# Lighters II

Joint Market Surveillance Action supported by the Executive Agency for Health and Consumers (EAHC) Agreement No: 2011 82 01 - GPSD

# **Final Implementation Report**

Covering the period 1 January 2010 - 31 December 2012



Co-funded by the European Union



February 2013

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## Introduction

This is the final interim technical implementation report prepared for the Joint Follow-Up Market Surveillance Action on Child-Resistant Lighters and Novelty Lighters.

In accordance with the Grant Agreement, the report is due 28<sup>th</sup> of February 2013 and it shall provide a concise overview of the progress of the Joint Action in the period 1<sup>st</sup> of January 2010 to 31<sup>st</sup> of December 2012.

In accordance with Annex III in the Grant Agreement [1], the report in particular includes the following information on the work carried out and the results achieved:

- A description of the work carried out in the Joint Action in chapter 3.
- Deviations from the initial work programme are identified and explained in chapter 3.7.
- The results obtained in the Joint Action are presented in chapter 4.
- Differences between the foreseen results of the Joint Action and those actually achieved are explained in chapter 4.7.
- The participation in the Joint Action is compared to the planned commitment in Annex 3.
- A financial analysis of the expenditures in the Joint Action is included in Annex 4. The analysis compares the expenditure incurred during the Joint Action with the foreseen budget as laid down in the Grant Agreement [1].

Copies of deliverables and other material produced by the Action are annexed in Annex 5 and 6. The Joint Action is executed under the 2009 call for tender. Thus, the reporting requirements may differ from Actions granted under the call for tenders outlined in other years.

#### Note to the reader

This is an edited version of the final report that was produced for publication purposes.

The difference to the full report is that the six annexes are deleted because part of their content is confidential (financial) information. This does not harm the readability of the report.



# 1 Management Summary

This is the final report from the Joint Follow-up Market Surveillance Action on Child-Resistant Lighters and Novelty Lighters. The Action is supported financially by the European Commission. It was carried out by PROSAFE and representatives from Austria, Cyprus, the Czech Republic, Estonia, Greece, Iceland, Malta, Netherlands, Norway, the Slovak Republic, Slovenia, Spain and Sweden.

The primary purpose was to ensure that lighters placed on the European market are safe. This was estimated with four indicators:

- The share of non-compliant lighters found on the European market.
- The share of non-compliant lighters imported to Europe.
- The share of non-compliant lighters produced in Europe.
- The share of shops that marketed novelty lighters.

The Joint Action fostered a lot of activity:

- The participants carried out some 8,600 inspections at retailers, wholesalers, importers and manufacturers.
- Customs inspected more than 1.000 consignments with lighters upon arrival to the EU.
- More than 5,200 lighters were checked.
- 29% of the inspected lighters failed to meet the legal requirements.

The failing lighters had the following non-compliances:

- EN ISO 9994 non-compliances, 326 cases.
- Child-resistance non-compliances, 105 cases.
- Other non-compliances, 529 cases.
- The non-compliances were not categorised in the last 540 cases.

The participants sampled 74 lighters that were tested at an accredited laboratory. There were no remarks for 55% of the lighters (this compared to 35% in the previous Action). The tests showed that 7% of the lighters presented critical non-compliance (compared to 35% of the lighters in the previous Action).

The figures for the previous and the present Joint Action are not immediately comparable, as the test conditions differed. Nevertheless, the improvements are so significant that they are taken as a sign that the joint market surveillance efforts over the past 5½ years have indeed lead to an improved situation on the market (even though the figures also clearly indicate that there is still room for improvement).

This conclusion is supported by the participating Member States. Their immediate impressions of the situation on their markets taken from the inspection campaigns they undertook showed that the picture had improved over the past few years. Moreover, novelty lighters were found by and large to have disappeared, except for some limited internet trade.

Another important finding came out of a benchmark of three accredited lighter laboratories undertaken by the Dutch authorities. The laboratories were asked to test the same seven lighter models according to EN ISO 9994. This exercise has shown remarkable differences between the laboratories: they only agreed on one of the lighters, and two of the laboratories disagreed on 5 of the 7 lighters. No conclusions were drawn during the Joint Action, but a number of likely root causes were identified including insufficient standardisation of the manufacturing, insufficient quality assurance or deficiencies in the standard.

The Joint Action had a second purpose: to gather experience related to best practice techniques in following up large Joint Actions and to further develop best practices for market surveillance actions including cooperation with customs.

Therefore, the Joint Action developed a number of tools for market surveillance for lighters. This included a memo on intervention limit values, a memo on risk assessment, a decision tree for assessment of potential novelty lighters, a guideline for importers of lighters from third countries, a memo on cross-border follow-up of test results, a guideline for system audit of lighter businesses and a draft guideline with best practices in market surveillance on lighters.

The Joint Action finished within budget and the participants even contributed with more work to the project than anticipated at the beginning.



# 2 Background Information

#### 2.1 Summary of Project Description

This chapter presents a short extract of the project description. The full text can be found in the Grant Agreement [1].

#### 2.1.1 Title of the Joint Action

Joint Follow-up Market Surveillance Action on Child-Resistant Lighters and Novelty Lighters. The Joint Action is supported financially by the European Commission under Grant Agreement No. 2009 82 05 - LIGHTERS 09.

#### 2.1.2 Participating Member States

The application for the Joint Action was signed by PROSAFE and 11 Member States (Austria, Cyprus, the Czech Republic, Estonia, Greece, Malta, Netherlands, the Slovak Republic, Slovenia, Spain and Sweden) plus Iceland and Norway.

The applicant body that also took overall responsibility for the Joint Action was PROSAFE. The project leader is Gunnar Wold from DSB in Norway.

The project consultant is Torben Rahbek, an independent consultant subcontracted by PROSAFE.

#### 2.1.3 Budget

The total budget cost for the Joint Action is 593.916,11  $\in$  out of which the Commission funds 62,32 %, equivalent to 370.136,87  $\in$ .

#### 2.1.4 Primary Objective

The primary purpose of the Joint Action is to ensure that lighters placed on the EU market are safe. The ambition of the Joint Action is to achieve a level below 2 % for each of the following indicators:

- The share of non-compliant lighters that are found on the European market.
- The share of non-compliant lighters that are imported to Europe.
- The share of non-compliant lighters that are produced in Europe.
- The share of shops that markets novelty lighters.

These indicators are estimated and not measured in the Joint Action as a statistically correct measurement would imply that a large number of lighters were sampled completely at random. This would lead to investigations and tests of a high number of safe lighters - an activity that would take up resources and cost money without contributing to consumer safety.

#### 2.1.5 Secondary Objective

Secondly the purpose is to gather experience related to best practice techniques in following up large Joint Actions and to further develop best practices for national market surveillance Actions including cooperation with customs (nationally and internationally).

#### 2.1.6 Deliverables of the Joint Action

The Grant Agreement [1] identifies the deliverables. They are also shown in table 1.

#### 2.1.7 The Activities of the Joint Action

The activities of the Joint Action are divided into three phases:

• First phase (January 2010 - June 2010)

The Joint Action is launched and the first project meeting is organised to introduce the Action and procedures for cooperation to the participants. The detailed contents of the Action will be discussed and agreed. This will include a discussion of a suitable means and procedure for exchange of information about samples and test results between Member States and a potential



organisation of joint testing.

• Second phase (July 2010 - September 2012)

Member States' monitoring of the market situation will be fully up and running and they will report their activities to the coordinator. Experience and test results are shared and the coordinator will monitor cross-border utilisation of tests.

• Third phase (October 2012 - December 2012)

The Joint Action will terminate and the participants will prepare a final report with conclusions and recommendations from the activities. Furthermore a final conference will be organised to disseminate the results. This conference will be scheduled together with other relevant meetings, e.g. events in other Joint Actions, PROSAFE meetings, Commission events, and the like.

A timeline of the Joint Action is included in Annex A.

Activity		Deliverable		
	ID	Title		
Identification of consultant	D1	Contract with selected consultant		
Kick-off meeting	D2	Minutes from meeting		
	D3	Detailed approach to Joint Action		
Discussion of sampling scheme	D4	Sampling scheme		
Set up means for exchange of information about tested lighter models	D5	Means for exchange of information about tested lighter models		
Set-up of joint testing	D6	Call for tender		
	D7	Selection of laboratory		
CR verification tool	D8	Feasibility study		
	D9	Joint purchase of CR verification tool		
Market Surveillance Action	D10	Reports of surveillance Actions		
Second project meeting	D11	Minutes from meeting		
First Interim Report	D12	Full Interim report and financial statement		
Third project meeting	D13	Minutes from meeting		
Second Interim Report	D14	Full Interim report and financial statement		
Fourth project meeting	D15	Minutes from meeting		
Fifth project meeting	D16	Minutes from meeting		
Sixth project meeting	D17	Minutes from meeting		
	D18	Draft programme for final conference		
Final conference	D19	Report of final conference		
Final report	D20	Final report		

Table 1. Overview of deliverables in the Joint Action.

#### 2.2 Other Background Information

#### 2.2.1 The European Market

Lighters in Europe are usually low-cost products that are sold for less than 1 Euro a piece. The annual sales are approximately 1.6 billion lighters a year. One third is produced in Europe. The rest is imported from countries outside the EU, mainly from China and other countries in the Far East (Malaysia, Indonesia, Vietnam and Taiwan). Lighters (with company logos) are one of the biggest promotion articles in Europe.

According to EN ISO 9994 [4], a cigarette lighter is defined as a "manually operated flame-producing device, employing a petrochemical derivative as a fuel, normally used for deliberately igniting cigarettes, cigars and pipes ..."

It is possible to identify 3 other important classes of lighters:

- Novelty lighters. These are (cigarette) lighters that resemble to other objects commonly known to attract children. They account for a small segment of the market, estimated less than 1%.
- Semi-luxury and luxury lighters. These are expensive (cigarette) lighters that the owner would have repaired if they stop functioning and where it is possible to identify an after-sales service centre in



Europe. They also account for a small segment of the market, approximately 1 - 1.5%.

• Utility lighters. These are lighters that are intended for igniting candles, barbecue grills, fireplaces, etc.

The major European manufacturers are members of EFLM (European Federation of Lighter Manufacturers). The three largest European manufacturers are located in France and Spain. The major European importers are members of ELIAS (European Lighter Industry Association). The association has some 20 members that represent approximately 80 % of the total amount of European imports.

#### 2.2.2 Risks and Accidents

Typically a normal, new cigarette lighter contains 3 - 5 grams of liquid butane. Such an amount can create a fireball with a diameter of 50 cm if ignited in the open air. Therefore lighters must be manufactured and handled carefully so that they do not present a danger to consumers. The risks can arise in a number of ways:

- An unsafe lighter might break open if dropped by the consumer.
- An unsafe lighter might function in dangerous ways, e.g. by producing a high flame when ignited or by not extinguishing properly.
- An unsafe lighter might leak, e.g. when put in the pocket of the user.
- Lighters with insufficient child resistance can be ignited by small children that play with lighters.

Furthermore, lighters present a risk when kept in large quantities because of the total amount of fuel. As an example a 40' container holds some one million lighters which contain 3 - 5 tons of fuel. To take account of the potential risks therefore, special requirements exist for storing and transporting lighters.

A special risk is linked with novelty lighters. There is a risk that children may regard them as play items because their shape and form may resemble animals, vehicles, tools, weapons and other toy-like items. These lighters are considered to be particularly dangerous as there is an increased chance that children will play with them because of their appearance. Several Member States have taken action against such lighters for many years and several RAPEX notifications have been issued.

European statistics on fires caused by lighters is sparse and often mixes fires caused by matches with fires caused by cigarette lighters. However, the fire statistics for the United Kingdom does make the distinction. The statistics published in 2009 produces data up to and including 2007. An extract is shown in table 2.

		Fatal fires		Non-fatal fires		
Year	Total	Cigarette lighters	Share (%)	Total	Cigarette lighters	Share (%)
1997	497	12	2,4%	12.877	297	2,3%
1998	454	14	3,1%	12.827	336	2,6%
1999	398	7	1,8%	12.556	270	2,2%
2000	397	13	3,3%	12.059	308	2,6%
2001	428	20	4,7%	11.691	332	2,8%
2002	355	13	3,7%	11.182	283	2,5%
2003	394	15	3,8%	10.426	300	2,9%
2004	325	13	4,0%	9.993	251	2,5%
2005	310	6	1,9%	9.687	216	2,2%
2006	295	8	2,7%	9.327	264	2,8%
2007	267	11	4,1%	9.066	254	2,8%

Table 2. Fire statistics for United Kingdom showing the total number of fires and the number of fires caused by cigarette lighters. The table is based on [2].

Table 2 shows the number of accidental fires (accidental meaning not intended) in dwellings (i.e. excluding fires in cars, enterprises, etc.). The numbers show that the share of non-fatal fires caused by cigarette lighters has more or less remained constant at a level of 2,5% from 1997 to 2007. The numbers also show that the share of fatal fires caused by cigarette lighters has increased from 2.5 - 3% to 3 - 4% in the same period. The increase is however mostly due to a decrease in the total number of fatal fires as the number of fires caused by lighters can be seen to remain constant by and large.



For comparison the category "Smokers' materials" account for more than ten times more fatal fires than lighters and five time more non-fatal fires. This category includes cigarettes and tobacco that is left burning by the smoker. Fires caused by matches have also been separated out in the statistics. They account for approximately the same number of fires as lighters.

The population of the United Kingdom corresponds to some 12% of the population in the European Union (about 60 million people in the United Kingdom and about 500 million people in Europe).

#### 2.2.3 Regulation and Standardisation

The safety of lighters has been on the EU agenda for several years and legislation has been in place since 2006 requiring Member States to take measures to ensure that only child-resistant lighters could be placed on the EU market and to prohibit novelty lighters (Commission decision 2006/502/EC [3] adopted May 11th, 2006). This decision must be renewed annually to maintain its validity. The newest prolongation was done January 27th, 2012, when the Commission adopted the decision 2012/53/EU [8] extending the validity of Decision 2006/502/EC until 1st of May 2013.

The decision 2006/502/EC references the standards EN ISO 9994 [4] and EN 13869 [5]:

- EN ISO 9994 describes the safety requirements for lighters. The standard has been referenced under the General Product Safety Directive meaning that a manufacturer can presume that a lighter is safe if it meets all requirements of the standard.
- EN 13869 describes the requirements for child-resistance. It has not been referenced and is currently under revision. The European Commission has adopted a mandate for the revision of the standard and CEN has started its work.

#### 2.2.4 The International Situation

Requirements on child-resistance are in place in the United States, Japan, Canada, Australia and New Zealand. The legal requirements in the United States have served as a model for the legislation in place in many other jurisdictions; the regulations in Canada, Australia and New Zealand reference the American child-resistance standard.

The Japanese approach is different. The Japanese authorities allow manufacturers to use a test of mechanical properties instead of the child-panel test to demonstrate the child-resistance of a lighter. The Japanese authorities have developed test methods to characterise the child-resistance of three types of cigarette lighters;

- 1. Hard-piezo lighters with a push-down plunger where the child-resistance is ensured by the required pusher force.
- 2. Flint-wheel lighters with a free-wheeling mechanism where the child-resistance is ensured by the force required to engage the wheel with the sparking mechanism.
- 3. Hard-piezo lighters with a slide plunger where the child-resistance is ensured by the torque that is required to operate the plunger.

The test methods are laid down in Japanese standards that are used by the nominated test laboratories for approval of lighters for the Japanese market.

#### 2.2.5 Link to Previous Joint Action

The Joint Action follows up a previous Action undertaken by 13 Member States in the years 2007 - 2009. Nine of the participating countries have continued in the Joint Follow-Up Action. The Joint Action is reported in a final technical implementation report [7]. The key findings were:

- The Member State authorities checked 5.557 lighter models during the Joint Action.
- In total 1.278 models were reported to be non-compliant. This corresponds to 23 % of all lighters checked.
- In that Action 143 lighter models were tested at an accredited laboratory; 49 passed the test and 94 failed corresponding to a compliance level of 34%. (The models in this batch were carefully selected by market surveillance authorities that suspected them to be dangerous. Therefore the share of non-compliant lighters should be higher than by random sampling.)
- The results show that 119 lighters were lighters that were imported to EU. 91 of these failed the test corresponding to a share of non-compliant lighters of 76%.
- The results also show that 22 lighters which were tested were produced in the EU. One of these



failed to meet the safety requirements.

- Two of the tested lighters did not have any marking of origin. They both failed the test.
- The sales of novelty lighters to consumers appeared to have decreased significantly during the Action.

The conclusion from the previous Action therefore was that two of the four ambitions of the project had been met. Lighters that were produced by the European lighter manufacturers by and large appeared to comply with the regulations and novelty lighters appeared to have been reduced to an insignificant share on the market. The overall picture was that some 20 to 60% of all lighter models on the market did not comply with the safety requirements.

Customs were very active in the first Joint Action. One specific initiative was the organisation of a joint meeting between representative from customs and market surveillance to facilitate a sharing of experience and exchange of best practices between customs in different countries and between customs and market surveillance. The event was a big success and was one of the best attended meetings in the entire Action.



## 3 Activities Undertaken in the Joint Action

This chapter presents the activities undertaken in the Joint Action in the reporting period (1<sup>st</sup> January 2010 to 31<sup>st</sup> December 2012).

#### 3.1 Overview of Activities

#### • Project management activities

Select consultant

The first activity in the Joint Action was to select a consultant to manage and coordinate the Joint Action. Stichting PROSAFE appointed an individual by drawing from its pool of consultants. This consultant was then engaged and a contract drawn up for signature.

• Project group meetings

The project group had 6 meetings including the kick-off meeting. The participants finalised a project plan and a communication plan during the kick-off meeting.

• Management of the Joint Action

The consultant developed a couple of tools and documents to facilitate the follow up of the operational stages in the Joint Action. The tools and documents were discussed at the meetings in the project group.

Interim reports

Two interim implementation reports were produced and published in February 2011 covering the period 1<sup>st</sup> January 2010 to 31<sup>st</sup> December 2010 and February 2012 covering the period 1<sup>st</sup> January 2011 to 31<sup>st</sup> December 2011.

#### • Selection of test laboratories

All testing was subcontracted to Bureau Veritas that also did the testing for the first Joint Action. It was selected after a tendering process where eleven laboratories were invited to tender. Five laboratories sent in quotations. Bureau Veritas was found to be the laboratory that best met the selection criteria. The selection process differed from other PROSAFE Actions insofar as it was undertaken by a group of Member State market surveillance officials.

#### • Monitoring and assessment of the sampling process

The Joint Action focused the investigations on lighters from the biggest 5 - 10 economic operators on the European lighter market. They presumably cover something like 80% of the market. The participants developed a sampling plan that took into account which countries could easily do the sampling at the same time ensuring that many countries were involved to spread the workload and the experiences. The progress was monitored by the consultant.

#### • Testing

The Joint Action had 74 lighters tested according to a number of key requirements in EN ISO 9994.

#### • Market surveillance activities

The participating Member States carried out market surveillance on lighters and reported their activities to the project consultant for statistical purposes. In total more than 8.500 inspections were carried out and more than 5.000 lighters were checked.

Customs also contributed with border control of lighters. They checked more than 1.000 consignments in the 3 years of the Joint Action.

#### • Drafting and updating of miscellaneous documents

The Joint Action produced a number of documents to capture the best practices that were developed over the 3 years of activity. This included:

• A memo on intervention schemes and intervention limit values for lighters



- A memo on risk assessment for lighters
- A decision tree for assessment of potential novelty lighters
- Questionnaire to the lighter industry
- A guideline for importers of lighters from third countries
- A memo on cross-border follow-up of test results on lighters
- A guideline for system audit of lighter businesses
- A draft guideline with best practices in market surveillance on lighters

#### • The Rapid Advice Forum

The Rapid Advice Forum for Lighters handled 74 questions on lighters. 27 of them dealt with potential novelty lighter designs.

#### • Awareness-raising and outreach activities

Several activities were carried out to increase the awareness of the Joint Action:

- Communication with Member States and other countries outside the Joint Action.
- Liaison with the European Commission, DG SANCO and DG TAXUD.
- Several meetings with stakeholders, first and foremost business associations like the lighter importer's association, ELIAS and the lighter manufacturers' federation, EFLM.
- Active participation in PROSAFE's attempts to reach out to China.

#### • Dissemination activities

The following documents were produced to spread information about the Joint Action:

- Six press releases, newsletters or similar documents.
- A number of expert papers for market surveillance authorities or businesses.

Furthermore, the following activities were undertaken:

- Representatives from CEN participated in the final workshop.
- Presentations of the Joint Action were given at several international meetings including the meetings in the Consumer Safety Network.
- A workshop was held for stakeholders at the end of the Joint Action.

#### 3.2 Meetings

#### 3.2.1 Project Meetings

Six project meetings have been organised by the Joint Action as foreseen in the original project plan:

- Kick-off meeting 23 and 24 February 2010 in Brussels The minutes from the meeting are annexed in Annex 5, deliverable D2.
- Meeting 19 May 2010 in Brussels The minutes from the meeting are annexed in Annex 5, deliverable D11.
- Meeting 27 and 28 October 2010 in Brussels The minutes from the meeting are annexed in Annex 5, deliverable D13.
- Meeting 10 March 2011 in Brussels The minutes from the meeting are annexed in Annex 5, deliverable D15.
- Meeting 6 September 2011 in Ljubljana The minutes from the meeting are annexed in Annex 5, deliverable D16.
- Meeting 3 and 4 May 2012 in Tallinn The minutes from the meeting are annexed in Annex 5, deliverable D17.

#### 3.2.2 Meeting with Customs



The Joint Action planned from the beginning to involve customs. The obvious reason is that two thirds of the lighters on the European market are imported from countries outside the EEA so border control is a key element in market surveillance of lighters.

During the kick-off meeting a small working group was established to describe best practices for involving customs in the control of lighters partly based on the experiences and practices developed under the previous Joint Action. The outcome was a memo that was shared with DG TAXUD's working group on market surveillance where 3 participants from the Joint Action attend.

The tangible result of this cooperation was that a joint meeting between customs and market surveillance officials was organised on 11 March 2011 to launch a joint market surveillance and border control campaign. The meeting was furthermore used to discuss the level of investigation requested from customs, to deliver some basic training of the customs officers and to share experiences between Member States and between customs and market surveillance officials.

The minutes from the meeting are annexed in Annex 6, document E4. The presentation from the meeting is annexed in Annex 6, document E5.

#### 3.2.3 Other Meetings Attended within the Framework of the Joint Action

The following meetings and events were attended by representatives from the Joint Action:

- Meeting with EFLM and the European Commission in Brussels, 5 February 2010;
- Meeting with the Consumer Agency of Japan in Brussels, 15 March 2010;
- Meeting with ELIAS and Polyflame in Hamburg, 11 May 2010;
- Meeting with EFLM in Brussels, 12 May 2010;
- Meeting with EFLM in Brussels, 17 June 2010;
- Meeting with METI from Japan in Copenhagen, 2 July 2010;
- Meeting in the DG TAXUD working group on customs involvement in market surveillance in Santa Cruz de Tenerife, 2 4 February 2011;
- Trilateral round table Beijing, 17 Nov 2011;
- Meeting with EFLM and Bureau Veritas on risk assessment in Copenhagen, 6 July 2012.

Further to this, the project leader and the project consultant participated in several PROSAFE meetings, PROSAFE conferences, PROSAFE core group meetings and teleconferences for the PROSAFE project management.

#### 3.3 Activities Undertaken at the National Level

The main activity that the Member States undertook at national level was market surveillance. This included border control in cooperation with customs and market surveillance inspections at retailers, wholesalers, importers and manufacturers.

The Member States have reported statistical information about number of inspections, number of lighter models checked, results, etc. mostly on a quarterly basis. If a Member State reported its data as accumulated figures for longer periods, the figures were divided proportionally over the relevant period. Besides the statistics, the Joint Action has received narrative reporting of the activities in some of the countries. The statistics is shown in Annex 2.

The data are presented in details and analysed in the following chapters.

#### 3.3.1 Statistics on Border Control Executed by Customs

The market surveillance authorities and customs have cooperated on lighters since the first Joint Action in 2007 - 2009 and the cooperation continued in the present Joint Action with one important difference: It was decided to have a joint market surveillance - border control effort where market surveillance authorities and customs in the participating countries intensified their cooperation in the months March to May 2011. The purpose of this exercise was to do a coordinated effort that would be more visible for the players on the market. The months were chosen to mark the date of the first lighter decision from 2006.

The effort was kicked off with a joint meeting attended by representatives from the national customs authorities and the national market surveillance authorities as described in chapter 3.2.2.

The initiative worked as can be seen from figure 1. It shows the number of consignments inspected by customs. The figure clearly displays the difference between the level of activity before the kick-off meeting 11<sup>th</sup> of March and after. Before the meeting, customs reported checking of some 10 - 15 consignments each quarter. After the meeting, this figure increased 5 times to 60 - 70 consignments per



quarter. (In fact, customs reported more checks in second quarter 2011 than in the five preceding quarters together.)

The figure shows that customs carried out 667 border controls in 2011 (compared to 58 checks in 2010). The total number of checks is even higher as the narrative reports submitted by some countries describe that they have carried out border control without giving any statistics.

Figure 1 also shows that the high level of activity remained long after the end of the focussed effort. This was particularly the case in Austria, where customs inspect virtually every container or consignment that is imported.

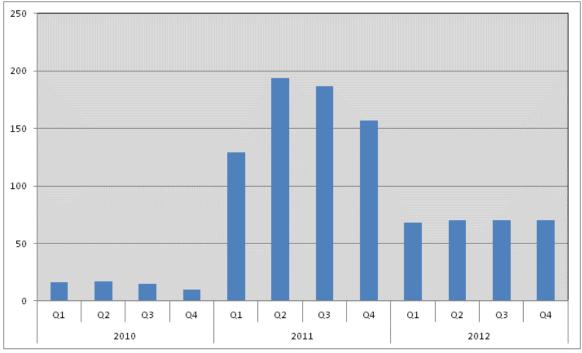


Figure 1. Number of border control of lighters carried out by the customs in the Joint Action.

The customs officer is normally able to do a few visual checks of the lighters during the border control mainly to decide whether the national market surveillance authority should be contacted because further investigations appear to be necessary. The practice varies from country to country depending upon the agreement between customs and the market surveillance authority: In some countries, customs contact market surveillance whenever there is a case. Other countries have organised themselves so that customs are able to draw a decision themselves in the majority of the cases.

Overall, the Joint Action demonstrated that customs can play an important role to support the market surveillance.

#### 3.3.2 Statistics on Market Surveillance Inspections

The market surveillance authorities have been actively carrying out inspections in the market, mainly at retailers as shown in figure 2.

The market surveillance authorities made in total 8.620 visits during the Joint Action. The focus has been on retailers (8.008 inspections or 93% of all inspections). The remaining 612 inspections divide on wholesalers/domestic importers and EU importers. Only four visits have been carried out at European manufacturers.

The main purpose of visiting an economic operator in the context of this Joint Action was to carry out visual inspections of one or more lighters. Such inspections could have one of the following three purposes:

- 1. To identify obvious non-conformities such as novelty lighters.
- 2. To decide whether a lighter model should be taken for further investigations for (technical) nonconformities.
- 3. To examine the technical documentation with the lighter (in particular if the visit took place at a European importer).



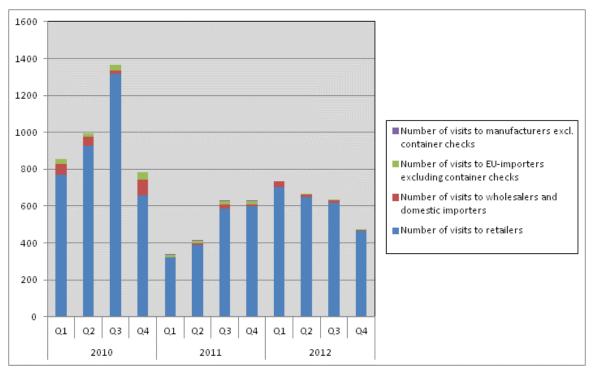


Figure 2. Number of market surveillance inspections in the Joint Action.

The Joint Action has recorded the number of lighters that were inspected or taken for further investigation during such visits. The result is shown in figure 3.

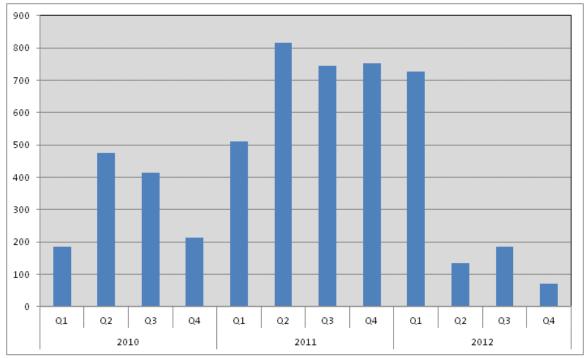


Figure 3. The number of lighters checked by market surveillance authorities in the Joint Action.

The figure shows that a total of 5.228 lighters were checked by the market surveillance authorities in the Joint Action. A check can be anything from a screening test or check of documents to a full laboratory test. (The organisation of the market surveillance activities and the level of reporting do not allow filtering out cases where multiple authorities inspected the same model of lighter.)

Some of the participating Member States have submitted narrative reports instead of statistics so the level of activity is even higher than shown in figure 3.

The figure shows that the activity level has fluctuated, but it seems to have been "kick-started" by the



joint market surveillance border control effort in March 2011, as the figure shows that the activity rose sharply from first to second quarter. Afterwards it remained at the high level throughout 2011 and into 2012.

The results of the checks of lighters is described and analysed in chapter 4.2.

#### 3.3.3 Joint Testing

An important part of the national activities was sampling of a number of lighter models for joint testing. It was decided to focus the investigations in the Joint Follow-up Action on the major economic operators on the European market. The 5 - 10 biggest players are expected to cover something like 80% of the total European market so if the participants could ensure that lighters from these players were safe, the biggest part of the market would be "clean".

Therefore the participants identified the top-10 economic operators on the lighter market and their brands. The number of samples that could be tested at the selected laboratory was calculated (by dividing the budget with the unit cost for tests) and split over the economic operators (minus a little reserve).

Next, it was decided which Member States should sample what lighters. Here the group encountered the problem that almost none of the economic operators have their headquarters in one of the participating Member States. Therefore it was impossible to do the sampling at the European source; it had to take place at major domestic importers. It was also considered to be important that many countries were involved in the sampling to spread the workload and the experiences.

The complete sampling plan is found in Annex 5, deliverable D4.

A total of 74 lighter models were sampled and sent for laboratory testing. The test results were shared with the participants so that all participating Member States could follow up on the results.

The results of the laboratory tests are discussed in chapter 4.3.

#### 3.3.4 Follow-up of test results

The follow-up of the results of the laboratory tests was structured and monitored separately to measure the efficiency and record the experiences for the benefit of PROSAFE's new omnibus Joint Actions (like JA2010, JA2011 etc.) where follow-up of test results forms an integral part of the activities.

The follow-up was organised in the way that the consultant prepared a list with the results of the 74 laboratory tests together with a classification of the non-compliances in minor, major and critical non-compliances. The classification was done using the intervention limit values described in chapter 3.4.7. This list was circulated to the Member States that were asked to send back statistics for the results of their activities. The result can be seen in table 3.

Reaction	Share
No action taken on information	26,7%
Distributor contacted	10,9%
Lighter is known not to be on the domestic market	55,8%
Distributor agreed on voluntary action	6,7%

Table 3: Result of the Member States' follow up of results of laboratory tests.

The table is based on statistics from CY, CZ, MT, SI and SK. Activities undertaken to investigate cases with conforming lighters have been excluded from the table. (This can take place if an authority decides to follow-up all test results from the Action.) The other countries in the Joint Action also followed up but reported in formats that do not immediately fit into the above table. As an example, EE reported that they contacted the 4 biggest importers and carried out inspections at wholesalers to look for non-compliant lighters on the list. They took action against one model of lighter and issued a RAPEX notification.

The Estonian example and the table indicate the typical way that an authority will follow up on such results in its territory. The authority will examine the products to decide whether it is likely to be found on their market. If this may be the case, the (domestic) importer is contacted to check ask if he has the product on the shelves. The further activities depend upon the result of these first steps.

Discussions with the Member States revealed that many authorities find this difficult in practice because the process can take many (tricky) directions. Therefore the Joint Action prepared a guideline in



following up. Please see chapter 3.4.11.

#### 3.3.5 System audits

One particular way of following up with importers (or manufacturers) is system auditing. The idea is that instead of sampling and testing lighters again and again, it may be more efficient that the authority examines the quality assurance measures that the importer has put in place to assure that his products are safe when they are placed on the market. This represents a more systemic approach to product safety monitoring.

Legally this is tricky as the GPSD does not require that an economic operator implements quality assurance measures. The directive just requires that products are safe. The lighter decision is somewhat stricter and requires that the manufacturer keeps records of certain key measurements, but none of these two empowers the authorities to audit the quality assurance systems. Therefore the authority has to negotiate the audit, for instance by convincing the economic operator that numerous unsafe products are a sure sign of a systemic error. In some countries it is possible to lean on national legislation like the Norwegian "internal control act" that forces an economic operator to operate a kind of a quality control system (an "internal control system") and empowers the authority to audit it.

Both models were tried out in the Joint Action. The Austrian authorities met and discussed with all their major importers that agreed to convey the feedback from the Joint Action tests to their producers in the Far East. Furthermore, the Joint Action management met with the European Importers Association, ELIAS in 2010. This gave the opportunity also to discuss the quality assurance system of one large importer.

Besides this, Norway and the Netherlands carry out such activities systematically towards businesses in their countries.

A guideline in system auditing was developed in connection with this activity. Please see chapter 3.4.12

#### 3.4 Activities Undertaken by the Coordinating Body

These activities include coordination activities and coordinated activities undertaken by the coordinating body.

#### 3.4.1 Kick-off Meeting

The first project meeting in the Joint Action was organised as a 2-day kick-off meeting or workshop. The main objective of the meeting was to develop a detailed project plan for the Joint Action and to provide input to a communication strategy and a stakeholder outreach strategy. A further objective was to get all participants "on board" the action and establish a shared picture of the activities and the outcome.

The meeting was structured with an open half-day session where stakeholders were invited to provide whatever input they found useful for the Member States. The lighter importers' association, ELIAS and the lighter manufacturers' federation, ELFM accepted the invitation and delivered presentations at the workshop. After this there was a  $1\frac{1}{2}$  day workshop for the Member State authorities only. This workshop allowed a thorough sharing of and reflection over the outcome of the previous action. To enhance the transfer of the experiences from the previous Action, representatives from the four countries that participated then and decided to stay outside the new Action were also invited to attend workshop.

The closed part of the workshop was organised as a series of brain-storming sessions, where the participants discussed the following questions:

- What was particularly worth noting in the presentations from industry?
- What was particularly worth noting in the project description of the Joint Action?
- What lessons should be brought forward from the previous Joint Action?
- Which are the main risks in the project and how to cope with them?
- What communication should go out from the Joint Action?
- How should stakeholders be involved in the Joint Action?

This part of the meeting resulted in the collecting of a lot of good input to the execution of the Joint Action without leading to major changes so it was decided to stay with the project plan as laid down in the Grant Agreement [1]. The project plan is annexed in Annex 5, document D3a. A memo with the input from the brain-storming sessions is annexed Annex 5, document D3b.

The last half day was allocated to a tour de table where people discussed the progress with national lighter activities.

This approach was deliberately different from the starting of the previous Action to emphasise "the new beginning" instead of a continuation of the previous action. It appeared to be



successful as the project management received good feed-back from the participants. Furthermore it seemed to be a very efficient way of "getting all participants up to speed" and to collect detailed input from many participants.

#### 3.4.2 Communication Plan

The participants in the Joint Action developed a communication plan for the dissemination and awareness-raising activities that could be foreseen. The communication plan discusses:

- Means for communication (press releases, direct mails, presentations, the PROSAFE Newsletters, workshops, the PROSAFE website, websites of the national authorities, etc.).
- Recipients (the general public, consumers in general, consumer organisations, business organisations, primarily EFLM and ELIAS, individual importers, retailers, wholesalers and manufacturers, CEN, the European Commission, Member States outside the Joint Action, ICPSC and CPSC).
- How the communication should be done (nationally or from the Joint Action).
- When the communication should take place (what should be communicated to mark the anniversaries 11<sup>th</sup> of March as one example).
- The draft contents.

The communication plan includes the envisaged outreach activities to China and the other stakeholders. The outreach to China is expected to be part of an overall PROSAFE strategy on China outreach. The outreach to stakeholders is expected to include two stakeholder meetings coordinated with the European Commission.

The plan is annexed in Annex 6, document E6.

#### 3.4.3 Administration of Action

The Joint Action used a dashboard to facilitate the follow up of the financial situation. It is developed from the dashboard used in the previous Joint Action. An example is shown in figure 4.

The dashboard presents five sets of information:

- The speedometer (upper left) shows the contributions pertaining to the work of Member State officials. The value "38%" is highlighted as it is (close to) the target value. The number in the middle of the grey circle (42,3% in the figure) indicates the actual level.
- The three bar graphs to the right of the speedometer compare the actual costs with the budget for consultancy work, travel costs and subcontracting costs (testing). These three costs are seen to be particularly critical to monitor. The progress is shown in numbers below the bars.
- Below the speedometer is a bar graph that compares costs of the work from the Member State officials with the budget.
- To the right of this graph is a table of the deliverables that are identified in the Grant Agreement. Deliverables will be marked in red if the deadline is passed and the deliverable has not been delivered.
- In the bottom is a table showing the Member States' attendance at the project meetings to help the project management achieve a balanced participation.



Joint Follow-up Market Surveillance Action on Child-Resistant Lighters and Novelty Lighters

Dashboard - overview of progress in Joint Action

Finances

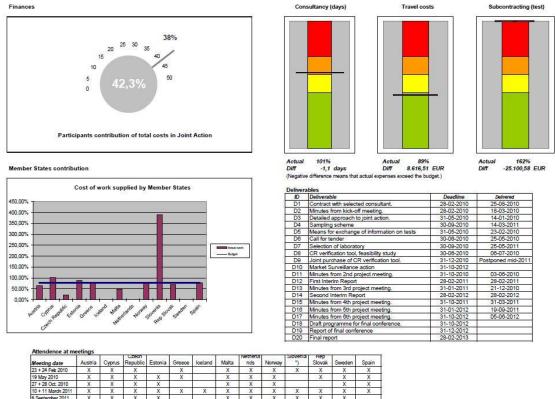


Figure 4. An example of the "dashboard" that is used to provide a quick overview of the progress in the Joint Action to the project group.

#### 3.4.4 Selection of Laboratories

The participants decided to adopt the same joint testing approach that was successfully applied in the first Joint Action meaning that all testing would be contracted to one or two laboratories.

The participating Member States were asked to provide contact details of all the potential lighter laboratories they knew. Eleven laboratories were identified and a call for tender was sent on 25 May 2010 with a deadline set for three weeks later. The call mentioned eight selection criteria:

- Experience with testing of lighters,
- Formal qualifications e.g. accreditation, •
- Price. •
- Delivery time, •
- Terms of delivery, •
- Ability to supply additional services to the Joint Action, •
- Ability to test lighters for individual Member States besides the joint tests, •
- The general impression of the laboratory's ability to undertake the job. •

Five laboratories reacted and sent in quotations. Their replies were compiled in a table and a laboratory assessment group consisting of 3 Member State representatives was set up to evaluate the quotations. A number of additional questions were posed to the laboratories and the replies were collected and evaluated. The laboratory assessment group ended up identifying the two best suited laboratories. After some discussions in the project group, it was decided to award the whole contract to one laboratory, Bureau Veritas in Manchester, United Kingdom.

One other laboratory presented a quotation with equally good commercial conditions but it was decided to reject the offer after a thorough examination. The quotation was based on a proposal to carry out the testing in two laboratories in China. The participants realised that this would imply several severe practical problems. Firstly it would be very costly if a Member State would want to witness a testing. Secondly, transport of the test items would most likely be costly as the transport is long. Transport by air is impossible, so the lighters would have to go by boat which would take 6 weeks. Such a long period was



20-08-2012

seen to be prohibitively long time to ask an economic operator to wait for the results of the testing. Thirdly, sending lighters from Europe to China would cause administrative problems as the products would leave the open market in Europe.

The Joint Action decided to try out this selection procedure with a laboratory assessment group consisting of Member State representatives to find out whether it would be advantageous for PROSAFE and the Member States. The approach would presumably save consultant's resources at the same time increasing the Member States' involvement and gaining of knowledge. The lessons learned were that it is possible, but the participants appear only to have limited resources available for such tasks. Moreover, this approach does not easily benefit from the economy-of-scale enjoyed by the PROSAFE consultants who run several such selection processes. On the other hand, the market surveillance organisations would usually have experts with a much deeper knowledge in laboratory assessment than the PROSAFE consultants so an optimum approach appears to involve a PROSAFE consultant to support with the practical work and Member State official(s) to contribute with the expertise.

#### 3.4.5 Exchange of Information on Investigated Lighters

The participants decided at the kick-off meeting to continue using the database that was developed during the first Joint Action on lighters for exchanging information on investigated lighters. Figure 5 shows a screen shot from the database for a "dummy" lighter.

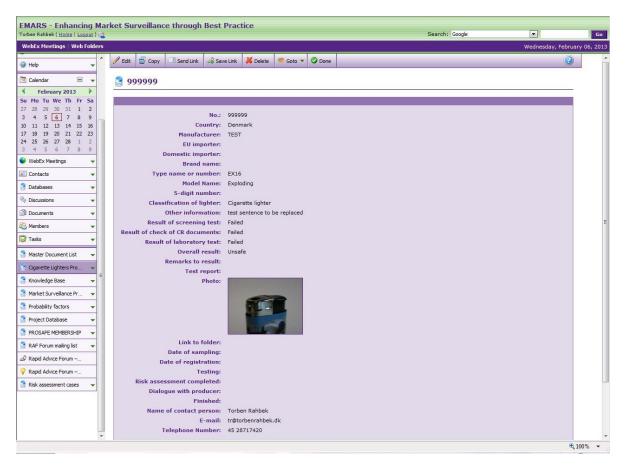


Figure 5. Screenshot from the WebEx database on lighters.

The database stores the following information for each lighter:

- A unique identifier of the lighter;
- Information about the economic operators (name, address, telephone numbers);
- Identification of the lighter (brand name, type name, model name, 5-digit code, classification of the lighter, other information to identify the lighter by and a picture);
- Description of the results of assessments, test and checks performed on the lighter;
- Link to an (optional) folder with more information (test reports, photos, technical documentation, etc.)
- Fields that indicate the progress in the case (e.g. date of sampling, date of testing, date of



completion of risk assessment, or other sorts of relevant information on the progress in the case in these fields);

• Contact information about the person that has reported the lighter.

The database already contained information about 616 lighters from the previous Joint Action. More information can be found in [7] and Annex 5, deliverable D5.

After the end of the Joint Action, PROSAFE has decided to discontinue its engagement with WebEx. The data have been saved and they will be uploaded to the tool that will replace WebEx,

#### 3.4.6 Feasibility Study for a CR Verification Tool

One activity foreseen in the Grant Agreement for the Joint Action was the development of a tool that would allow a market surveillance inspector to do a simple indicative check of the child-resistance of a hard-piezo pusher force lighter. In this lighter type child-resistance is established by the force that is required to push down the plunger to ignite the lighter. Experience shows that the majority of cigarette lighters on the market employ such a CR mechanism and that lighters requiring more than 40 N to ignite would most certainly be child-resistant.

PROSAFE visited CPSC in the United States in February 2008 and saw a demonstration of a suitable test probe for this sort of testing. It can be seen on figure 6.





Figure 6. Test probe designed by CPSC for indicative on site measurements of the childresistance of lighters of the hard-piezo pusher force type.

The inspector carries out the measurement by fixing the lighter between the moveable piston to the left and the fixed part with the strain gauge meter to the right. The lighter is oriented towards the gauge meter so that the small piston visible on the lower photograph presses the plunger on the lighter. The inspector operates the tool by using the handle and increases the force until the lighter ignites. The inspector releases the lighter and the measurement is ended. The strain gauge meter has a "maximum hold" function that stores the maximum force encountered during the measurement.



A study revealed that many other authorities already apply similar measurement methods using less sophisticated equipment. In some authorities, the inspectors manually push the plunger with the strain gauge meter until the lighter ignites. In other authorities, the inspectors have developed very primitive and fast methods without equipment such as operating the lighter between the thumb and the little finger on one hand.

The participants in the Joint Action discussed the feasibility of developing such a dedicated CR verification tool and pointed to a couple of serious drawbacks:

- The measurement reliability appears to be low.
- The force itself doesn't establish the child-resistance; it is possible to design a lighter that can be operated by a child even though it requires more than 40 N and it is possible to design lighters that are child-resistant even though the required force is lower than 40 N.
- The tool does not take the shape of the plunger into consideration.
- The CPSC tool only works for one type of lighters (pusher force hard-piezo lighters).

The participants concluded that the distinguishing of lighters that "are most likely CR" from lighters that "should be checked further" could be obtained just as easy with simpler test methods like the "little finger test". Therefore the development of the test tool appeared to provide too few benefits. It was also noted that CEN TC335 was undertaking a study on technical parameters for child-resistance purporting to develop a set of mechanical test methods for demonstration of child-resistance. Therefore it was decided not to develop a CR test probe.

More information can be found in Annex 5, deliverable D8.

#### 3.4.7 Development of Intervention Schemes and Intervention Limit Values

When a model of lighter is tested at the laboratory in the Joint Action, the results are captured in a test report. If the lighter does not comply with the requirements, it may be dangerous and measures may be necessary. Such measures should be uniform across Europe (or the authorities should at least be able to justify differences) as many manufacturers and importers operate in many Member States and would immediately recognise differences.

In practice the Member State authorities need tools to achieve the required uniformity, and it was decided to develop intervention schemes and intervention limit values to guide the decision-making. The intervention scheme gives values for minor, major and critical non-compliances for each of the safety requirements that are tested in the Joint Action. Using such a scheme an authority can immediately categorise the non-compliances and get an idea about the level of risk posed by the lighter.

The scheme uses "minor", "major" and "critical" non-compliances. They are defined as follows:

- "Minor non-compliance" refers to a level of non-compliance where the risk to the consumer is so low that legal action normally is unlikely.
- "Major non-compliance" refers to the level of non-compliance that present such a risk to the consumer that the authority would normally take action against the product.
- "Critical non-compliance" refers to the level of non-compliance that presents an immediate risk to the consumer. The authority would carry out a risk assessment to decide on a proper reaction.

Some of the safety requirements have a nature whereby the risk caused by many individual samples each slightly exceeding the standard's requirements is considered to be as severe as the risk caused by few samples largely exceeding the standard's requirements. Hence the categorisation depends upon the level of exceeding and the number and it is done using graphs. For the moment this is only applied to two requirements (flame height and volumetric displacement), but the intention is to spread out this principle to more requirements.

The scheme has been used in the Joint Action to categorise the non-compliances that were found in the laboratory tests (chapter 4.3). This enabled an assessment of the difference between the results from the first Joint Action and the present Follow-Up Action.

In addition to the intervention schemes, the memo also lists the main injuries that may be caused by lighters that do not conform to the tested safety requirements. The participating Member States have indicated that this is useful for their communication with economic operators as they have to justify legal measures by referring to the risks that are posed to consumers.

The complete memo is found in Annex 6, document E2.

#### 3.4.8 Risk Assessment for Lighters

When assessing the risk for an unsafe lighter, the risk assessor has to make a number of decisions on the appropriate scenario, the steps in the scenario and the probabilities. All of this involves a certain amount



of estimation which will inevitably give rise to uncertainties in the final assessment. This may cause differences if two people carry out a risk assessment for the same product.

To cope with this, the Joint Action developed 4 model risk assessments, i.e. generic assessments for typical non-compliances illustrating what the scenario would look like, what the steps would be and what the probabilities would be. The model risk assessments also explain the rationale behind the probabilities so a risk assessor will know how to change the value if other conditions prevail.

The 4 model risk assessments cover the following non-compliances:

- A lighter that is overfilled with gas. Five of 50 lighters fail the volumetric displacement test; one is more than 90% filled.
- The lighter produces high flames. Two out of 50 lighters exceed the requirement by 25% or more.
- The lighter breaks when it is dropped. One out of 12 lighters breaks in the drop test.
- The lighter leaks after being dropped. One out of 12 lighters leaks after the drop test.

Each risk assessment describes the injury scenario, type of injuries, severity of injuries, probability factors, calculated probability, probability class and total risk. The model risk assessments were developed together with EMARS Task C, the working group that was responsible for risk assessment in the EMARS project.

The results are shown in table 4. The table shows that the risk for the 4 non-compliances varied between low risk and high risk even if the injuries were quite severe (injury class 3 or 4). The reason is that the resulting probabilities are low, in one case even extremely low. The probabilities however seem to compare well with the participants' immediate feeling: Severe accidents with lighters seem to be rare even though lighters are extremely common products with 1,5 - 2 billion items sold annually in Europe.

Non-compliance	Injury scenario	Type of injuries	Calculated probability	Risk
The lighter is overfilled with gas. Five of 50 lighter fail the volumetric displacement test (85%). One is more than 90% filled.	A (fresh) overfilled lighter is left on the dashboard of a car in clear sunlight. The temperature in the fuel chamber in the lighter increases so much that the lighter ruptures. The gas evaporates and ignites. The car catches fire.	The car burns	2,50E-09	Low risk
The lighter produces high flames. Two out of 50 lighters exceed the 120 mm requirement by 25% or more.	The user is unaware that his lighter produces high flames and ignites a cigarette. The user gets burns in the face or at the hands	Superficial burns in face, hair and on hands	4,00E-06	Low risk
The lighter breaks when it is dropped. One out of 12 lighters breaks in the drop test.	The user drops a lighter on a hard surface. The lighter breaks, the gas evaporates, ignites and the fireball ignites the user's clothes. The user gets burns on legs and feet.	Burns on legs and feet, possibly also lower parts of body	2,08E-05	Medium risk
The lighter leaks after being dropped. One out of 12 lighters leaks after the drop test.	The user drops a lighter on a hard surface. The lighter is damaged and begins to leak gas. The user doesn't notice but puts the lighter in the pocket. The escaping gas ignites the user's clothes. The user gets severe burns on legs and upper body.	Burns on legs and/or upper part of body	2,08E-05	High risk

Table 4. Examples of model risk assessments for 4 typical non-compliances with lighters.These examples are currently under revision.

The complete model risk assessments are found in Annex 6, document E2.

These results have been questioned by stakeholders and work has begun to revise the risk assessments. This work is undertaken by the risk assessment group of Joint Action 2012.

#### 3.4.9 Decision Tree for Novelty Lighters

Novelty lighters is a diminishing safety issue on the European market, but Member States still face



situations where they have to decide whether a given lighter design is a novelty lighter or not. This situation doesn't seem to stabilise as the lighter producers are quite innovative and come up with new and "interesting" designs.

The decision-making process in itself was found to be complicated as the market surveillance authority must check several properties in a proper sequence to make the decision. It was therefore decided to develop a decision tree to support the decision-making process. The work was undertaken by a representative from one of the participating Member States. The decision tree takes the market surveillance official through the necessary decisions one by one in the correct sequence. The participating Member States have indicated that they find this useful for the work in the field. The decision tree is shown in figure 7.

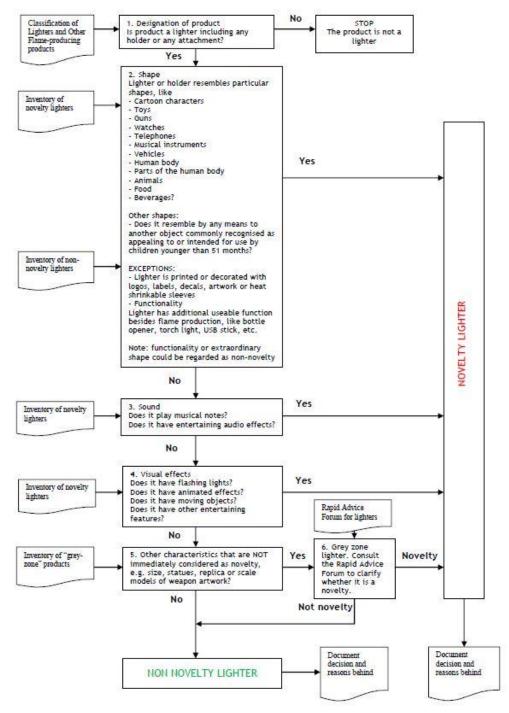


Figure 7. The figure shows the decision tree for novelty lighters.

A memo with the decision tree is found in Annex 6, document E3.

#### 3.4.10 Guideline to importers of lighters from third countries

The Joint Action decided to produce a guideline for "the willing and unable" economic operators (i.e. businesses that want to comply with the rules, but are unable to do so for example because of lack of



knowledge of the rules). To shape such a guideline to the target audience, it was found necessary to have reliable information about how much knowledge the players in the European lighter industry had of the legal requirements governing their business.

The Member State participants found that they lacked such information so a questionnaire was produced aiming at businesses working with lighters. The questionnaire contained questions on the business' knowledge of the legal requirements and standards, the general knowledge of lighters and lighter types, knowledge of child resistance, knowledge of the main safety requirements and knowledge of the 5 warning symbols. The businesses were also asked what technical documentation they thought they were required to possess and what information they actually had available.

The questionnaire is found in Annex 6, document E10.

Eight of the participants (CY, CZ, EE, ISL, MT, NO, SE and SI) used the questionnaire and reported statistics on the replies they got back. These 8 countries had sent out questionnaires to 238 businesses and almost two thirds - 154 - replied.

The general picture was that the situation looked pretty good. The replies showed that approximately 40% of the businesses had very good knowledge about the legal requirements and another 25 - 30% had sufficient knowledge. (The categorisation in "Very good" and "Sufficient" was done individually by the 8 participants based on their assessment of the replies.) The same picture was seen as regards the knowledge about which documents the economic operator should possess. Again, some 40% had very good knowledge about the topic. Moreover some 65% of the respondents indicated that they had the documents that they should have.

An overview of the replies is found in Annex 6, document E11.

The result from this exercise was that a "Guideline for Importers of Lighters from Third Countries" was drawn up. The guideline describes the applicable legislation (the GPSD, the lighter decision, regulation 765/2008 and the legislation for transport) and standards (EN ISO 9994 and EN 13869). Afterwards the guideline discusses some basic requirements when ordering lighters from third countries, like assuring that the lighters comply with the safety requirements, that the manufacturer has undertaken the appropriate conformity assessment procedures and drawn up the technical documentation. The guideline also presents some practical "tips and tricks" to what the importer should check to see if this obligation has actually been lifted by the manufacturer. Finally the guideline discusses the authorities' control, e.g. border control and market surveillance and it ends with a short notice about the obligation to undertake corrective action if a lighter is found to be non-compliant.

The guideline is included in Annex 6, document E16.

The lessons learned from this exercise are that it is very valuable to have knowledge about the businesses' knowledge, but there are several practical issues associated with obtaining it. First and foremost it turned out to present practical difficulties for some of the participants to identify the economic operators on their markets; usually the market surveillance authorities would only know "the black sheep". Customs and business associations can be helpful to solve this issue. Secondly, there are practical problems connected to fitting the activity into national plans at the proper time. Here the main issue seems to be a question of planning well in advance.

#### 3.4.11 (Cross-border) Follow-up of test results on lighters

The Joint Action group discussed a number of times how an authority could do an appropriate follow-up of test results from other authorities. This resulted in development of the document "Follow-up procedure for lighters". It presents a draft procedure for following-up on reports on (potentially) unsafe lighters.

It discusses a couple of issues that are known to present challenges for the authorities:

- Conflicting test reports. Typically the business will present a test report that disagrees on the authority's test result.
- The business claims that the problem is isolated to the particular batch.
- The safety of the lighters varies from batch to batch and from item to item.

The process is presented in the form of a flowchart.

The guideline is included in Annex 6, document E12.

#### 3.4.12 Guideline in system auditing

One of the observations from the more than 5 years of activity in the two Joint Actions on lighters was that sampling and testing of lighters in itself doesn't always seem to be the most efficient way to increase the safety in a product sector. So the participants discussed this and it was suggested to try a different approach where the authorities "audit" the economic operators to see if they have the



systems in place to assure that the lighters they import are indeed safe. The discussions also showed that some Member States had good experience in applying such measures so there was a good background in the project group for undertaking such activities.

One problem is the different legislation in the Member States. Some of the participants have legal powers to audit quality management systems at economic operators. Others have to base themselves on the minimum requirements that follow from the GPSD.

The participants decided to develop a guideline taking the minimum requirements from GPSD and the lighter decision as the base so that the guidelines would be applicable in all European countries.

The guideline describes the steps an authority should undertake to do a system audit of a business. It has been developed to be very practical with advice on "how-to-do".

The guideline also describes the recommended minimum set of requirements for a best practice quality assurance system for lighter importers.

It is included in Annex 6, document E13.

#### 3.4.13 A draft guideline with best practices in market surveillance on lighters

The two joint actions have resulted in a number of best practices, guidelines, interpretations and tips & tricks that applies to market surveillance for lighters. They have been compiled into a draft guideline. The scope of it is market surveillance on lighters, but the project group appreciates that a large part of the contents also applies to other products.

The intention behind the document was to present all this information in one document that could be accessed by interested market surveillance authorities.

The work is in progress and will be further developed in the coming years as the Member States' knowledge base increases. The current draft of the guideline is included in Annex 6, document E17.

#### 3.4.14 Aligning and Harmonizing the Member States' Approach

One of the important purposes of joint actions is to promote a more harmonised approach among the participants. The Joint Action on lighters worked in several ways to achieve this.

A significant part of all meetings was a "tour de table" where all participants presented the most recent developments in their countries and discussed any issues that had arisen. The activity had two purposes: The participants could learn from the experiences of each other and they could benefit from the total bank of knowledge that had accumulated in the group.

The Joint Action also proved to be an efficient vehicle for harmonising the Member States' reaction when one of the economic operators filed complaints against another economic operator in most European Member States. The Member States discussed the developments and shared results of their investigations during the meetings. This activity even extended beyond the participants in the Joint Action to Member States outside the action where the complaints were also filed.

#### 3.4.15 The Rapid Advice Forum for Lighters

The Rapid Advice Forum for Lighters was very successful in the first Joint Action so it was continued in this second Joint Action with a similar success. It was noted however that the focus of the forum gradually changed. In the first Joint Action a lot of questions concerned lighter designs that might be seen as novelty lighters. These questions were discussed and the conclusions were captured in the inventories of novelty lighters and designs that were not considered to be novelty lighters. This meant that a solid base of knowledge gradually built op and the focus of the forum shifted to questions of another nature. Over the 3 years, the Forum (or the consultant) handled 74 questions in total. 27 of these concerned potential novelty lighter designs, e.g.:

- Lighters with engraved pictures and ornamented metal lighters.
- Lighters with moving objects.
- Lighters that glow in the dark.
- Lighters resembling to other objects, e.g. perfume containers, a set of cards, slot machines, bank notes, hand grenades, pencils, cigarettes, smartphones and ball pens.
- Multi-function lighters with knives, watches and torch lights.
- Lighters that smell when the user scratches the surface.
- Tool-like lighters.
- Lighters with attachments or illuminated ornaments.



The other questions that were handled dealt with such issues as:

- The requirement for an EMC certificate for an electronic lighter.
- Lifetime of test certificates.
- Location of warnings.
- King-size (XXL) lighters.
- Force requirements.
- The standard for utility lighters (EN ISO 22702).
- Classification of other flame-producing devices (e.g. a kitchen burner and a wrist watch with an integral lighter).
- The definition of importer.
- The legal reference for the standards.
- Legal requirements for marking of CR lighters.
- Permissible fuels.
- Evaluation of CR documentation.
- Low-cost luxury lighters.
- Test laboratories and essential test requirements.
- The 5-digit export code applied by the Chinese export authorities.
- The necessity for using EN ISO 9994 to demonstrate the safety of a lighter.
- Classification of lighters (luxury, utility or cigarette lighter).
- And a number of questions related to specific models, documents or cases.

#### 3.4.16 Synergies with other PROSAFE Activities

The Joint Action was coordinated with the EMARS II project and the Joint Action 2011, in particular the working groups that worked with guidelines and checklists (EMARS II, Task A) and risk assessment (EMARS II, Task C and the risk assessment group of JA2011).

In practice this coordination was been easy as it is the same consultant that is working with the Joint Action and the above Tasks. Moreover the project leader chaired the work in EMASR II, Task A from the beginning.

The Joint Action on lighters benefited directly from a number of outcomes from the EMARS projects:

- The idea of doing joint testing came out of the first EMARS project and the first Joint Action for lighters and has been further explored in the second Joint Action.
- The concept of the Rapid Advice Forum was developed by the first EMARS project.
- Documents from the EMARS knowledge base served as background papers for the Joint Action.
- The WebEx website set up by the EMARS projects served as a platform for storing the documents created by the Joint Action.
- The WebEx database set up by the previous Joint Action on lighters continued to be the main means for sharing information on lighters.
- The work in EMARS Task C on risk assessment has fed directly into the efforts in the Joint Action to develop intervention limit values and model risk assessments for the enforcement activities.
- Outreach to China was undertaken in close coordination with PROSAFE's other China outreach activities and the Joint Action on China in particular.
- Cooperation with Customs benefitted from the good contacts between DG TAXUD and EMARS Task A that works with practical guidelines. The Joint Action on Lighters contributed to the work with a checklist on lighters that customs officers can use in their border control.

#### 3.5 Dissemination Activities

#### 3.5.1 Press Releases

The participants in the Joint Action published two press releases:

• Press release 1 May 2010



The press release informed stakeholders and the general public that the market surveillance activities against dangerous cigarette lighters continued. Furthermore it repeated the results of the recently finished Joint Action (from 2007 to 2009) and the advice to consumers.

It was published by at least five of the participating Member States and on the PROSAFE website. The press release is annexed as annex E1.

• Press release Feb 2011 on XXL lighters

The press release informed stakeholders and the general public that a new type of lighters (sold as "XXL lighters", "Jumbo lighters" or "Giant lighters") had entered the European market. This was problematic as such lighters most often contained so large amounts of fuel that they could no longer be transported as lighters but had to fulfil (stricter) requirements applying to larger gas containers.

The press release was published by at least seven of the participating Member States and on the PROSAFE website.

The press release is annexed as Annex 6, document E7.

Afterwards the participants realised that it would be useful to communicate the same message to the Member States outside the Joint Action. The press release was found to be less useful for this purpose so the Action prepared a "Joint Action opinion" that was sent to the GPSD committee.

The Joint Action opinion is annexed as Annex 6, document E9.

• Press release March 2011 on launch of joint market surveillance - border control activities The press release informed stakeholders and the general public that the market surveillance activities and customs joined forces in a joint market surveillance - border control effort against dangerous cigarette lighters.

It was published by at least six of the participating Member States plus PROSAFE and the European Commission, DG TAXUD.

The press release is annexed as Annex 6, document E8.

• Press release June 2012 on the interim results of the laboratory tests

The press release informed stakeholders and the general public about the results from the first 29 laboratory tests.

It was published by at least seven of the participating Member States plus PROSAFE.

The press release is annexed as Annex 6, document E18.

• Newsletter November 2012 on the end results of the Joint Action

The press release was published immediately after the final workshop and the purpose was to inform about the results of the Member States' market surveillance activities and the 74 laboratory tests.

(It was decided to change the name and formant of the publication into a "newsletter" because the term "press release" was found to be confusing as the publication is typically used by other parties (the participating Member States) to provide contents for their press releases.)

The press release is annexed as Annex 6, document E15.

#### 3.5.2 Outreach to CEN

The Joint Actions (also) represent one major effort to test the feasibility and applicability of the standards that cover the products that are targeted by the activities. The Joint Action on Lighters was no different, in particular when it concerned the CR standard, EN 13869. The previous Joint Action carried out one child-panel test to verify the child-resistance of a lighter and learned that it was difficult, if not impossible for an authority to undertake child-panel testing for lighters of unknown origin.

This knowledge is brought into the current revision of EN 13869 undertaken by CEN/PC355.

Moreover, representatives from CEN have been invited for the meetings where stakeholders could attend.

#### 3.5.3 Meetings where Presentations of the Joint Action have been given

Presentations of the Joint Action were given at several meetings in PROSAFE and the Consumer Safety Network.

The meetings in the Consumer Safety Network also served as a platform for spreading information about the best practices and other tools that were developed by the Joint Action.

#### 3.5.4 Final Workshop



The Joint Action ended with a 1-day workshop for the participants, other Member State authorities and stakeholders. The workshop was well attended with participation from all major European lighter businesses.

The purpose of the workshop was to inform about the results of the Action and to provide training to the businesses about how market surveillance worked and how business could interact with a market surveillance authority. The agenda is shown in *figure 8*.

TIME	N°	SUBJECT
TIME	N	SUBJECT
9:30		Registration of participants, coffee
10:00	1.	Opening of Conference • Opening remarks by PROSAFE • Remarks from the European Commission • Remarks from the European Free Trade Association
10:15	2.	Overview of the Joint Action and its results <ul> <li>Activities undertaken in the Joint Action</li> <li>Cooperation with customs</li> <li>Results obtained in the Joint Action</li> <li>Reflections and comments from stakeholders.</li> </ul>
11:30		Coffee break
11:45	3.	Overview of the Joint Action and its results (continued) <ul> <li>Activities undertaken in the Joint Action</li> <li>Cooperation with customs</li> <li>Results obtained in the Joint Action</li> <li>Reflections and comments from stakeholders.</li> </ul>
12:30		Lunch break
13:30	4.	Putting the Joint Action in context Links to the first Joint Action on Lighters Standardisation, revision of EN 13869 Lighters after the Joint Action
14:30		Coffee break
15:00	5.	Open session: Do's and don'ts for the lighter business (lively interaction is welcomed): How does market surveillance work? Consultation of business Business' internal control mechanisms (quality assurance) Reacting on test results Comments, observations and reflections
17:00	6.	Any other business
17:05	7.	Closure of the conference

#### DRAFT AGENDA

Figure 8. Agenda for the final workshop.

The workshop started with a presentation of the activities and results from the Joint Action. This included presentations of some of the tools that were developed during the Action such as the decision tree for novelty lighters, the inventory of novelty lighters, the "opinion" on XXL lighters and their particular risks and the guideline for importers. The session also included a presentation of the results of a ring test carried out by the Dutch authorities that showed remarkable differences between the test results from three laboratories.

The stakeholders were then invited to comment and reflect over the presentations and the outcome. In general business was very happy about the large work that had been undertaken and the results that were achieved, but it was also noted that there was still "room for improvement". The brief conclusion of the almost 6 years of activities was that the two Joint Actions had (almost) removed the novelty lighters from the European market, but they hadn't been able to clear the market from unsafe lighters. However, next



to the "lighter results" were a number of unforeseen benefits like procedures for joint testing, for issuing joint press releases, the Rapid Advice Forum for lighters and all the tools that had proven to be beneficial in other PROSAFE actions.

The workshop ended with an open session on "Do's and don'ts for the lighter business". Here the Joint Action informed about how market surveillance works and how business should react when they are consulted as part of a market surveillance case. This part also featured a presentation with advice on the contents of businesses' internal control mechanisms.

The invitation is annexed in Annex 5, deliverable D18.

The minutes are annexed in Annex 5, deliverable D19.

The presentations are annexed in Annex 6, documents E14a - E14k.

#### 3.6 Awareness-Raising Activities

The Joint Action undertook numerous activities to increase the awareness of the Action with different parties:

#### 3.6.1 Member States and other countries outside the Joint Action

Several Member States were active with market surveillance activities on lighters even though they did not feature in the financial scheme of the Joint Action:

- The four Member States that decided to leave after the first Joint Action on lighters (Bulgaria, Denmark, Latvia and Poland) contributed actively during the planning of the present Joint Action. Bulgaria and Poland also attended the kick-off meeting.
- Ireland joined the Action in 2011 and participated in several of the meetings outside the financial scheme.
- Member States outside the Joint Action benefitted from advice from the Rapid Advice Forum (Belgium and United Kingdom).
- Two Member States (United Kingdom and Romania) reported statistics on their market surveillance activities in 2010 for this report.
- Member States outside the financial scheme have participated in the sharing of information on the European-wide complaint against a large economic operator.
- Several more Member States received copies of the information that is produced by the Joint Action.

In total, 19 Member States were actively involved in (parts of) the Joint Action inside or outside the financial scheme and the Joint Action attracted the interest of 4 more Member States plus Switzerland and Croatia. Furthermore the CPSC in the United States received material from the Joint Action and there were contacts to Japanese stakeholders.

Last but not least, the two Joint Actions became a focal point for the European activities on lighters, and several countries outside the Action contacted the project leader or the consultant when they had issues with lighters.

#### 3.6.2 The European Commission

DG SANCO of the European Commission was the most important stakeholder for the Joint Action and representatives were invited to participate in all project group meetings. In addition, updates were produced when requested by the Commission (e.g. for reporting to meetings in the Consumer Safety Network or the GPSD committee).

DG TAXUD of the European Commission was also a key stakeholder as the Joint Action heavily involved customs. Representatives from DG TAXUD received all material produced by the Joint Action and attended one of the project meetings. They took a very positive approach to the potential involvement of customs in the Joint Action and acted as the main liaison between the Joint Action and the Member State customs services.

#### 3.6.3 Stakeholders

Throughout the more than 5 years of activity, the Joint Actions on Lighters attracted a high level of interest from stakeholders, in particular business. As a consequence several meetings were held with the lighter importer's association, ELIAS and the lighter manufacturers' federation, EFLM as can be seen from the list of meetings in chapter 3.2.3.



The two business organisations were also involved in the kick-off meeting (see chapter 3.4.4).

It has proven difficult to achieve a well-balanced involvement of all stakeholders including in particular the consumer organisations. ANEC has however participated in one meeting together with the European Commission and the lighter manufacturers' federation and in the final workshop.

#### 3.6.4 Outreach to China

The vast majority of the lighters on the European market originate from China so outreach to China was planned as an integral part of the Action from the beginning and provisions were included in the budget.

This however turned out to go differently. From the beginning, the most obvious means appeared to be a 5-day mission to China to discuss lighters with the Chinese authorities and to present the findings of the Joint Action and the safety requirements. Secondly, such a mission could gather experiences with surveillance activities in China in cooperation with the Chinese authorities.

This mission was intended to be coordinated with the joint Commission-China activities and with similar outreach activities in other PROSAFE Joint Actions (on helmets and baby walkers). This was discussed with the European Commission in September 2010 and the result was that PROSAFE's chairman, Jan Deconinck, presented PROSAFE and its activities during the Shanghai summit in October 2010.

It was decided to expand these activities with a more sharp focus on lighters, helmets and baby walkers, so PROSAFE continued the discussions with the European Commission aiming at another visit in 2010. Unfortunately this was so late that the Chinese authorities replied back that it was impossible for them to organise anything before the end of the year.

New discussions were started in 2011 together with the European Lighter Importers' Association, but this initiative soon turned out to stumble over the upcoming Joint Action on China that was beginning to materialise. Still, one result of the activity was that the consultant participated in a trilateral round table in Beijing in November 2011 purporting to find ways to share information on dangerous products with Chinese manufacturers. The roundtable was also attended by several representatives from the Chinese lighter industry and the European lighter importers.

One of the experiences from this is that all such activities have to be closely coordinated to avoid that they present a scattered picture to the counterparts and to ensure that the European side maximises the benefits from the activities. Therefore PROSAFE has nominated a person to be responsible for all outreach to China and all contacts from PROSAFE actions will be coordinated via the Joint Action on China.

#### 3.7 Differences between Work Program and Activities Actually Undertaken

Table 5 below compares the activities foreseen in the work programme as stated in the Grant Agreement [1] to those actually undertaken in the Joint Action.

Planned Activity	Activity Actually Undertaken
Market Surveillance Activities	
Market surveillance authorities will check lighters in the market.	<b>Completed.</b> 8.008 inspections were carried out at retailers. 612 inspections were carried out at wholesalers and importers. 5.228 lighters where checked at these occasions. Please also see chapter 3.3.2.
Market surveillance authorities will carry out systems audits at European importers and manufacturers.	<b>Completed.</b> A number of systems audits were carried out, mainly as part of the follow-up of the laboratory tests.
Customs authorities will inspect consignments with lighters at the border.	<b>Completed.</b> Customs checked 1.003 consignments or containers. A joint market surveillance and border control activity was carried out by the market surveillance authorities and customs in spring 2011. Please also see chapter 3.3.1.



Planned Activity	Activity Actually Undertaken
A number of potentially non- complying lighters will be tested at laboratories.	<b>Completed.</b> 74 lighters were tested at an accredited laboratory. Please also see chapter 3.3.3.
A common sampling scheme will be discussed and laid down.	<b>Completed.</b> The participants discussed and agreed on a sampling scheme prior to the first coordinated sampling of lighters in March - May 2011. Please also see chapter 3.3.3.
Coordination Activities	
Six project meetings will be organised.	<b>Completed.</b> Six project meetings were organised during the Joint Action. Please also see chapter 3.2.1.
The Joint Action expects to meet once a year with industry in the Commission's core group for lighters.	There have been no meetings in the Commission's core group for lighters. The Joint Action has maintained regular contacts with stakeholders. They also attended the final workshop.
One of the above project meetings will involve representatives from Customs in the participating Member States.	A joint meeting with customs and market surveillance was organised 11 March 2011. Please also see chapter 3.2.13.2.2.
One project meeting will be organised to prepare and discuss the final report and to prepare the final conference.	<b>Completed.</b> The final conference was discussed at the sixth project meeting and via email.
A final report is prepared.	<b>Completed.</b> The present document has been prepared.
A conference will be organised to disseminate the results from the Action.	<b>Completed.</b> A final workshop was held 8 November 2012. Please also see chapter 3.5.4.

Table 5. Overview of activities foreseen in the working program and activities actually<br/>carried out.



### 4 Results of the Joint Action

#### 4.1 Introduction

According to the Grant Agreement [1], the primary purpose of the Joint Action is to ensure that lighters placed on the EU market are safe. The success of the Action is measured from the following indicators:

- The share of non-compliant lighters that are found on the European market.
- The share of non-compliant lighters that are imported to Europe.
- The share of non-compliant lighters that are produced in Europe.
- The share of shops that markets novelty lighters.

These indicators are estimated from the results of the activities rather than measured. The reason is that a statistically correct measurement of each indicator would imply sampling at random and investigations of safe lighters - an activity that would not contribute to consumer safety. Therefore the Joint Action estimates its success from the Member States' reports on their perception of the market, the results from the tests, how easy it is to find non-compliant lighters, etc.

The secondary purpose is to gather experience related to best practice techniques in following up large Joint Actions and to further develop best practices for national market surveillance Actions including cooperation with customs (nationally and internationally).

#### 4.2 Results from Member States' Market Surveillance Activities

#### 4.2.1 Capturing Results from the Member States

The Member States were asked to report the results of their market surveillance activities on a quarterly basis. They were requested to report the number of lighter models checked, the number of non-compliances found and the nature of the non-compliances split on CR non-compliances, non-compliances linked to EN ISO 9994 and other non-compliances (like missing or wrong instructions, novelty lighters, lighters that do not meet the exclusion criteria for luxury lighters, etc.). Alternatively the Member States could report the total number of non-conforming lighter models found without specifying the non-compliance.

Some authorities reported data as accumulated numbers for periods longer than one quarter. Such figures have been divided proportionally over the relevant periods.

The detailed statistics from the Member States' inspections can be found in Annex 1 and in deliverable D10. The following chapters analyse and discuss the results.

#### 4.2.2 Level of Compliance

The Member States have reported that they have checked a total of 5.228 lighter models during the 3 years of the Joint Action. The inspections showed that 1.500 of these did not comply with the safety requirements. This is shown in figure 9.



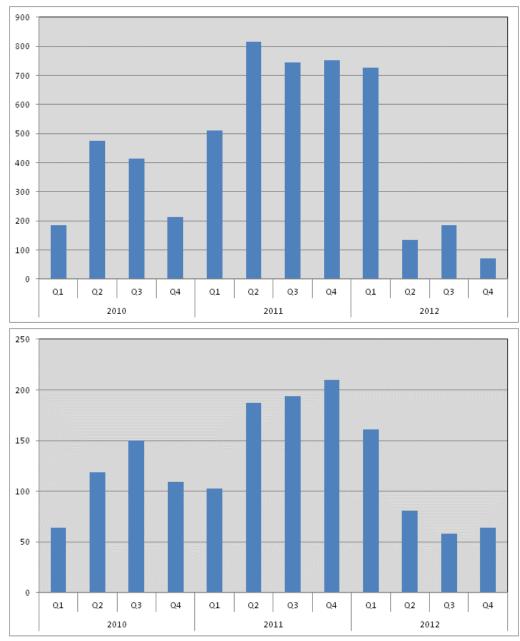


Figure 9. The results of the checks in the Joint Action. The upper diagram shows the number of lighters checked. The lower diagram shows the number of non-compliant lighters.

A comparison of the two graphs in figure 9 shows the non-compliance rate. It is seen that it has varied considerably during the three years (from 25% in Q2, 2010 to 89% in Q4, 2012). This figure is influenced by the processing time in the authorities: If a lighter is taken for investigation in one quarter and the result in only available next quarter, there will be a disparity between the figures that are divided. The processing time will be short if the investigations are simple (e.g. checking whether documents are present and correct), whereas it can be much longer if the investigations involve laboratory testing and assessment of the test results. It is uncertain how much this impacts the figures in this case.

One cannot say that the above figures give a fully representative picture of the share of non-compliant lighters on the market. Market surveillance inspectors tend to (and should) "zoom in" on non-compliant lighters and would, for instance, do more checks in shops with many non-compliant lighters to "clean the place"; whereas they would quickly leave shops, where the first few checks indicate that the lighters are OK. This approach is sound as it focuses on increasing the consumer safety, but it will bias the non-compliance rate and drive it up. One should therefore ideally see an increasing figure as the inspectors become better and better trained in identifying the con-compliant lighters.

#### 4.2.3 Nature of the Non-Conformities

The Member State that checked the lighters categorised the non-conforming lighters according to the



nature of the non-compliance. The result is shown in figure 10.

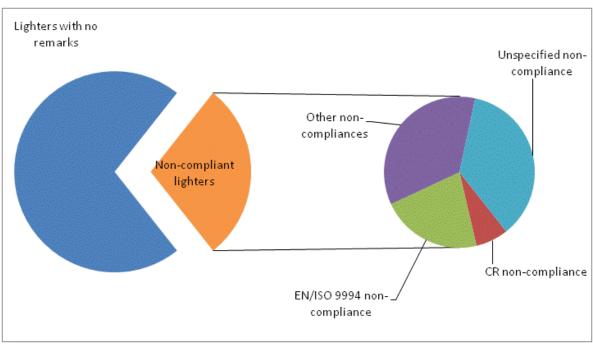


Figure 10. The nature of the non-compliances identified in the lighters checked in the Joint Action.

The figure shows that the biggest share of the lighters on the market (corresponding to 71%) complied with the safety requirements. The biggest share of the non-compliant lighters is seen to be "Unspecified non-compliances" (36% of all non-compliances). These are cases, where the statistics did not contain any details on the non-compliances. They are left out of the further analysis. (It seems reasonable however to assume that the distribution of these non-compliances would be the same as for the remaining non-compliant lighters.)

This means that the non-compliances were categorised properly for 960 lighters:

- 105 of these lighters had CR non-conformities, i.e. they were not child-resistant (or the economic operator was unable to produce evidence that the lighters were child-resistant). This corresponds to a share of 11%.
- Another 326 lighters (34% of the 960 lighters) did not comply with the requirements from EN ISO 9994. This standard gives all the technical safety requirements. The reports from the Member States do not detail the categorisation further than "non-compliance with EN ISO 9994". However, the reports from the Member States at the project meetings showed that they only carried out a limited number of laboratory tests beyond what has been tested as part of the Joint Action (please see next chapter). Therefore the majority of the non-compliances behind figure 10 have a character that could be identified by the inspector on the spot, e.g. lacking warnings or instructions.
- Finally 529 lighters (55% of the 960 lighters) had other non-conformities. This includes missing or wrong instructions, novelty lighter designs, lighters claimed to be luxury lighters that did not meet the exclusion criteria, etc.

#### 4.3 Results from Laboratory Tests

The project plan foresaw that 75 lighters be tested in a laboratory. The result was that 74 lighters were sampled and tested at an accredited laboratory during 2011 and 2012.

The results are shown in the upper diagram in figure 11. It shows that the laboratory did not find any noncompliance with 41 of these lighters corresponding to a share of 55%. This compares to the previous Action where only 35% of the lighters did not receive any remarks during the test.

The participants in the Joint Action developed the tool for categorisation of non-compliance as described in chapter 3.4.7. This tool was used to assess the test reports in more detail to get a more solid base for comparing the previous Joint Action to this one, see figure 11.



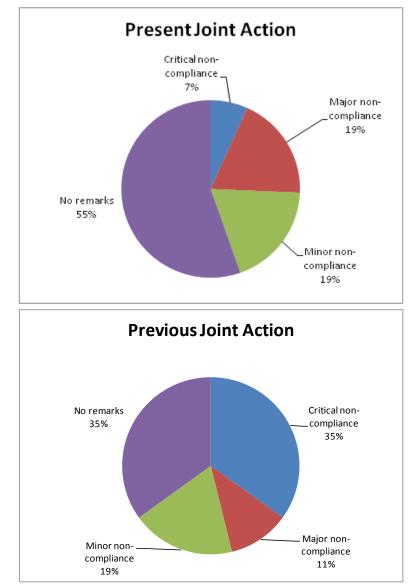


Figure 11: Comparison of the non-compliance found in the laboratory tests in the present Joint Action compared to the previous Action.

The figure shows two things. Firstly, one can immediately see that the share of lighters with "no remarks" has increased significantly since the previous Joint Action (from 35% to 55%). Secondly, one can also see that the share of critical non-compliances has decreased dramatically (from 35% to 7%). The same is seen to be the case with major non-compliances where the share falls from 19% to 11%.

One of the explanations of this apparent improvement is that the two populations of lighters behind the two figures are different: The split across economic operators is different in the two actions and probably more important the two populations were exposed to different test requirements. (The lighters in the first population were tested against 8 requirements from EN ISO 9994, whereas the lighters in the second population were tested against 6 requirements.)

An estimate can be made to allow for these differences:

- All minor brands and no-name lighters are left out of the analysis and the selection is limited to companies represented in both Joint Action (i.e. BIC, Electronica, Flamagas, Plattner, Polyflame, Swedish Match, Heinz Tröber and Unilite).
- The test requirements are aligned by omitting the outcome of the two additional tests from the results of the first Joint Action.

The result is shown in figure 12.



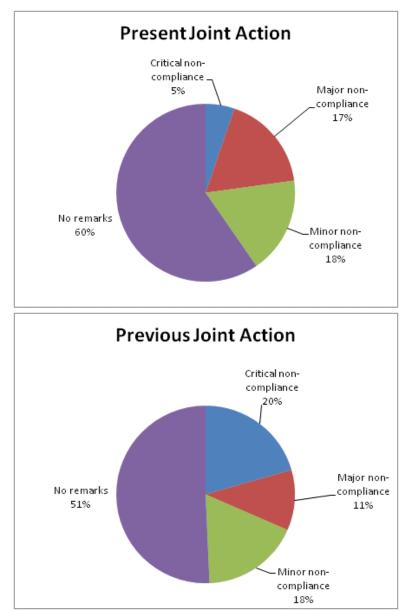


Figure 12: Comparison of the non-compliances found in the laboratory tests in the present Joint Action compared to the previous Action. Only brands that are present in both Actions are included.

The figure shows the same trend, the number of lighters with non-compliances in the laboratory tests has decreased from 49% to 40%, and the number of lighters with critical non-compliances has dropped from 20% to 5%. The enforcement activities have apparently worked.

The improvement can be seen when analysing the results from imported lighters and lighters manufactured in the EU. This is shown in table 6 and table 7. The populations of lighter models in the two tables have been adjusted to accommodate lighters from the same eight companies only.

Share of lighters tested without remarks	Importers	EU manufacturers	Number of tested lighters
Previous Joint Action	35%	90%	73
Present Joint Action	51%	81%	57

Table 6: The table shows the share of lighters that were tested without remarks from the laboratory.

Table 6 shows that the share of imported lighters that were tested with no remarks from the laboratory has increased significantly (from 35% to 51%) in the 2 years that has passed. The table also shows that the share has dropped (from 90% to 81%) for EU manufactured lighters in the same time. This is probably due to statistical uncertainty and the fact that the present Joint Action has done greater efforts to pick a



representative sample covering all major manufacturers.

Probably an even bigger impact on consumer safety can be seen from table 7. It shows the share of lighters where the tests revealed critical or major non-compliances, i.e. the lighters that represent the most serious risks to the consumers.

Share of lighters with critical non-compliances	Importers	EU manufacturers	Number of tested lighters
Previous Joint Action	<b>29</b> %	0%	73
Present Joint Action	7%	0%	57

Table 7: The table shows the development in the share of lighters where the test showed critical non-compliances.

The table shows that the share of the most risky lighters has dropped significantly for imported lighters. The share of the most risky imported lighters has fallen from 29% to 7% (almost 4 times). At the same time, the share of the most risky EU manufactured lighters has remained on 0%.

This seems to be a good indication that the efforts in the Joint Actions on lighters have indeed worked, and the lighter market has become safer in the past few years. However one must also conclude that there is still "room for improvement". Figure 11 and figure 12 clearly shows that some 40 - 45% of the lighters on the market still do not comply with the safety requirements.

When looking at the numbers one has to understand how the figures have been estimated to understand better the uncertainties that are introduced by the estimation. Figure 13 explains how the differences in test requirements have been aligned. The upper picture illustrates the test procedure in the previous Joint Action, the middle picture illustrates the test procedure in the present Joint Action, and the lower picture shows the differences between the two test procedures.

Both test methods starts from a lot of 50 lighters that are sent for testing.

In the first Joint Action this lot is split into groups of 6 lighters. Each group is subjected "fresh" to one of the tests in Stage 1. (There are two exceptions: The volumetric displacement test only used one lighter - the heaviest one, and the drop test uses two 6-lighter groups because it includes 2 tests - one with cold lighters and one with lighters at room temperature.) One lighter is kept as a spare.

After these tests, all "used" lighters are subjected to four or five more tests as "used lighters" (stage 2) as indicated in the figure: All lighters will go through all the 5 tests in stage 2 with the exception that no lighters will go through the same test twice. Therefore lighters that have been subjected to e.g. the test for spitting, sputtering & flaring in stage 1 will skip this test in stage 2. This means that each of the stage 2 tests will comprise 42 lighters.

The approach is almost the same in the test method that is applied in the present Joint Action except that two tests have been omitted in stage 1 and 2. This means that the split can be done differently to test the lighters as efficiently as possible. The middle picture shows that this results in three 9-lighter groups and three 7-lighter groups.

Again, each group of lighters is subjected "fresh" to one of the stage 1 tests with the same two exceptions as before. Afterwards all "used" lighters will go through the 3 stage 2 tests. This means that each of the stage 2 tests will be carried on 39 lighters.



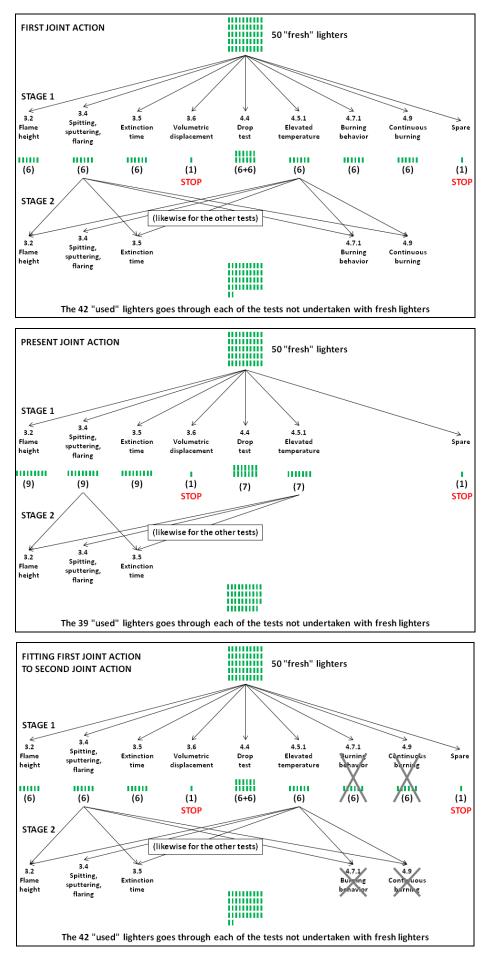


Figure 13: Illustration of how comparable test results are estimated



Omitting the two tests from the analysis of the outcome of the first Joint Action decreases the number of non-compliances with something like 10 percentage points. This is the estimate for the difference caused by the different test procedures alone. It is however an estimate and there are different sources of errors that may impact on this result.

One thing that can be seen from the bottom picture on figure 13 is that omitting tests from the analysis is equivalent to performing the test on fewer lighters. The second Joint Action checks 49 lighters "fresh" against a number of test requirements. The two extra tests in the first Joint Action use 12 lighter which means that only 37 lighters are tested in "fresh" condition against the requirements that are repeated in the second Joint Action. All things equal this decreases the chances for identifying non-compliant lighters in the estimated results from the first Joint Action. (Intuitively speaking, the more lighters we test the more non-compliance we find.) This in itself should decrease the non-compliance rate that is calculated for the first Joint Action. (Or in other words, the figures stated for the first Joint Action in figure 12, table 6 and table 7 should actually be even higher and the difference to the second Joint Action even larger.)

Furthermore to add to this uncertainty, the test requirements were even altered during the first Joint Action: The test programme did not include tests for volumetric displacement and continuous burning from the beginning and the first 25 lighters were not subjected to these two tests. All things equal, this would mean that some of the first lighters that passed the test would have failed if they had been subjected to all requirements. (For information, 15 of the 25 first lighters passed.) It seems reasonable to anticipate that this would also increase the number of non-compliant lighters found in the first Joint Action.

One may claim that the larger test programme in the first Joint Action "stresses" the lighters more, which would identify more non-compliance. Intuitively speaking, this makes sense: The more you test a lighter the more likely it is that it will fail. It is difficult to find evidence in the data that support this argument however. The tests in the two Joint Actions identified all together 55 lighters with critical non-compliance. 39 were identified during the stage 1 tests and only 16 did not show before the stage 2 tests. (Only one of these non-compliances was identified in the two extra stage 2 tests.) This seems to support a perception of lighters dividing in "black sheep" and "good guys": If the test identifies a lighter with one type of non-compliance, the data indicates that is more likely to find more types of non-compliance with that lighter (so we have found a "black sheep"). On the other hand, if the lighter complies, it seems to be of a better quality and it will pass the entire test programme no matter how long it is. Therefore it seems to makes sense to test as many different requirements during stage 1 as possible to identify "the black sheep". At the same time, the data indicate that the following stage 2 tests will only identify few more non-compliant lighters.

An alternative estimate can be made by subjecting a number of the same lighters to both test procedures and comparing the results. The European Federation of Lighter Manufacturers, EFLM, has made this exercise with 10 lighter models. Their analysis showed that 2 of the lighters failed on the extra tests, i.e. the tests suggested a difference of 20 percentage points due to the differences in test procedures. This conclusion however builds on tests of only 10 lighter models compared to the 218 lighters tested in the two PROSAFE Joint Actions. Therefore the uncertainty on the estimate must be rather high seen for statistical reasons. EFLM is considering repeating the test with more lighters.

The situation is that we can only estimate what the real difference between the first and the second Joint Action on Lighters is. One estimate arises if we analyse the test results omitting the extra tests from the first Joint Action. Another estimate arises if a number of the same lighters are subjected the both test procedures. The above analysis of the errors does not give reason to prefer the second estimate for the first one.

#### 4.4 Ring Test - Benchmarking of 3 Laboratories

During the Joint Action, the Dutch authorities, NVWA carried out a benchmark test of three lighter laboratories. All laboratories were accredited to test lighters according to EN ISO 9994.

The ring test was carried out the way that NVWA sampled 3 lots each with 50 items of 7 different models of lighters. They were sent to three laboratories (TÜV, Bureau Veritas and NVWA's own laboratory) in a blind test. The laboratories were asked to test the following 9 safety requirements according to EN ISO 9994:

- 3.2, flame height
- 3.4, resistance to spitting sputtering and flaring
- 3.5, flame extinction
- 3.6, volumetric displacement



- 4.4, resistance to dropping
- 4.5.1, resistance to elevated temperature
- 4.7.1, burning behaviour
- 4.9, resistance to continuous burning
- 6, instructions and warnings

The results from the 3 laboratories' tests of the 7 lighters can be seen in table 8.

	Laboratory 1	Laboratory 2	Laboratory 3
Lighter 1	pass	pass	fail
Lighter 2	pass	fail	pass
Lighter 3	pass	pass	fail
Lighter 4	pass	(pass)	pass
Lighter 5	pass	fail	pass
Lighter 6	pass	fail	fail
Lighter 7	pass	pass	fail

Table 8: Comparison of the results of 3 laboratories' test of 7 lighter models.

The table shows that the differences are remarkable. All lighters were sampled from the same batches. Still, there is only one lighter where all three laboratories (almost) agree, and the two last laboratories disagree on 5 of the 7 lighters.

The test did not make it possible to tell what the correct answer was, but a number of potential reasons for the discrepancies could be identified:

- Insufficient standardisation of the manufacturing process.
- Insufficient quality assurance in the manufacturing process and with the importer.
- The tests are undertaken on too few test items. The European laboratories recommend that 50 items be tested. The Japanese authorities prescribe 1.500 items to be tested. A European manufacturer tests 200 items.
- The standard may be poor.
- The laboratories may lack skills. (All 3 laboratories in this benchmark were accredited.)

Conclusions on this were not drawn during the Joint Action.

#### 4.5 Impressions of the European Lighter Market in General

The participating Member States were also invited to share their impressions of the situation on their markets in a less statistical way. Their comments are compiled and analysed in this chapter:

• The lighter market has improved significantly in the past few years.

The Slovak authorities compared a campaign in 2011 to a similar campaign in 2008 and noted a significant improvement. As an example, the number of shops where shortcomings were recorded decreased from 65% in 2008 to 30% in 2011. The Slovak authorities also noted that the number of lighters with incorrect marking decreased from 174 in 2008 to 71 in 2011.

The Norwegian authorities noted that their lighter market seemed to be fairly clean based on random inspections in 2011 and 2012 with indicative tests carried out in larger stores or chains. The authorities also noted that only four big importers account for almost 90% of all lighters on the Norwegian market.

Iceland reported that they visited most (or all) lighter importers in August 2011 and checked their lighters. The campaign also comprised visits to some retailers. All the inspected lighters seemed to be OK. The Icelandic noted (in contradiction to the observations from the Norwegian market) that a lot of brands were found on their (comparatively small) market.

The Czech Trade Inspection Authority carried out 300 inspections in retail stores focussing on safety of lighters and sales of novelty lighters. Their conclusion was that the biggest Czech importers and distributors of lighters knew the relevant legislation and met the safety

requirements. Most of the infringements they found were in the retail sales and had to



do with sellers that forgot to deliver safety information (usually in the form of a flier or a label). The Czech authorities considered the situation in the market to be stable and the quality and safety of lighters to have increased.

 Novelty lighters have (almost) disappeared from the market. The Slovak authorities noted that the number of novelty lighters found in their inspections decreased from 98 types in 2008 to 11 types in 2011. The Norwegian authorities noted that novelty lighters are very rarely seen in the market, mainly in fairs during summertime.

The Czech authorities checked for novelty lighters during their inspections and found such lighters in several cases, but always in small lots of a few pieces.

• Internet sales (of novelty lighters).

If novelty lighters have disappeared from the lighter market, they seem to some extent to have moved to e-trade. During 2010, Sweden carried out a study of internet shops and found several websites where novelty lighters were sold. Therefore several other participants decided to check for similar websites in their language in 2011. The Icelandic authorities did a survey of all web shops located in Iceland and found that only one was selling one type of novelty lighters (in the form of a hand grenade). Similarly the Czech authorities checked online sales in fourth quarter of 2011 and found 2 cases where novelty lighters were sold.

• Special effort against XXL lighters in the United Kingdom.

United Kingdom reported that they carried out a special effort targeted against XXL lighters. The effort was started in January 2011 after an incident. Afterwards one brand was tested and found to be so risky that the authorities submitted a RAPEX notification (0888/11).

The campaign comprised 173 visits made to retail premises and included inspections of the maximum amount of fuel in the lighter. (International legislation restricts the contents of fuel in a lighter to 10 grams. XXL lighters typically contain 20 grams or more.)

A total of 172 non-compliant lighters were found during the year, mainly XXL lighters.

Accidents with lighters appear to be rare (compared to the number of products).

The authorities were also invited to report accidents or accident statistics. Only few reports were received:

- Norway had no reports of house fires or other fires caused by children's play with lighters in 2011.
- Iceland reported an accident in September 2011 where a lighter exploded in a car.
- Bosnia Herzegovina asked for advice in a case where a lighter apparently had exploded and put fire to the user's hair, when she tried to ignite a cigarette.

The Netherlands had a reasonably detailed accident statistics that also covers lighters. The following observations could be derived from it:

- $\circ$  No fatalities appear to have been caused by lighters in the most recent 15 years.
- There are some 30 40 less severe accidents annually.
- Some 10 15% of the accidents occur when a user is refilling a lighter.
- Some 15% are "intended accidents" where the user wants to injure himself on purpose.
- Approximately 75% of the accidents are skin burns. The rest are caused by sharp parts etc.

The observation on the number of accidents has been challenged by the European Federation of Lighter Manufacturers, EFLM who claims that the number of lighter accidents in Europe is considerable.

#### 4.6 Lessons learned

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A number of lessons as well as unresolved issues can be taken from the Joint Action:

• The standard EN ISO 9994 provides little guidance on sampling and testing.

One experience from the selection of a test laboratory was that the laboratories did not all recommend the same number of lighters to be tested. Many laboratories recommended a lot size of 50 lighters, but lot sizes down to 20 items were suggested.

The ring test (chapter 4.4) also suggested that larger numbers of lighters from each batch are tested, e.g. 100, 200 or even more.

Furthermore the standard leaves a lot of freedom for splitting the lot over the tests. Figure 13 shows the two different approaches that were applied in the two Joint Actions. In the first Joint Action 6 lighters are tested "fresh" for e.g. flame heights. In the second Action, 9



lighters are taken through the same test. All things equal this will have an influence on the results, which seems to be inappropriate.

- The standard allows a maximum flame height of 120 mm for adjustable lighters. This seems to be a very high value. (The maximum permissible flame height for a number of other lighter types is 50 mm.)
- The Dutch benchmark of 3 lighter laboratories also indicates that there is a need for improvements somewhere. It would need to be followed up.
- Low-cost (semi-)luxury lighters have begun to present problems in some Member States. The issue arises because (semi-)luxury lighters are excluded from the child-resistance requirements in the lighter decision. Recently, some Member States have seen semi-luxury lighters offered for sale at very low prices (1 2 €). This is clearly seen as a way of circumventing the lighter decision and the CR requirements, but it is very difficult to ban such lighters because they meet the exclusion criteria.
- Products like lighters are difficult to handle in classic market surveillance. The authorities have to "work from the top" with EU importers and manufacturers, they have to cooperate cross-border and they must have the support from customs. This is because the majority of the lighters on the European market are placed on the market by few very large players. They are manufactured in large series that are identical across Europe. Furthermore almost two thirds of all lighters on the market are imported from third countries (in the Far East).

The general picture is that things have improved during the two Joint Actions but there is still room for improvement.

#### 4.7 Differences between Foreseen Results and Those Actually Achieved

Table 9 below compares the results foreseen in the work programme in the Grant Agreement [1] with those actually achieved in the Joint Action

Table 10 further below lists the documents that have been produced by the Joint Action further to what was demanded according to the Grant Agreement.

Foreseen Deliverable or Result	Deliverable or Result Actually Achieved
Main deliverables or res	ults
A significant decrease of the share of non- compliant lighters that were found on the European market.	<b>Result achieved.</b> The results from the laboratory tests show that the share of lighters with critical non-compliances decreased from 20% in the previous Action to 5% in the present Action. Please also see chapter 4.3.
Decrease of the share of non-compliant lighters that were imported to Europe.	Result achieved. The results from the laboratory tests show that the share of imported lighters that passed the test without remarks increased from 35% in the previous Action to 51% in the present Action. The share of imported lighters with critical non-compliances fell from 29% to 7%. Please also see chapter 4.3.
Decrease of the share of non-compliant lighters that were produced in Europe.	<ul> <li>Unclear if result was achieved.</li> <li>The results from the laboratory tests show that the share of EU manufactured lighters that passed the test without remarks decreased from 90% in the previous Action to 81% in the present Action.</li> <li>On the other hand, the share of EU manufactured lighters with critical non-compliances was 0% in both Joint Actions.</li> <li>Please also see chapter 4.3.</li> </ul>



Foreseen Deliverable or Result	Deliverable or Result Actually Achieved
Decrease of the share of shops that markets novelty lighters.	<b>Result achieved.</b> The reports from the participants suggest that the sales of novelty lighters in the European market have almost stopped.
	A Swedish study showed that novelty lighters could still be found in Internet shops. Further investigations in more Member States confirmed that the problem seems to be small and probably even concentrated in few countries in Europe.
Deliverables identified	in the Grant Agreement
Deliverables produced according to or ahead of schedule	<ul> <li>D3, "Detailed approach to Joint Action", stipulated month 5, delivered month 1.</li> <li>D5, "Means for exchange of information about tested lighter models", stipulated month 5, delivered month 2.</li> <li>D6, "Call for tender", stipulated month 6, delivered month 5.</li> <li>D10, "Reports of market surveillance actions", stipulated month 36, delivered month 36.</li> <li>D11, "Minutes from second project meeting", stipulated month 10, delivered month 6.</li> <li>D12, "Full interim report and financial statement", stipulated month 14, delivered month 14.</li> <li>D13, "Minutes from third project meeting", stipulated month 13, delivered month 12.</li> <li>D14, "Second full interim report and financial statement", stipulated month 26, delivered month 26.</li> <li>D15, "Minutes from 4th project meeting", stipulated month 22, delivered month 15.</li> <li>D16, "Minutes from 5th project meeting", stipulated month 34, delivered month 30.</li> <li>D17, "Minutes from 6th project meeting", stipulated month 34, delivered month 30.</li> <li>D18, "Draft programme for final conference", stipulated month 34, delivered month 34.</li> <li>D19, "Report of final conference", stipulated month 36, delivered month 36.</li> </ul>
Delayed deliverables	<ul> <li>D1, "Contract with selected consultant", stipulated month 36, detivered month 8.</li> <li>D1, "Contract with selected consultant", stipulated month 2, delivered month 8.</li> <li>The delay did not influence the progress in the Joint Action as the consultant was identified and started working at the beginning of the Action.</li> <li>D2, "Minutes from kick-off meeting", stipulated month 2, delivered month 3.</li> <li>The kick-off meeting was held 23 and 24 February. Only the minutes were delayed until March.</li> <li>D4, "Sampling scheme", stipulated month 9, delivered month 15.</li> <li>The participants decided to do the first coordinated sampling of lighters in March - May 2011, i.e. month 15 - 17. Consequently no efforts were spent on the sampling scheme before then. This did not compromise the success of the Joint Action.</li> <li>D7, "Selection of laboratory", stipulated month 9, delivered month 17.</li> <li>The joint laboratory testing was closely linked to the coordinated sampling that was postponed to March - May 2011. The laboratory was selected and the contract was in place before the testing started.</li> <li>D8, "Feasibility study for CR verification tool", stipulated month 6, delivered month 7.</li> <li>The question was discussed and concluded at the project meeting 19 May, but the document was not finalised until beginning of July. This had no</li> </ul>



Foreseen Deliverable or Result	Deliverable or Result Actually Achieved
	influence on the further progress as the conclusion was to postpone (and at the end totally cancel) the development of the CR tool.
Cancelled deliverables	• D9, "Joint purchase of CR verification tool", stipulated month 12. It was decided not to develop or purchase such equipment as it didn't seem to provide any benefits for the participants. Please also see chapter 3.4.6.

Table 9. Overview of results and deliverables foreseen in the working program comparedwith those achieved. All deliverables are found in Annex 5.

Document	Remark	Number
Press release from the Joint Action, 1 May 2010	Joint The press release informs that market surveillance against dangerous cigarette lighters continue after the end of the first Joint Action.	
Intervention limit value note	A memo to guide Member States in their assessment of non-compliant lighters. More details can be found in chapter 3.4.7.	
Decision tree for novelty lighters	A memo to support Member States in their assessment of potential novelty lighter designs. More details can be found in chapter 3.4.9.	
Minutes from joint meeting with customs 11 <sup>th</sup> March 2011 in Brussels		E4
Presentation for joint meeting 11 <sup>th</sup> March 2011	neeting The presentation described the Joint Action and gives some hints on how to carry out an indicative test of a lighter.	
Communication plan		E6
Press release on XXL lighters membrasises that the market surveillance authorities consider XXL lighters to be ordinary cigarette lighters seen from a legislative perspective.		E7
Press release, 11 March 2011	lease, 11 March 2011 The press release informs about the joint effort between market surveillance authorities and customs against dangerous cigarette lighters	
Joint Action opinion on XXL lighters		
Questionnaire to lighter industry		
Overview of replies to questionnaire to lighter industry	Overview of the replies from industry to the above mentioned questionnaire. More details can be found in chapter 3.4.10.	
Memo on follow up of test results	A memo to guide Member States in their follow up on reports of non-compliant lighters (e.g. test reports, complaints, RAPEX notifications, etc.). More details can be found in chapter 3.4.11	
Guideline for system auditing		
Presentations from final workshop		E14a - E14k



Documents produced beyond requirements in the Grant Agreement [1]				
Document	Remark	Number		
Newsletter from November 2012	The newsletter informs about the results from the Joint Action.	E15		
Guideline for importers of lighters	borters of The document outlines the legal and other requirements to a business that wants to import lighters from a third country. More details can be found in chapter 3.4.10.			
Best practices for market surveillance of lighters	est practices for market The current draft of a compilation of best practices,			
Press release, June 2012	The press release informs about the interim results from the Joint Action at summer 2012.	E18		

Table 10. Overview of documents produced by the Joint Action further to those identified in the Grant Agreement. All the documents are found in Annex 6.



# 5 Budget and Expenses

	Budget	Expenses
	(€)	(€)
Direct costs		
Staff (int./ext.)	156.816,35	157.557,97
Staff, Member States	223.779,24	233.265,85
Travel and subsistence	115.537,00	90.405,51
Equipment	0,00	0,00
Subcontracting	42.429,20	46.068,15
Miscellaneous	16.500,00	8.808,79
Total direct costs	555.061,79	536.106,25
Indirect costs		
Indirect costs 7%	38.854,32	37.527,44
Total expenditure	593.916,11	573.633,69
Revenue		
Resource of the participant	223.779,24	233.265,83
Amount of EU support requested	370.136,87	340.367,86
Total revenue	593.916,11	573.633,69



# 6 Bibliography

All quotes and references in the text are stated with a number in brackets, e.g. [1]. The full references to the documents are given below.

- "Grant Agreement for an Action Multiple Beneficiaries, Agreement Number 2009 82 05". Grant 1. Agreement 2009 82 05 - LIGHTERS 09.
- "Fire Statistics, United Kingdom, 2007", publication issued by Communities and Local Government, 2. United Kingdom, Friday 28 August 2009. The report can be downloaded from http://www.communities.gov.uk/documents/statistics/pdf/1320522.pdf.
- 3. "Commission Decision of 11 May 2006 requiring Member States to take measures to ensure that only lighters which are child-resistant are placed on the market and to prohibit the placing on the market of novelty lighters", 2006/502/EC, published in the Official Journal L 198 of 20 July 2006, p. 41. 4. EN ISO 9994:2006 "Lighters - Safety specification (ISO 9994:2005)".
- EN 13869:2002 "Lighters Child-resistance for lighters Safety requirements and test methods". 5.
- "Best Practices in Market Surveillance", PROSAFE, 2008. The book was developed in the project 6. "Enhancing Market Surveillance through Best Practices (EMARS)". The book is available from the PROSAFE secretariat or can be downloaded from www.prosafe.org.
- 7. "Joint Market Surveillance Action on Child-Resistant Lighters and Novelty Lighters", final implementation report covering the period 1 September 2007 - 31 December 2009. The Joint Action was supported financially by DG SANCO under the Grant Agreement No: 17.020200/07/472817. Report published 28 February 2010.
- "Commission Decision of 21 March 2011 extending the validity of Decision 2006/502/EC requiring 8. Member States to take measures to ensure that only lighters which are child-resistant are placed on the market and to prohibit the placing on the market of novelty lighters", 2011/176/EU, published in the Official Journal L 76 of 22 March 2011.

