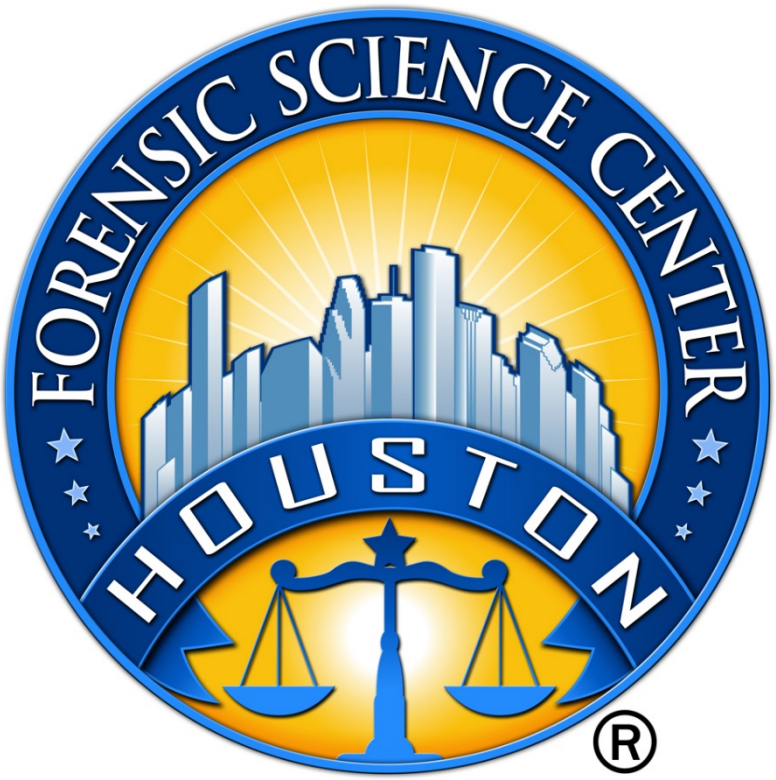

Latent Print Section

1,2-Indanedione (IND)

Comparative & Analytical Division

1. Processing evidence using 1,2-Indanedione (IND)

1.1 Scope

1.1.1 This document details the procedure for the mixing and application of IND on porous and semi-porous forensic materials by the Latent Print Section of the Houston Forensic Science Center (HFSC).

1.2 Equipment, Materials, and Reagents

1.2.1 IND (2.0 grams)
1.2.2 Ethyl Acetate (70mL)
1.2.3 3M Novec HFE-7100 (930 mL)
1.2.4 Equipment: balances, graduated cylinders, magnetic stirrer and stirring bar, and dark storage bottles
1.2.5 Safety Equipment: fume hood, safety glasses, gloves, orange filtered goggles, lab coat

1.3 Safety

1.3.1 Examiners/Processors shall wear appropriate personal protective equipment (PPE) while preparing and applying IND.
1.3.2 Fume hood use is required when preparing and applying IND.
1.3.3 See applicable Safety Data Sheets (SDS).

1.4 Preparation of IND

1.4.1 Working Solution
1.4.1.1 Add 2.0 g of IND to 70 mL of ethyl acetate and place on a stirring device for approximately 20 minutes until the IND is dissolved.
1.4.1.2 Add the dissolved mixture to 930 mL of 3M Novec HFE-7100 solvent.
1.4.1.3 Place the appropriate safety label and information on the bottle. Proper labeling should include:
- Name of Reagent
- Date of Preparation
- Date of Expiration
- Preparer's name or initials
- Batch Number

1.4.2 The date of expiration for batch solutions of IND be six months from the date of preparation.

1.5 Procedure

1.5.1 IND may be applied by dipping or spraying.
1.5.2 Items that have been processed with IND may be placed in a humidity chamber at approximately 80°C to 100°C for 10 to 20 minutes to accelerate the development of latent prints. If a humidity chamber is not available a heat press or dry iron can also be used.
1.5.2.1 Do not use heat on specialty papers (i.e. thermal) because it will darken the paper. Thermal items should be allowed to sit at room temperature in the dark. The item must be left to develop for a minimum of 24-72 hours prior to viewing.

1.5.3 Developed latent prints will fluoresce under a green LASER/ALS and are viewed with orange goggles.

1.6 QA/QC

1.6.1 A quality control check must be performed when a new reagent is prepared and placed into service.

1.6.2 A quality control check of in service reagents must be performed once a week.

1.6.3 To test the solution, apply a finger to an Amino Acid Standard Pad and place a test print on a piece of paper (Matrix = amino acid; Substrate = paper). Apply IND as described above.

1.6.4 A successful Quality Control Check is one in which a positive test result is achieved when the test print is visible under LASER/ALS light.

1.7 Records/Results

1.7.1 Processes used are documented in the case examiner's/processor's case notes via the Laboratory Information Management System (LIMS).

1.7.2 Reagent test results are recorded in Qualtrax.

1.8 Storage

1.8.1 Store solution in a dark bottle in a refrigerator to enhance shelf life.

1.9 References

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