



Manufacturer's Information

Test No. 17-546: Paint Analysis

Each sample set consisted of three items with layered paint and primer: one known sample (Item 1) and two questioned samples (Items 2 and 3) were cut from a painted section of drywall. Items 1 and 2 came from a section of drywall with the same primer and topcoat. Item 3 was prepared with the same topcoat, but a different primer from what was used for Items 1 and 2. Examiners were instructed to examine the samples and determine if either questioned sample could have originated from the same source as the known paint sample.

SAMPLE PREPARATION: The drywall substrate was 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 2 (ASSOCIATION): The known Item 1 and questioned Item 2 samples were prepared by applying two coats of primer (Zinsser Cover Stain Oil-Base Interior/Exterior Primer, white) to a drywall substrate. Then two layers of topcoat (Behr Marquee Interior Eggshell Enamel Paint & Primer, Purple Gladiola (MQ4-59)) were applied. For Item 1, paint samples were scored into squares that were approximately 1/2" x 1/2" and removed. One 1/2" x 1/2" piece was packaged into a glassine bag and then a pre-labeled Item 1 coin envelope. For Item 2, 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 2 coin envelope. Items 1 and 2 were taken in close spatial proximity to one another and were kept together as an association group and packaged into the sample sets as described below.

ITEM 3 (ELIMINATION): The questioned Item 3 samples were prepared by applying two coats of primer (Behr Premium Plus® All-in-One Primer & Sealer, white) to a drywall substrate. Then two layers of topcoat (Behr Marquee Interior Eggshell Enamel Paint & Primer, Purple Gladiola (MQ4-59)) 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 3 coin envelope.

SAMPLE SET ASSEMBLY: For each sample pack, an Item 1 and an Item 2 from the same association group along with an Item 3 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: All three laboratories that conducted the predistribution examination of the completed sample sets reported the expected association and elimination results. The methods that were employed by the predistribution laboratories included: stereomicroscopy, polarized light microscopy, fluorescence microscopy, pyrolysis GC/MS, FTIR, solubility/chemical, XRS/XRF, SEM/EDX, and microspectrophotometry.