Procedures For The Analysis Of Pepper Spray Products

I. Name of analytical procedure

Pepper spray analysis

II. Suggested applications

The analysis of pepper spray canisters is recommended whenever quantitative and/or qualitative information about the pepper spray product is needed in a criminal investigation.

III. Analytical Procedures

A. Analysis of canisters and their contents

1. All vital information from each canister label is recorded in the case notes.
2. Each canister is weighed on an appropriate balance and the weight recorded.
3. The contents of each canister are collected in an Erlenmeyer flask, beaker, or other suitable glass container.
4. The empty canister is weighed and the weight recorded in the case notes.
5. A sample of the liquid is placed in a glass Petrie dish and the dish placed in a drying oven and dried at a low temperature (50 - 100 C).
6. The oil which remains after drying off the water can then be examined by FTIR and/or Pyrolysis-GC if comparison and/or identification is needed. (See the appropriate instrumental procedure for these methods)

B. Reports

The "Results of Analysis" portion of the laboratory report should state the weight of the contents of each canister analyzed. The weights may be expressed in ounces or grams or both. If qualitative information is requested, the report will also express the results of any comparisons and identifications. Other information appropriate to the request may be reported**.**

IV. Safety concerns

Safety glasses and protective clothing (lab coat, gloves, etc) will be worn when pepper spray canisters are emptied. All spraying is to be done in a fume hood or outside the laboratory building away from doors, windows, and established pedestrian walkways. Wind direction should be assessed before spraying and reasonable effort made to avoid spraying the pepper solution into the wind.

Supervisor Approval _____ **Date _____**

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