



<b>ATF-LS-FD9 Report Wording</b>	Published Online: <b>March 2018</b>
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- I. **Scope:** This policy and procedure guideline establishes examples that may be used in laboratory reports. Report wording will accurately reflect what was identified in the sample and clearly communicate those findings to the reader. The wordings listed below are examples only and may be used as a guideline.

### Examples

#### Non-Aqueous Liquid

- The liquid in Exhibit 1 was identified as a/an (classification). Some examples of (classification) are (list appropriate examples from **ATF's Ignitable Liquid Classification System – FD-8**). This (classification) is an ignitable liquid.
- The liquid in Exhibit 1 was identified as a/an (classification), which is consistent with the (product label / Material Safety Data Sheet (MSDS)). It should be noted that (classification) is an ignitable liquid.

#### Debris Samples

- Exhibit 1 contained a/an (classification). Some examples of (classification) are (list appropriate examples from **ATF's Ignitable Liquid Classification System – FD-8**). This (classification) is an ignitable liquid.
- A/An (classification) was identified in Exhibit 1. Some examples of (classification) are (list appropriate examples from **ATF's Ignitable Liquid Classification System - FD-8**). This (classification) is an ignitable liquid.

#### Liquids that do not burn

- The Exhibit 1 aqueous liquid contained a/an (classification). Some examples of (classification) are (list appropriate examples from **ATF's Ignitable Liquid Classification System - FD-8**). This (classification) is an ignitable liquid.
- Exhibit 1 contained a/an (classification), which is an ignitable liquid. Some examples of (classification) are (list appropriate examples from **ATF's Ignitable Liquid Classification System - FD-8**). It should be noted that Exhibit 1 did not burn when exposed to an open flame.

*Note: Examples will not be listed for gasoline.*

### Terpenes

Terpenes were identified in Exhibit 1. Terpenes consistent with those detected are essential components of turpentine and are naturally occurring in some types of wood.

### Single Components

Exhibit 1 contained (chemical name), commonly referred to as (common name). (Common name) may be found in some (product types).

*Note: Common pyrolysis products will not be reported except when a large amount of unexplainable product is detected.*

### **Mixtures**

Analysis of a liquid from a commercially labeled product (i.e. paint thinner):

- The liquid in Exhibit 1 was identified as a blend of a medium petroleum distillate (MPD) and a naphthenic/paraffinic product. Examples of MPD's are some paint thinners, mineral spirits, and some charcoal starters. Examples of naphthenic/paraffinic products include some charcoal starters, some lamp oils, and some industrial solvents. Certain brands of paint thinners contain a blend of a MPD and a naphthenic/paraffinic product.

Analysis of fire debris from the same case:

- Exhibit 1 contained a medium petroleum distillate (MPD) and a naphthenic/paraffinic product. There are some commercial products, such as some brands of paint thinners, which contain such a mixture. It could not be determined whether Exhibit 1 contained a single commercial product or a mixture of two individual products.

### **Alternative Fuels**

Biodiesels

- Fatty acid methyl esters (FAMES), which are indicative of a biodiesel product, were identified in Exhibit 1. Biodiesel products are ignitable liquids.
- A heavy petroleum distillate and fatty acid methyl esters (FAMES) were identified in Exhibit 1. This combination is indicative of a biodiesel product. Biodiesel products are ignitable liquids.

E85

- Ethanol (ethyl alcohol) and gasoline were identified in exhibit 1. Ethanol is most commonly used in alcoholic beverages. Additionally, ethanol is used as an additive to gasoline and is the primary constituent of E85 fuel, which is a blend of 85% ethanol and 15% gasoline. Ethanol and gasoline are both ignitable liquids.

### **Vegetable Oils / Animal Fats**

Liquid and solid samples

- Fatty acids, characteristic components of vegetable oils (or animal fats), were identified in Exhibit 1.

Debris samples

- The following wording is suggested based on the results of the analysis:

- Fatty acids were identified in Exhibit 1. Fatty acids are naturally occurring and are found in animal fats and vegetable oils. The original source of these fatty acids could not be determined.
- Fatty acids were identified in Exhibit 1. Fatty acids are naturally occurring and are found in animal fats and vegetable oils. The fatty acids present are consistent with known vegetable oil compositions; however the original source could not be determined.

#### Negative

- No fatty acids were identified in Exhibit 1.

### **Lubricating Oils**

#### Liquid samples

- The liquid in Exhibit 1 was identified as a lubricating oil. Examples of lubricating oils include mineral oils and motor oils.

#### Debris samples

- A lubricating oil was identified in Exhibit 1. Examples of lubricating oils include mineral oils and motor oils.
- Exhibit 1 contained a lubricating oil. Examples of lubricating oils include mineral oils and motor oils.

#### Negative

- No lubricating oils were identified in Exhibit 1.

#### Comparison of lubricating oils

- Exhibits 1 and 2 contained lubricating oils that were chemically indistinguishable and could have originated from the same source or another source with the same chemical composition.
- Exhibits 1 and 2 contained lubricating oils that were chemically different.
- It could not be determined if the lubricating oils in Exhibits 1 and 2 originated from the same source.
- The lubricating oil in Exhibit 1 could not be eliminated as the source of the lubricating oil in Exhibit 2.

### **Waxes and Petrolatum**

#### Solid samples (waxes)

- Exhibit 1 contained a/an (color) (type) wax.
- A/an (color) (type) wax was identified in Exhibit 1.

#### Semi-solid substances (petrolatum)

- Exhibit 1 contained a semi-solid paraffin- (and/or) lubricating oil-based material. Examples of this type of product include petroleum-based greases such as petroleum jelly and hair grooming products.

#### Comparison of solid samples

- Exhibits 1 and 2 contained (color) (type) waxes that were chemically consistent and could have come from the same source or another source with the same color and composition.
- Exhibits 1 and 2 contained (color) (type) waxes that were chemically different.
- It could not be determined if the waxes in Exhibits 1 and 2 could have come from the same source.
- The (color) (type) wax in Exhibit 1 could not be eliminated as the source of the (color) (type) wax in Exhibit 2.

#### Comparison of semi-solid samples

- Exhibits 1 and 2 contained semi-solid paraffin- (and/or) lubricating oil-based materials that were chemically consistent and could have come from the same source or another source with the same composition.
- Exhibits 1 and 2 contained semi-solid paraffin- (and/or) lubricating oil-based materials that were chemically different.
- It could not be determined if the semi-solid paraffin- (and/or) lubricating oil-based materials in Exhibits 1 and 2 could have come from the same source.
- The semi-solid paraffin- (and/or) lubricating oil-based material in Exhibit 1 could not be eliminated as the source of the semi-solid paraffin- (and/or) lubricating oil-based material in Exhibit 2.

#### Negative

- No waxes were identified in Exhibit 1.
- No semi-solid paraffin- (and/or) lubricating oil-based materials were identified in Exhibit 1.

#### No material present

- Exhibit 1 contained chemical components indicative of (or consistent with) a (type) wax.
- Exhibit 1 contained chemical components indicative of (or consistent with) a paraffin wax and a lubricating oil. It could not be determined if the exhibit contained two individual products or a single commercial product. Examples of lubricating oils include motor oils and mineral oils. Examples of a single commercial product containing components consistent with a paraffin wax and lubricating oil include petroleum-based greases such as petroleum jelly and hair-grooming products.

*Note: Examiners may identify the type of wax (paraffin, beeswax, vegetable-based, etc.) at their discretion and with supporting analytical data.*

### **Non-Identifications**

#### Non-identification of some exhibits from one case:

- No ignitable liquids were identified in Exhibits 2, 6 or 7.

Or, if all exhibits produced negative results:

- Exhibits 2 through 8 were examined for the presence of ignitable liquids with negative results.

### **Disclaimers**

Some situations warrant the use of a disclaimer. Examples of such situations include when the submitted material is known to potentially contain a petroleum product or when a submitted comparison sample contains a petroleum product. An example of appropriate disclaimer wording is:

- Some (material) may inherently contain (classification).

*Note: Products generally attributed to pyrolysis will not be reported except under unusual circumstances or when a large amount of unexplainable product is detected.*

### **Disposition**

Disposition of evidence statements should include information on extracts being returned with the evidence. An example of this type of statement:

- Exhibits 1 through 5 along with their charcoal strip extracts will be returned to the submitter.

### **Incendiary Device Descriptors**

At a minimum, suspect device casework reports must contain a brief description of device components.