



Manufacturer's Information

Test No. 18-545: Paint Analysis

Each sample set consisted of four items with layered paint and primer: two known samples (Items 1 and 2) and two questioned samples (Items 3 and 4) were cut from painted poplar wood plank substrates. Items 1 and 3 came from a plank with the same primer and topcoat. Item 2 was prepared with a different primer and topcoat than what was used for Items 1 and 3. Item 4 had the same primer that was used for Items 1 and 3 and the same topcoat that was used for Item 2. Participants were instructed to examine the questioned samples and determine if they could have originated from the same source as either of the known paint samples.

SAMPLE PREPARATION-

All planks used for this test were selected based on their limited defects and were wiped down to remove dust before painting. For the following preparations, each coat was allowed to dry overnight before applying the next coat.

ITEMS 1 and 3 (ASSOCIATION): The known Item 1 and questioned Item 3 samples were prepared by applying two coats of primer (Valspar All-weather Exterior Primer/Sealer, latex) to several poplar wood planks. Then two layers of topcoat (Sherwin Williams Ovation Paint & Primer, Steely Gray (color code-HGSW1453)) were applied. The known Item 1 planks were cut into 1" x 3" x 1/4" pieces. One piece was packaged into a glassine bag and then a pre-labeled Item 1 envelope. For Item 3, paint samples were scored into squares that were approximately 1/4" x 1/4" and removed. Two 1/4" x 1/4" pieces were packaged into a glassine bag and then a pre-labeled Item 3 envelope. Items 1 and 3 were taken in close spatial proximity to one another, kept together as a group, and packaged into the sample sets as described below.

ITEM 2 (ELIMINATION): Item 2 was prepared by applying two coats of primer (Kilz Original Primer/Sealer/Stain Blocker, interior oil-based) to several poplar wood planks. Then two layers of topcoat (Valspar Signature High-Hiding Paint & Primer, Drizzling Mist (color code- 4006-1C)) were applied. The known Item 2 planks were cut into 1" x 3" x 1/4" pieces. One piece was packaged into a glassine bag and then a pre-labeled Item 2 envelope.

ITEM 4 (ELIMINATION): Item 4 was prepared by applying two coats of primer (Valspar All-weather Exterior Primer/Sealer, latex) to several poplar wood planks. Then two layers of topcoat (Valspar Signature High-Hiding Paint & Primer, Drizzling Mist (color code- 4006-1C)) were applied. Paint samples were scored into squares that were approximately 1/4" x 1/4" and removed. Two 1/4" x 1/4" pieces were packaged into a glassine bag and then a pre-labeled Item 4 envelope.

SAMPLE SET ASSEMBLY: For each sample pack, an Item 1 and an Item 3 from the same identification group along with an Item 2 and Item 4 were placed into a pre-labeled envelope and sealed with invisible tape. This process was repeated until all of the sample sets were prepared. Once verification was completed, all sample sets were further sealed with evidence tape and initialed "CTS."

VERIFICATION-

The expected association and elimination results were confirmed by predistribution laboratories, who used the following combined list of techniques: stereomicroscopy, pyrolysis GC, FTIR, and SEM-EDX.

The information presented here details how test samples were prepared as well as any design specifications. This information does not necessarily represent the answers that should or could be obtained from an examination of the sample(s). Final interpretation of the results should be deferred until the summary report is available.