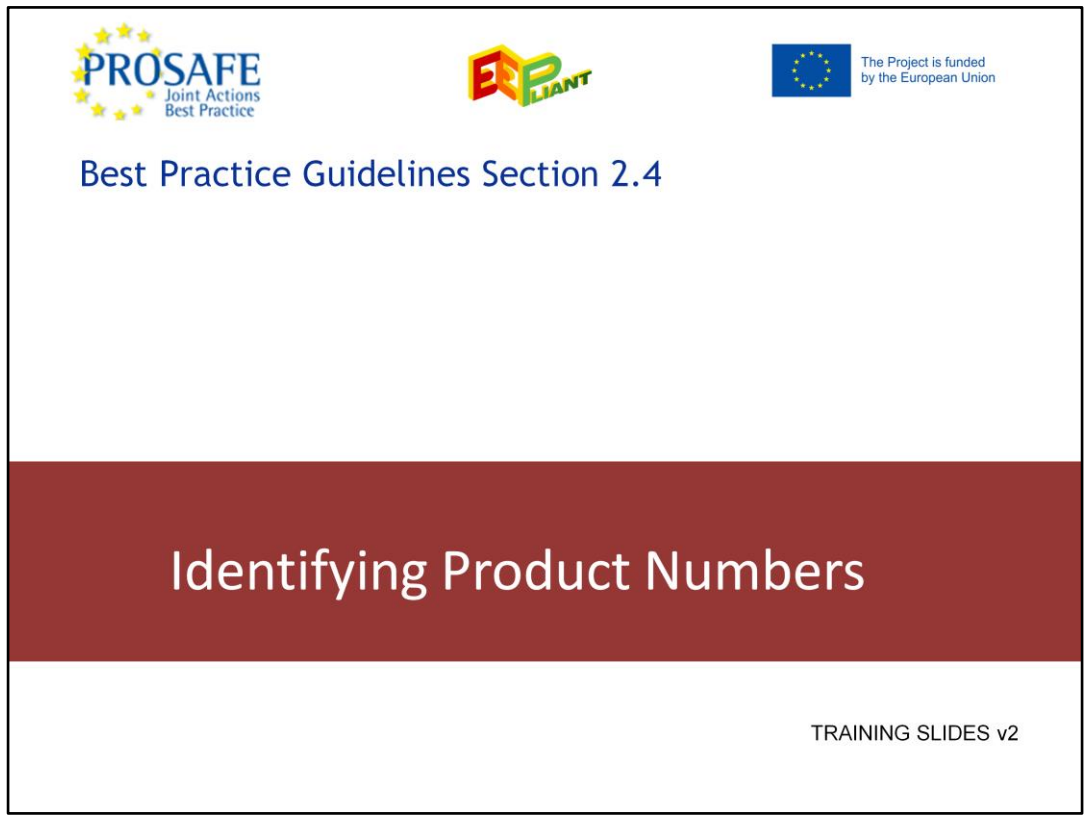
# Recommendations

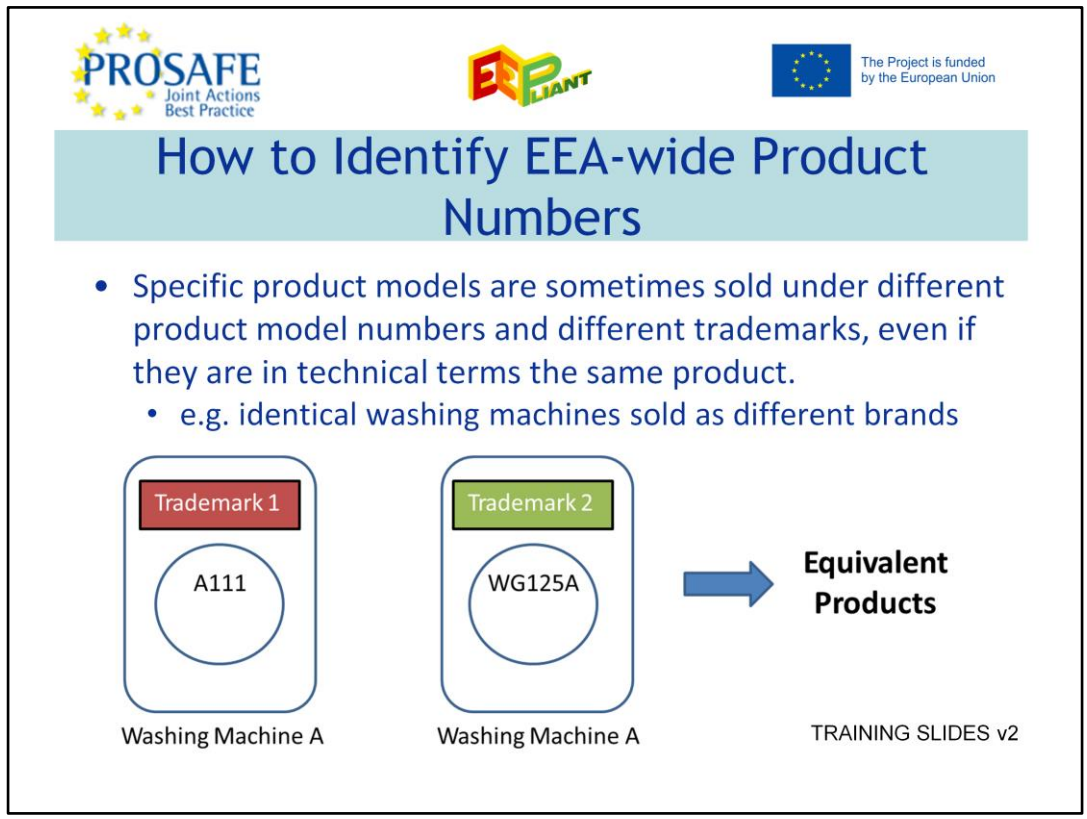
**Avoiding Misrepresentation**

- *The specific samples selected for testing need to be randomly chosen and collected from a store. They should be representative of what is being supplied to the market.*

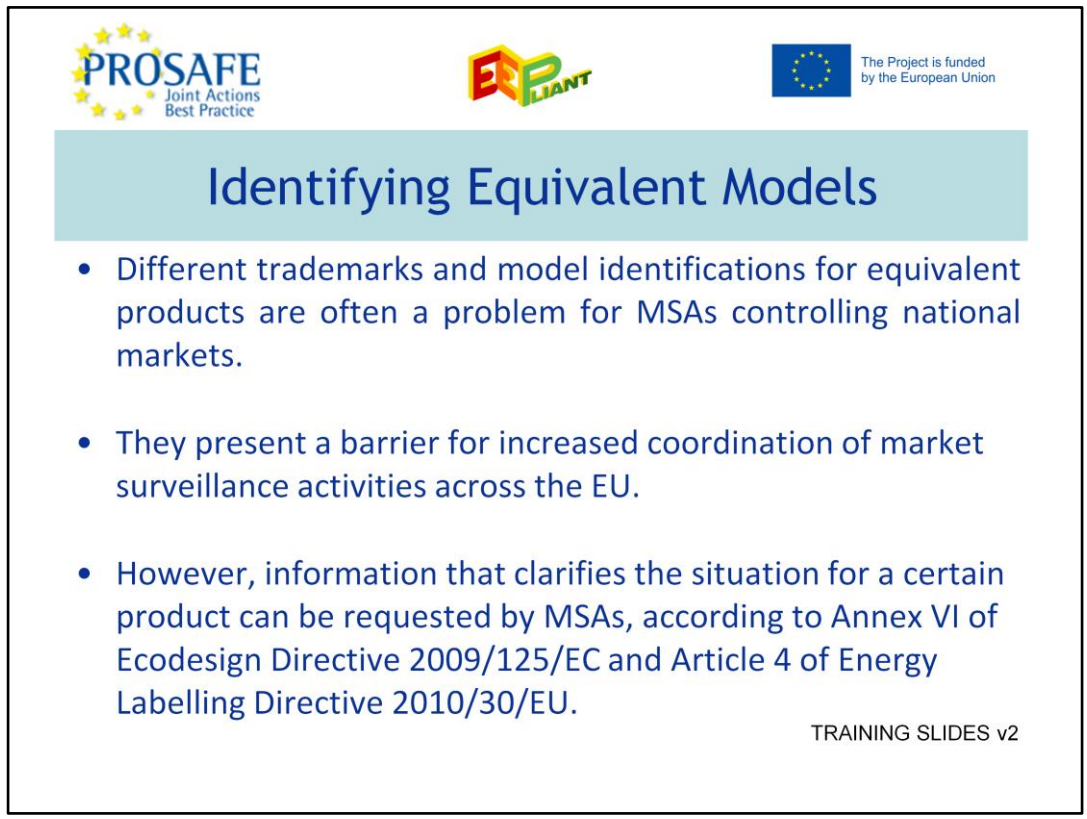
- *Thus if samples are obtained directly from the producer, MSA must see to that the samples chosen are indeed randomly selected and not a "premium" unit.*




The following group of slides is covered in detail in Section 2.4 of the Best Practice Guidelines



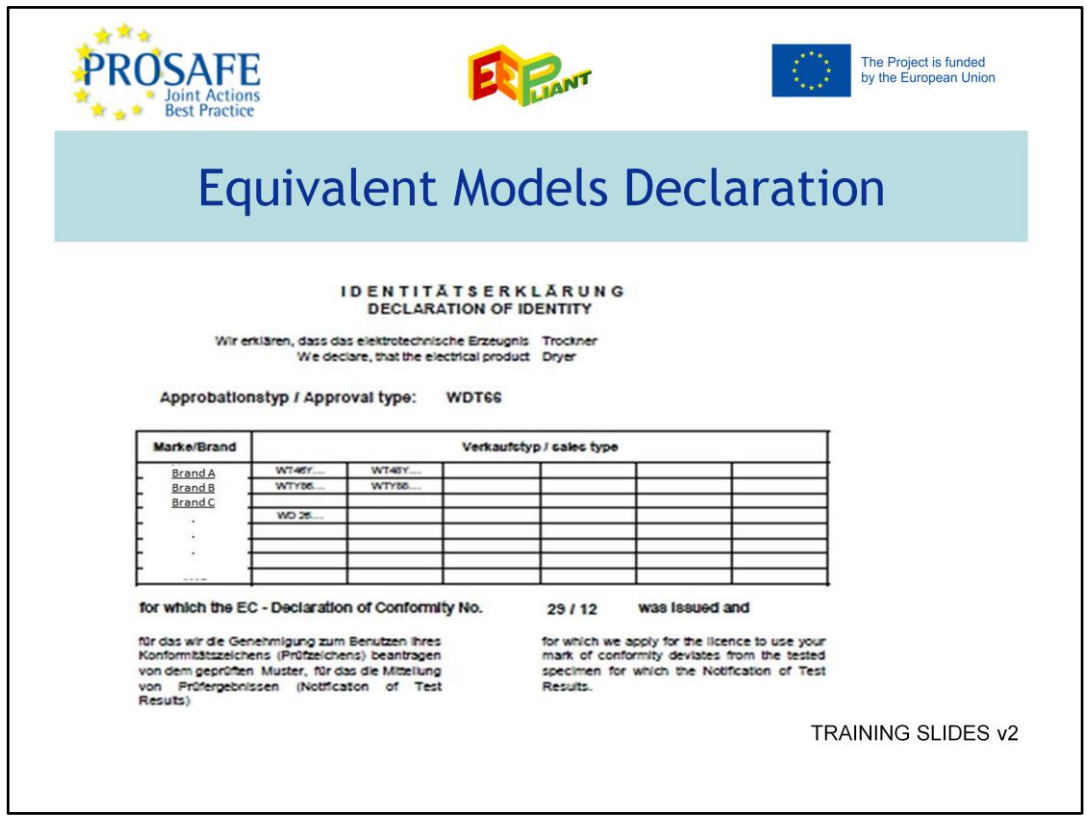

Manufacturers' use of different trademarks and different model identification for equivalent products is a substantial barrier for increased coordination of market surveillance activities across the EU. The proposed EU Product Registration Database, if adopted, would be likely to remove this challenging aspect for the work of the MSA.




As noted in the slide, the respective Directives place a clear requirements in this respect on “the manufacturer or its authorised representative”

- The Ecodesign Directive 2009/125/EC requires “a description of the model sufficient for its unambiguous identification”

- The Energy Labelling Directive 2010/30/EU says “where values are used for similar models, the references allowing identification of those models.”




A case study example of how one MSA sends a template for the manufacturer to complete in order to identify the equivalent models


These RECOMMENDATIONS are those given at the end of Section 2.4 of the Best Practice Guidelines. They provide guidance on the key requirements for model identification that manufacturers are required to supply if requested by MSAs.

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# Recommendations

- *In order to identify the equivalent models and models whose technical documentation is derived from the same "basic model", the following documents can be requested:*
  - *Identity declaration. To establish the appliances covered by the same technical file (equivalent models) and/or those derived by calculation from the same "basic model".*
  - *Test reports. To identify the basic model.*
  - *Calculations. To justify the changes, if any, in the nominal values of some models with respect to the test report of the basic model.*


The following group of slides is covered in detail in Sections 2.5 & 2.6 of the Best Practice Guidelines

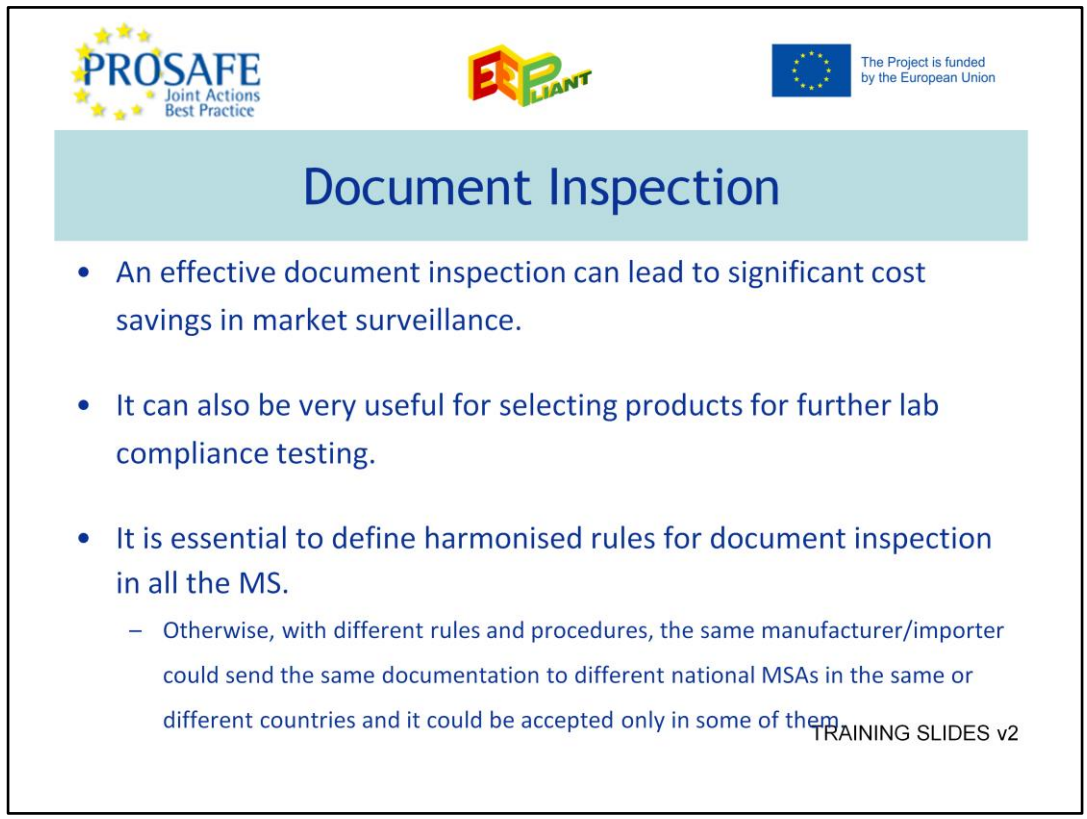

Most of the requirements can be checked by a visual examination of the information displayed on products at the point of sale or in catalogues, internet web pages and advertising materials.

MSA staff will need to travel in order to inspect products at the point of sale. However, as there can often be a range of products available for inspection at a single location, then this form of market surveillance can be a cost effective activity.


These RECOMMENDATIONS are those given at the end of Section 2.5 of the Best Practice Guidelines.


Products regulated under the Ecodesign Directive 2009/125/EC and the Energy labelling Directive 2010/30/EU need to have a technical file, consisting of documents relating to the conformity assessment that has been carried out by the manufacturer, making it possible for an assessment of the conformity of the product with the requirements of the directive and the relevant product specific regulation.

The technical documentation file consists of a number of documents, depending on the type of product. Requirements on the content of the technical documentation can be found in both Directives and in the product specific implementing regulations.




Document inspection is one of the most cost effective procedures for MSAs to use. Costs for document inspection are much lower than the costs for testing samples in laboratories - see next Slide for more details on costs. See later slides and the Best Practice Guide for some case studies for how some MSAs undertake document inspections.

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# Cost Comparison: Denmark

**Costs per inspection of technical documentation compared to the costs per laboratory testing…**

- The costs for inspection of technical documentation typically amounts to about 400 – 600 €
- The costs for laboratory testing vary considerably from 700 € up to 4,000 € - excl. the administration cost in this respect

| Products | Costs for inspection of technical documentation as a percentage of the costs for laboratory testing | Remarks on test costs |
|---|---|---|
| Consumer electronics (TV, standby, external power supply) | 25 – 30 % | Relatively low test costs. |
| Household washing machines and dishwasher | < 10 % | High test costs |
| Household refrigerators and freezers and motors | 10 – 20 % | Medium test costs |
| Household driers and ovens | 20 – 25 % | Medium test costs |
| Air conditioners | < 10 % | High test costs |

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## Document Inspection

- Before starting a document inspection, the minimum content of the documentation and the rated and measured values to be provided according to the relevant implementing regulation(s) need to be clarified.

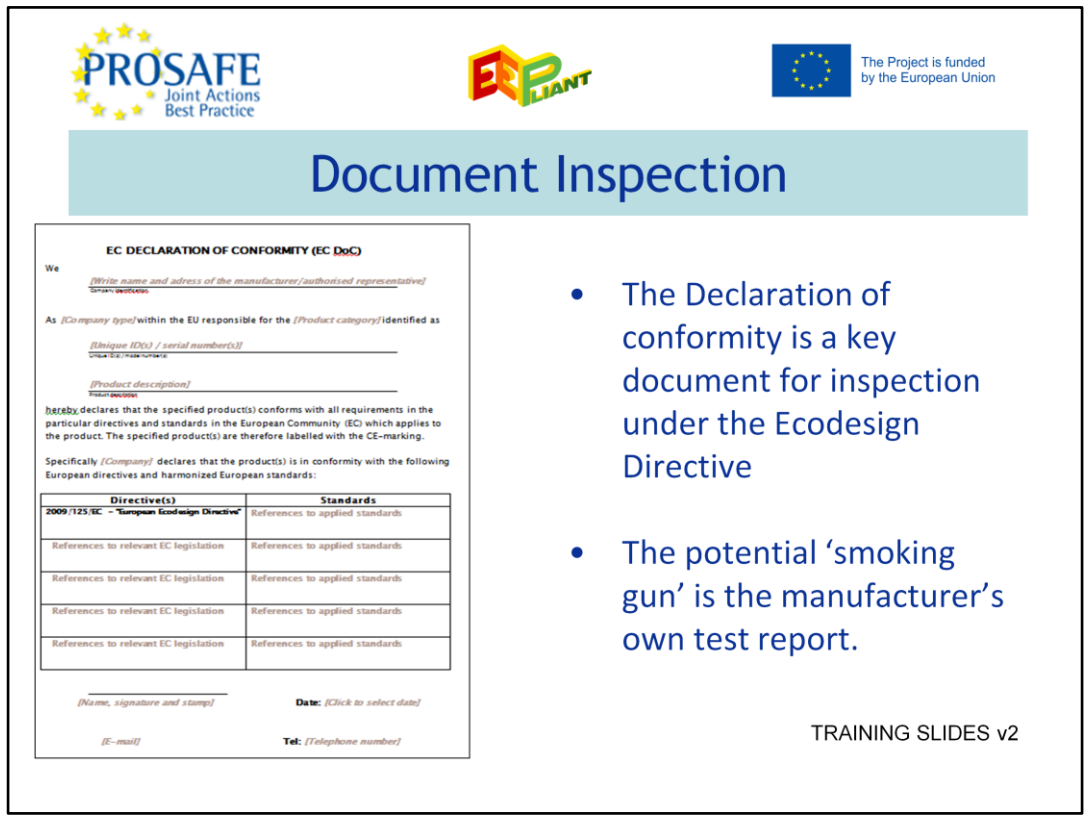
Flickr: Robert Couse-Baker

TRAINING SLIDES v2

Further guidance on the process of document inspection is provided in the following slides.

The starting point is to have copies of the relevant implementing regulation(s). All of these, for both the Ecodesign and Energy Labelling Directives, can be downloaded at no cost from

http://ec.europa.eu/growth/industry/sustainability/ecodesign/index_en.htm




The respective Directives list the documents that the manufacturer/supplier needs to provide if requested by a MSA. Failure to provide the correct documentation is, in itself, a non-compliance.

The test report is likely to require the closest technical scrutiny, since this is where the manufacturer demonstrates how they measured the performance of the product.

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# Document Inspection

- The technical documentation file should include a list of all equivalent models of all the appliances covered by the same technical file (identity declaration). This should include all the appliances where the same basic model is used to derive compliance by calculation or interpolation.

- It is necessary to check that the manufacturer has not used the measurement tolerances prescribed in the regulations to achieve a more favourable score. (These tolerances have been prescribed for use by MSAs only.)

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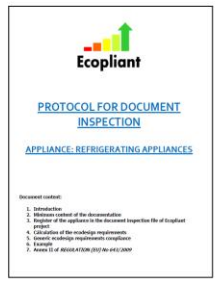
# Inspection Protocol

Two, perhaps three, options are available:

a) National data logging scheme (perhaps using MSExcel or similar)

b) ICSMS

?) Reporting via ECO/EEPLIANT database


Ecopliant

PROTOCOL FOR DOCUMENT INSPECTION

APPLIANCE: REFRIGERATING APPLIANCES

TRAINING SLIDES v2

Each of these three possible options is discussed in more detail in the following slides

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# Document Inspection: Excel Protocol (Denmark)

Kontrolskema_Opvaskemaskiner.xlsx

| | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Dokumentkontrol opvaskemaskiner, Journalnr 1073 | | | | | | | | | | | | | | |
| 2 | | Produktoplysninger | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | |
| 4 | | Udtagne produkter | | Kun skrive i orange felter | | | | | | | | | | | | |
| 5 | Journalnr. | Producent | Modelbetegnelse | Kuvert antal | KWh N.prog. | Liter N.prog. | Minutter N.prog. | AEc kWh/år | AWc liter/år | EEI beregnet | E-klasse oplyst | E-klasse beregnet | Tørre-evne | Lyd dB(A) | Bredde | Modeltype |
| 6 | | Opvaskemaskiner | | | | | | | | | | | | | | |
| 7 | 1073-01 | Producer (censored) | Model | 15 | | | | 239,00 | 3.080 | 49,5 | A+++ | | A | | | Indbyg |
| 8 | 1073-02 | | | 12 | | | | 257,00 | 2.800 | 55,6 | A++ | | A | | | Indbyg |
| 9 | 1073-03 | | | 14 | | | | 266,00 | 3.640 | 55,9 | A++ | | A | | | Indbyg |
| 10 | 1073-04 | | | 12 | | | | 258,00 | 2.800 | 55,8 | A++ | | A | | | Indbyg |
| 11 | 1073-05 | | | 14 | | | | 237,00 | 2.716 | 49,8 | A+++ | | A | | | Indbyg |
| 12 | 1073-06 | | | 13 | | | | 262,00 | 3.024 | 55,9 | A++ | | A | | | Indbyg |
| 13 | 1073-07 | | | 13 | | | | 194,00 | 1.960 | 41,4 | A+++ | | A | | | Indbyg |
| 14 | 1073-08 | | | 13 | | | | 230,00 | 2.380 | 49,0 | A+++ | | A | | | Indbyg |
| 15 | 1073-09 | | | 12 | | | | 266,00 | 3.080 | 57,6 | A++ | A+ | A | | | Indbyg |
| 16 | 1073-10 | | | 14 | | | | 263,00 | 3.080 | 55,3 | A++ | | A | | | Indbyg |
| 17 | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | |

Produktoplysninger | CE-erklæring | Teknisk dokumentation | Oplysningsskema

Product information from manufacturer

TRAINING SLIDES v2

This and the next slide show how a MSA constructs their own Excel spread sheet on which to collect the results of their document inspections. The energy efficiency measurements of most products is derived through calculations and the formulae for these can be embedded into the spreadsheet, making it very convenient to use once it has been set up.

However, it is difficult for different MSAs to have access to such files being held by individual MSAs, so this approach may not be ideal for collaborative projects.

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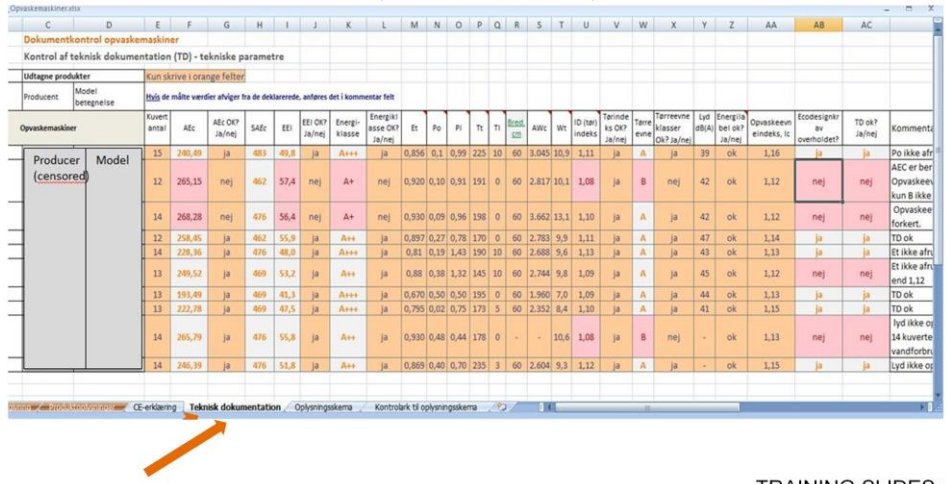
# Document Inspection: Excel protocol (Denmark)



Dokumentkontrol opvaskemaskiner

Kontrol af teknisk dokumentation (TD) - tekniske parametre

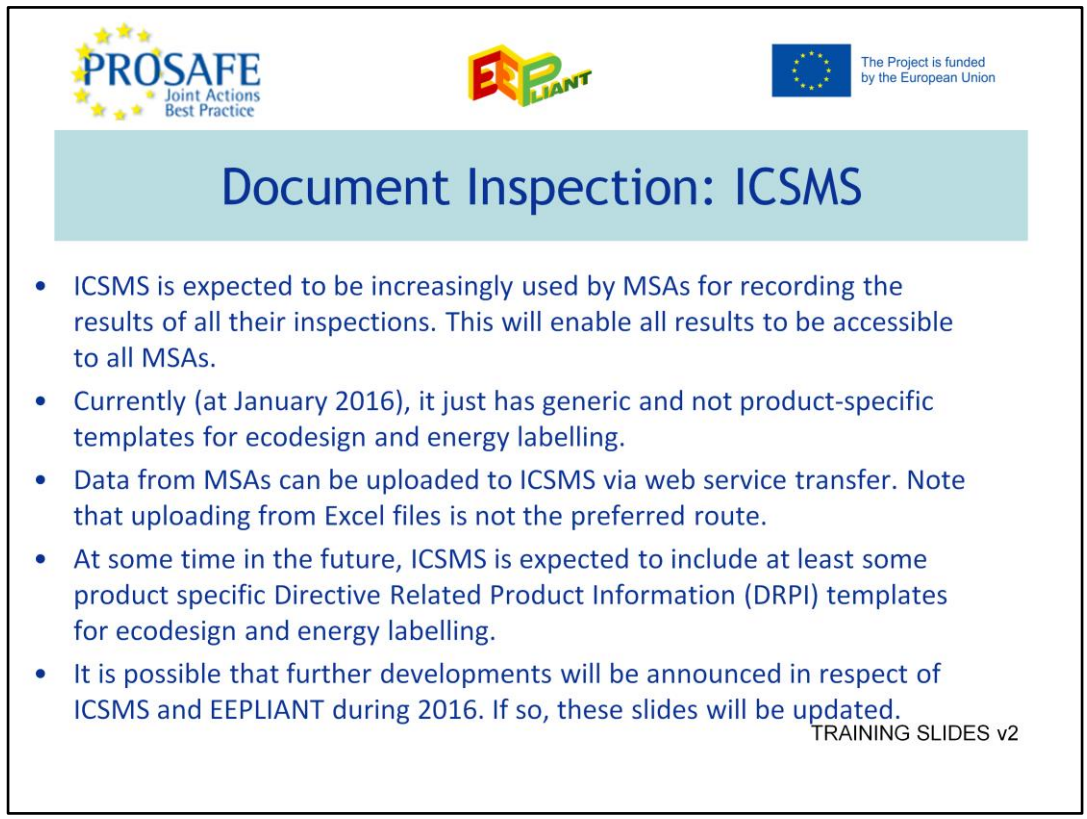
| Udtagne produkter | Kun skrive i orange felter |
|---|---|
| Producent / Model betegnelse | Hvis de målte værdier afviger fra de deklarerede, anføres det i kommentar felt |

| Opvaskemaskiner | Kuvert antal | AEc | AEc OK? Ja/nej | SAEc | EEI | EEI OK? Ja/nej | Energi-klasse | Energiklasse OK? Ja/nej | Et | Po | Pl | Tt | Tl | Rpmt. rpm | AWc | Wt | ID (tør) indeks | Tørindeks OK? Ja/nej | Tørre evne | Tørreevne klasser Ok? Ja/nej | Lyd dB(A) | Energiklabel ok? Ja/nej | Opvaskeevn eindeks, Ic | Ecodesignkr av overholdet? | TD ok? Ja/nej | Kommenta |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Producer (censored) / Model | 15 | 240,49 | ja | 483 | 49,8 | ja | A+++ | ja | 0,856 | 0,1 | 0,99 | 225 | 10 | 60 | 3.045 | 10,9 | 1,11 | ja | A | ja | 39 | ok | 1,16 | ja | ja | Po ikke afr |
| | 12 | 265,15 | nej | 462 | 57,4 | nej | A+ | nej | 0,920 | 0,10 | 0,91 | 191 | 0 | 60 | 2.817 | 10,1 | 1,08 | ja | B | nej | 42 | ok | 1,12 | nej | nej | AEC er ber Opvaskeev kun B ikke |
| | 14 | 268,28 | nej | 476 | 56,4 | nej | A+ | nej | 0,930 | 0,09 | 0,96 | 198 | 0 | 60 | 3.662 | 13,1 | 1,10 | ja | A | ja | 42 | ok | 1,12 | nej | nej | Opvaskee forkert. |
| | 12 | 258,45 | ja | 462 | 55,9 | ja | A++ | ja | 0,897 | 0,27 | 0,78 | 170 | 0 | 60 | 2.783 | 9,9 | 1,11 | ja | A | ja | 47 | ok | 1,14 | ja | ja | TD ok |
| | 14 | 228,36 | ja | 476 | 48,0 | ja | A+++ | ja | 0,81 | 0,19 | 1,43 | 190 | 10 | 60 | 2.688 | 9,6 | 1,13 | ja | A | ja | 43 | ok | 1,13 | ja | ja | Et ikke afn |
| | 13 | 249,52 | ja | 469 | 53,2 | ja | A++ | ja | 0,88 | 0,38 | 1,32 | 145 | 10 | 60 | 2.744 | 9,8 | 1,09 | ja | A | ja | 45 | ok | 1,12 | nej | nej | Et ikke afn end 1,12 |
| | 13 | 193,49 | ja | 469 | 41,3 | ja | A+++ | ja | 0,670 | 0,50 | 0,50 | 195 | 0 | 60 | 1.960 | 7,0 | 1,09 | ja | A | ja | 44 | ok | 1,13 | ja | ja | TD ok |
| | 13 | 222,78 | ja | 469 | 47,5 | ja | A+++ | ja | 0,795 | 0,02 | 0,75 | 173 | 5 | 60 | 2.352 | 8,4 | 1,10 | ja | A | ja | 41 | ok | 1,15 | ja | ja | TD ok |
| | 14 | 265,79 | ja | 476 | 55,8 | ja | A++ | ja | 0,930 | 0,48 | 0,44 | 178 | 0 | - | - | 10,6 | 1,08 | ja | B | nej | - | ok | 1,13 | nej | nej | lyd ikke o 14 kuverte vandforbr |
| | 14 | 246,39 | ja | 476 | 51,8 | ja | A++ | ja | 0,869 | 0,40 | 0,70 | 235 | 3 | 60 | 2.604 | 9,3 | 1,12 | ja | A | ja | - | ok | 1,15 | ja | ja | Lyd ikke o |

CE-erklæring | Teknisk dokumentation | Oplysningsskema | Kontrolark til oplysningsskema

**Technical documentation check**

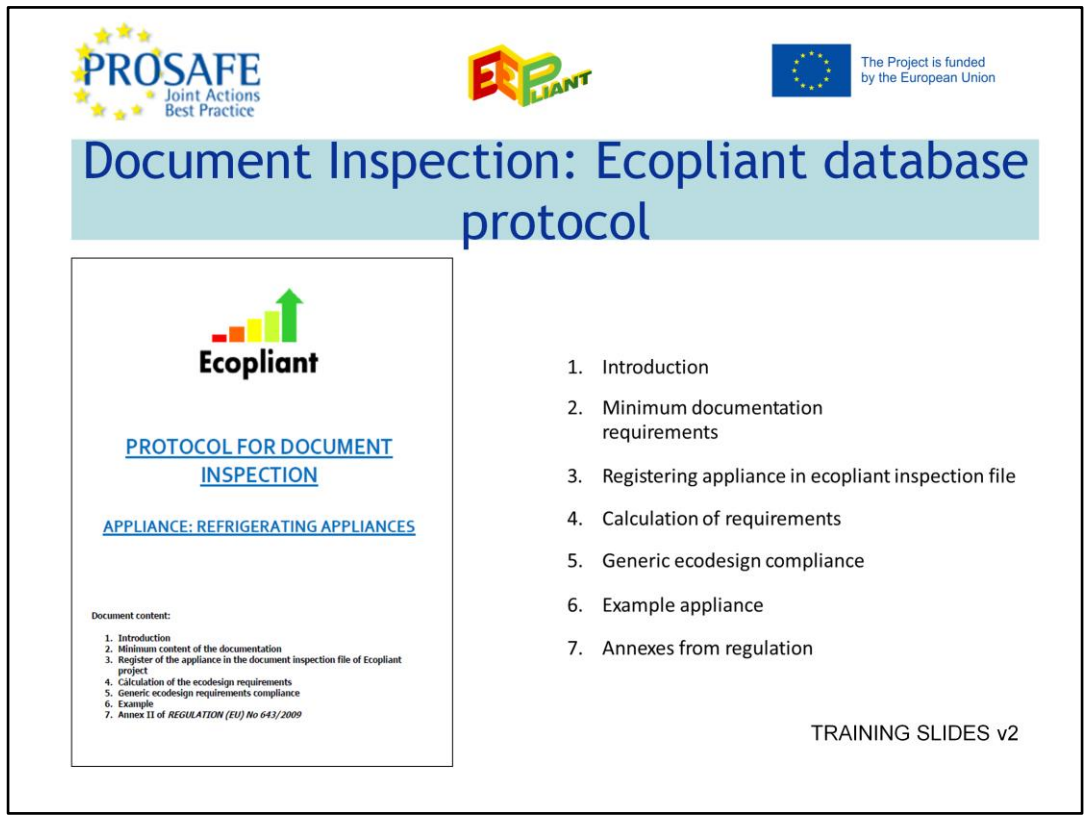
TRAINING SLIDES v2




More information regarding the use of ICSMS for sharing results is given in Module D and in Section 2.8 of the Best Practice Guidelines.

The EEPLIANT project is currently in discussion with the ADCOs and ICSMS management to explore whether DRPIs can be developed for 2 (LEDs and Heaters) of its product sectors in time for the DRPIs to be used on the project.

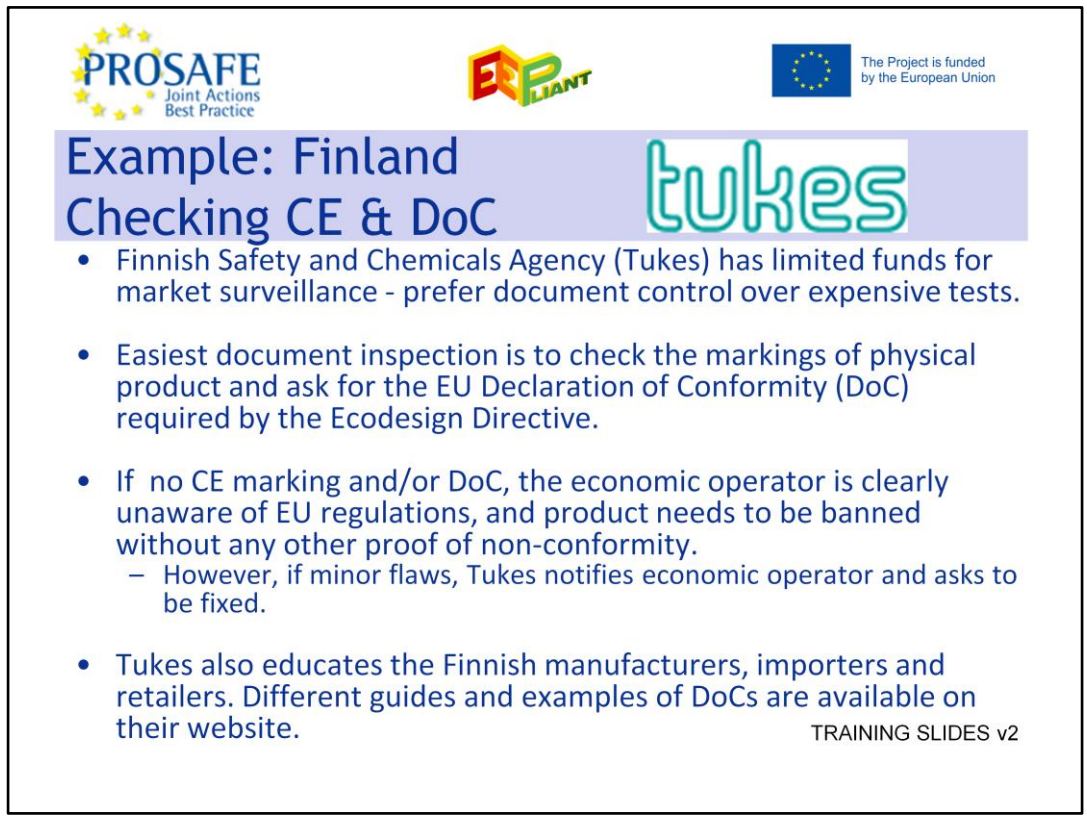
The 3rd product sector in EEPLIANT, imaging equipment, is expected to use the ECO/EEPLIANT database (see next slide)



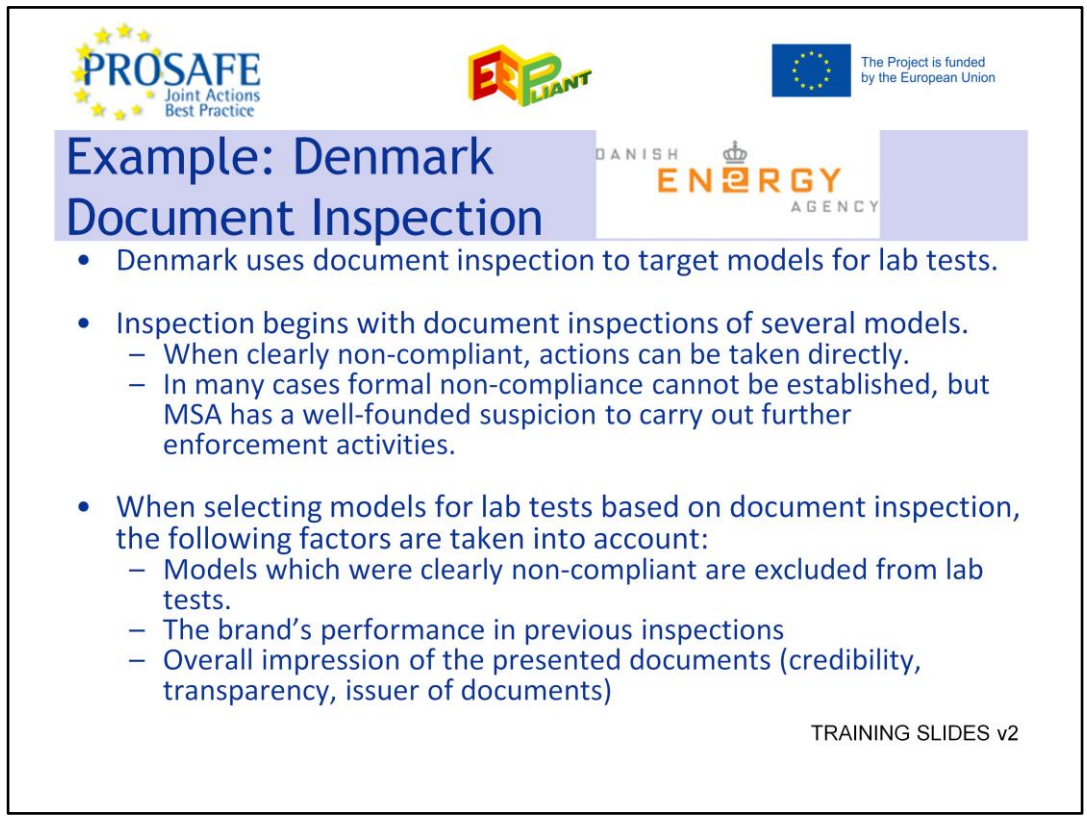

The ECOPLIANT database was developed during that earlier project because, at that time, ICSMS did not include any provision for ecodesign. The ECOPLIANT database has been custom designed to support all data entries for ecodesign product inspections by MSAs and includes embedded calculations to maximise convenience of use. As such, it is the equivalent of what ICSMS would become once the product DRPIs have been developed.

It is available for use (request access via info@prosafe.org) by all MSAs though, currently, none are continuing to use it.

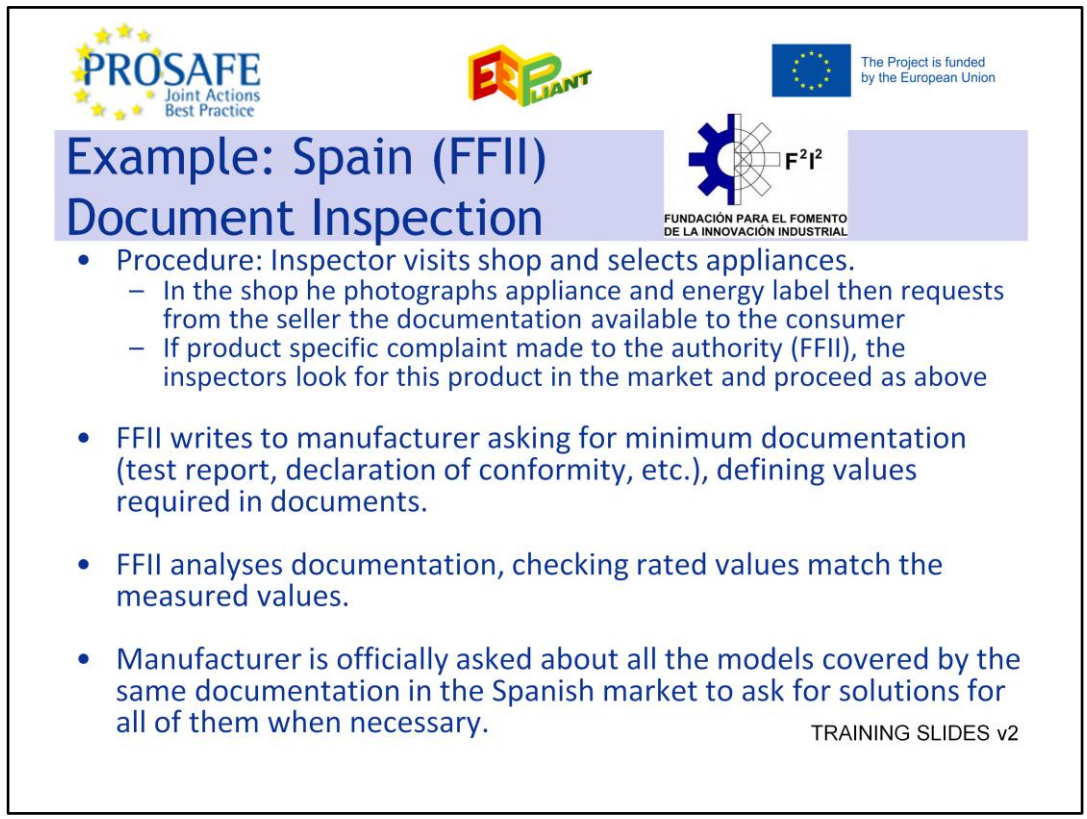
The database will be further developed under the EEPLIANT project for imaging equipment.



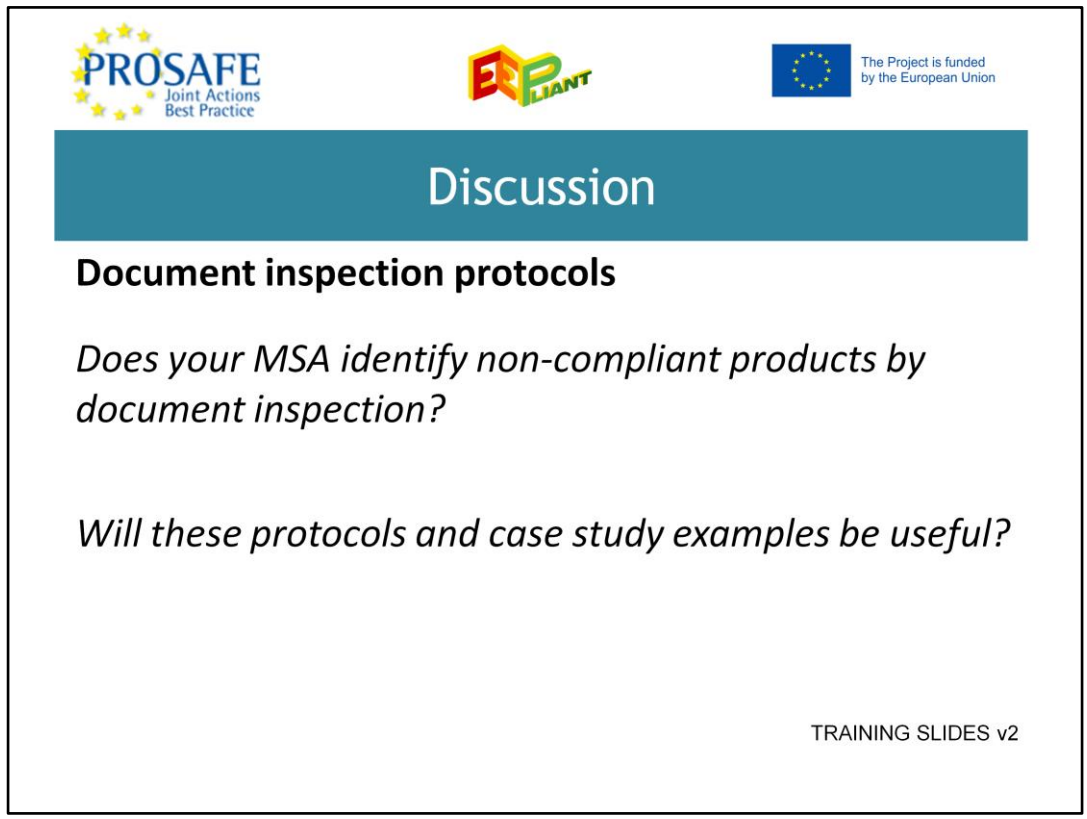

A case study example of document inspection carried out by a MSA




A case study example of document inspection carried out by a MSA

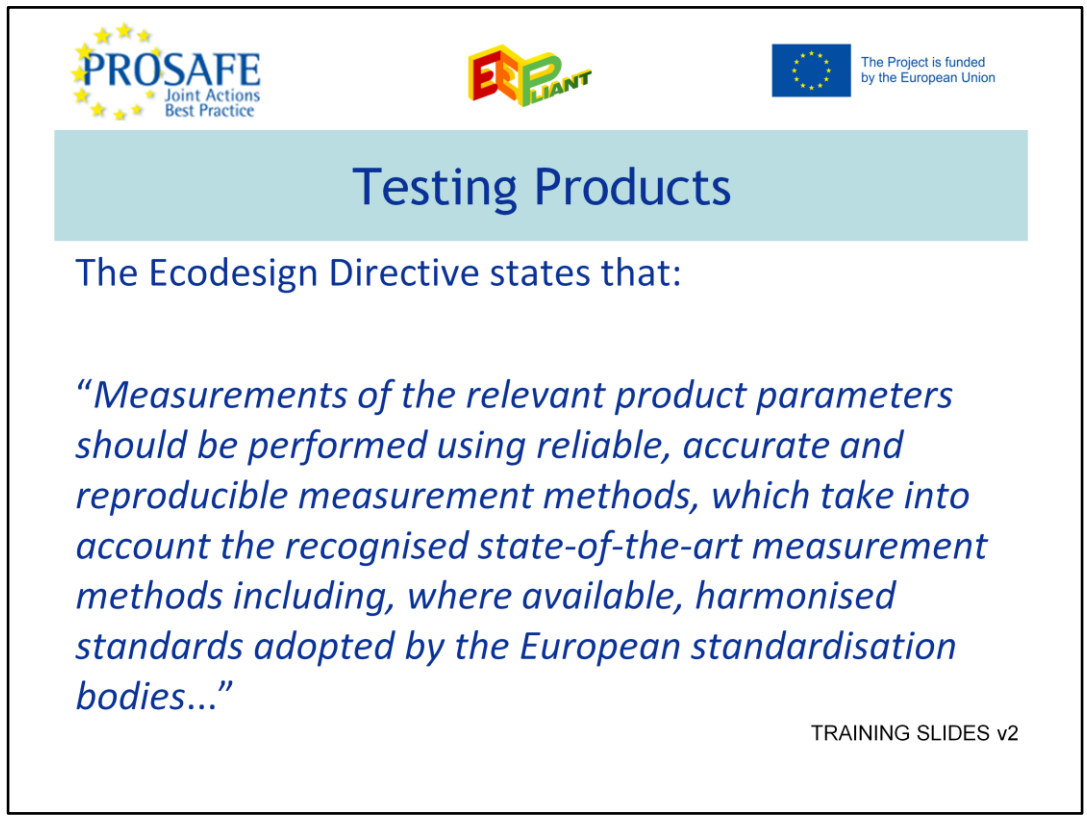



A case study example of document inspection carried out by a MSA



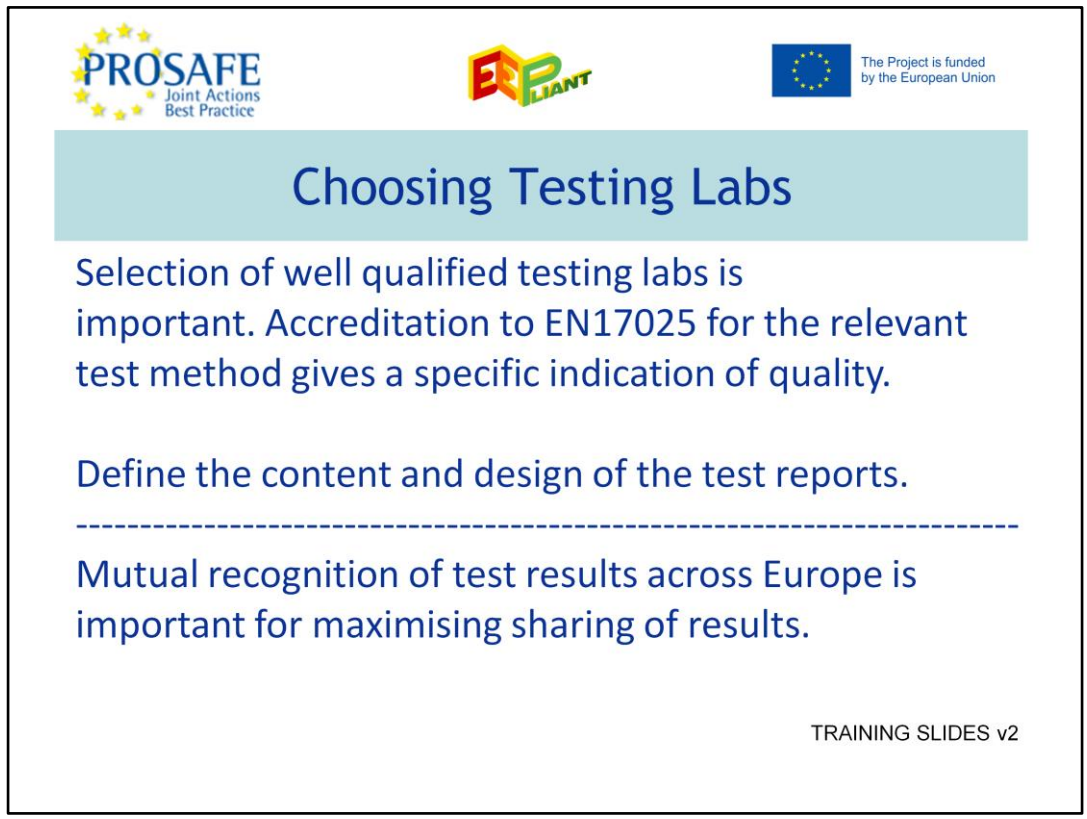

This slide encourages you to reflect on the information provided in the preceding slides and to discuss the content and main topics with colleagues.


The following group of slides is covered in detail in Section 2.7 of the Best Practice Guidelines




The technical product compliance is determined through measurements done in test laboratories following harmonized EN standards or transitional method(s) published by the European Commission.

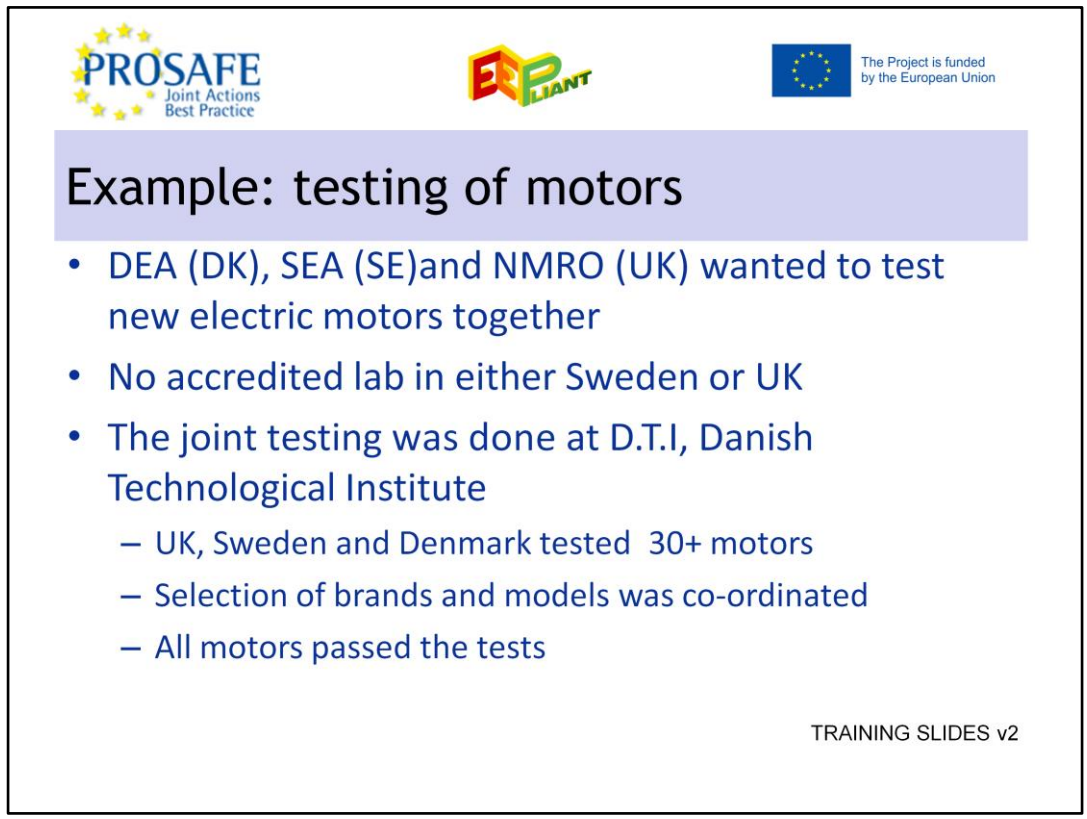
Testing products can be very expensive and usually would only be considered only when all other MSA inspection processes have been completed without identifying a non-compliance.




The importance of accurate measurements in relation to the Directives is stressed throughout the product specific implementing measures.

The verification of product compliance through laboratory testing and the function that laboratories play in delivering reliable and accurate results is therefore central to the effective enforcement and success of these Directives. When selecting laboratories for testing, many MSAs base their choice on criteria such as established expertise, reliability of results, accreditation, available budget and services offered.


These RECOMMENDATIONS are those given at the end of Section 2.7 of the Best Practice Guidelines. They highlight topics that MSAs need to consider when selecting laboratories for testing samples.




This example highlights another challenge faced by MSAs when selecting a laboratory for testing. It is that there may be no suitable laboratory in that MS.

In this case it will be important to ensure that the test report from the non-national laboratory is acceptable within the national legal system.

Some MSAs manage this problem by commissioning the testing though a national laboratory of high repute who then sub-contracts and supervises the testing done in the laboratory in another MS. The originally contracted laboratory then prepares a test report in the correct national language that is suitable for use within the national legal system.

The Project is funded by the European Union

# Example: Motor test report

**Compliance to:**
COMMISSION REGULATION (Ec) No. 640/2009 of 22 july 2009.
Implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to eco-design requirements for electric motors.

**Compliance result:** **PASSED**

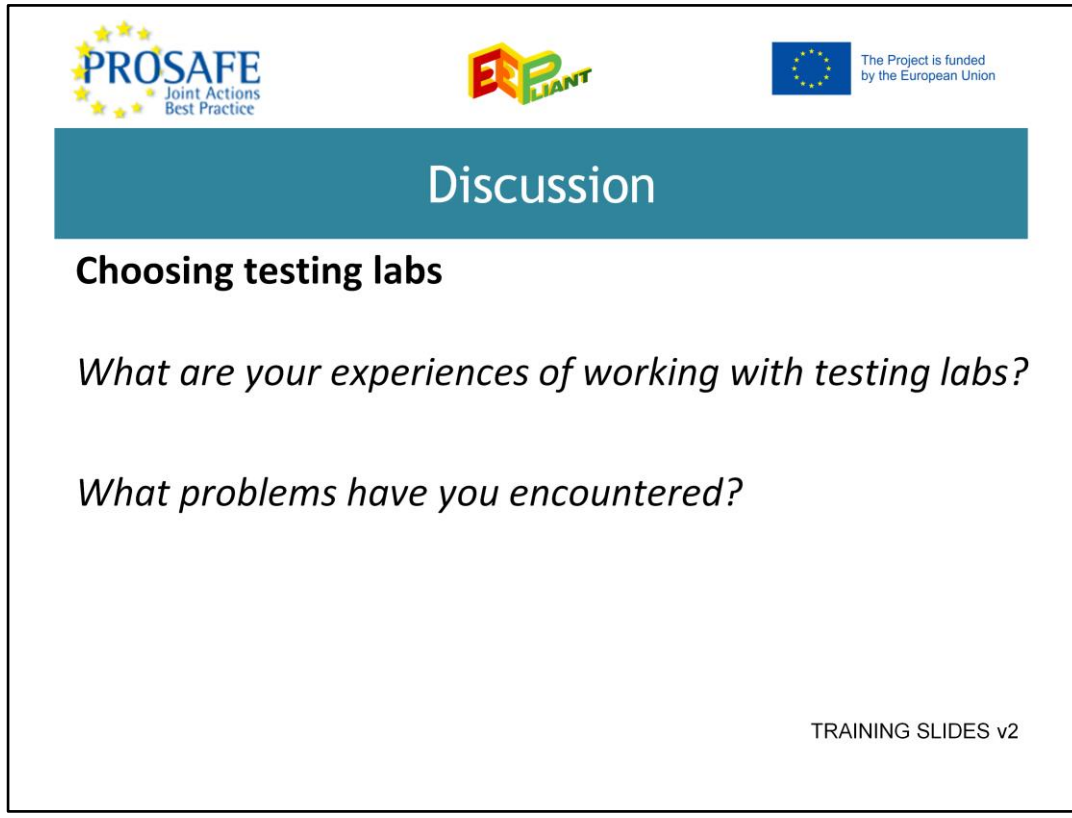
Test result:

| Measured Efficiency | Corresponding class (IEC 60034-30) | Requirement for Compliance: | Requirement for IE2 (IEC 60034-30) |
|---|---|---|---|
| **77,0%** | **IE2** | **72,3%** | **75,9%** |

**Energy and Climate**
**Centre for Energy Efficiency & Ventilation**

*60034 report 2012 ver B*

TRAINING SLIDES v2




This slide encourages you to reflect on the information provided in the preceding slides and to discuss the content and main topics with colleagues.


In some cases, MSAs may not have all such resources making market surveillance almost impossible and as consequence putting at risk the Directives' intended economic and environmental benefits. Some MSAs consider funding by third parties as a way to enlarge the available economic resources for their work.

A third party can be described as any private or public subject not directly involved in market surveillance e.g. trade associations, industry or grants, and other funding initiatives including European Commission's funded projects, such as EEPLIANT.

The Project is funded by the European Union

# Third Party Funding

- **Regulatory**
  - Some MSAs have, for example, powers which allow for the recovery of testing and other costs. This regulatory process can be considered as a reactive form of third party funding.
- **Industry Cooperation**
  - Cooperation forms: direct funding (subsidies), indirect funding (access to human or laboratory resources) and shared work.
- **EU Programmes**
  - initiatives such as the Horizon 2020 programme that has funded this EEPLIANT project.


These RECOMMENDATIONS are those given at the end of Section 2.7.2 of the Best Practice Guidelines. They highlight topics that MSAs need to consider when considering the possibilities for third party funding.