



Collecting Ignitable Liquid Residue from the Hands of a Person

The following procedure was determined through laboratory testing at the Colorado Bureau of Investigation Forensic Services (CBIFS) to be a suitable method for sampling the hands of individuals for ignitable liquids.

Required Materials:

- Powder-free latex exam gloves; do **not** use gloves of other materials such as nitrile. Please note that the use of latex gloves may be harmful to individuals with latex allergies and this procedure should not be used if such allergies exist. At this time the CBIFS has no recommendation for an alternate collection method.
- Vapor-proof packaging (paint can or arson bag).

Procedure:

1. Have the individual put one latex glove on each hand. It is preferable for the gloves to be snug; if the gloves are loose have the individual gently clasp his/her hands to have contact between the glove and skin.
2. Keep the gloves on the hands for 20 minutes.
3. Remove the gloves so the surface touching the skin is outside.
4. Place the sample gloves in vapor-proof packaging and seal.
5. Prepare a negative control (also called a “blank”) as a separate item. Two unused gloves from the same supply as those used for sampling the person are to be placed into a container that is from the same supply as was used for packaging the sample gloves.

Discussion:

The CBIFS has been successful using this technique on a very small volume of gasoline that was placed on the hands of a volunteer. After two hours of normal activity (excluding hand-washing) gasoline was detectable by using this procedure. It is anticipated that the length of time that ignitable liquids are still detectable will depend on the ignitable liquid, the amount of ignitable liquid which was initially on the hands, and the activity of the individual.

The preparation and submission of the negative control (blank) is critical, and it must be prepared at the same time as the sample collection from the individual. The negative control gloves will be analyzed along with the gloves used to sample the person in order to verify that any ignitable liquid found in the analysis of the sample gloves came from the person and did not originate from the gloves themselves.

Be sure that you have not had recent contact with ignitable liquids prior to conducting this procedure on a subject. You do not want any question about your hands contaminating the sample. Gloving yourself or eliminating any contact with the sample gloves are measures to reduce concern about contamination.

If you have any questions, please contact:

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