



Manufacturer's Information

Test No. 15-539: Fibers Analysis

Each sample pack consisted of two sections of known yarn (Items 1 and 2) and a set of questioned fibers (Item 3). Items 2 and 3 were from the same purple yarn labeled as 100% acrylic, whereas Item 1 was from a different purple yarn labeled as 70% viscose and 30% silk. Both yarns were purchased from a local craft store. Participants were requested to examine the fibers, identify the fiber type, and determine if the questioned fibers could have originated from the known yarn.

SAMPLE PREPARATION-

The outside of the yarn skein was rolled with a lint roller to remove any extraneous debris. Items 1 and Items 2/3 were prepared at different times to prevent any possibility of cross-contamination.

ITEM 1 (ELIMINATION): For the known yarn (Item 1), one inch sections were cut from the skein. They were then packaged into a glassine bag and a pre-labeled Item 1 envelope.

ITEMS 2 AND 3 (IDENTIFICATION): For the known yarn (Item 2) and the questioned fibers (Item 3), one inch sections of yarn were cut from the same skein. One of these one inch sections of yarn was packaged into a glassine bag and a pre-labeled Item 2 envelope. From another one inch section of yarn, approximately 15-20 fibers were teased out and packaged into a glassine bag and a pre-labeled Item 3 envelope. Items 2 and 3 were taken in close spatial proximity to one another, within 4 feet, and were kept together as an identification group and packaged as described below.

SAMPLE PACK ASSEMBLY: For each sample pack, an Item 1, 2, and 3 were placed in a sample pack envelope and sealed with invisible tape. This process was repeated until all of the sample pack envelopes were prepared. Once verification was completed, the sample pack envelopes were sealed with evidence tape and initialed with "CTS".

VERIFICATION: Predistribution laboratories met consensus on association and fiber identification results. The following procedures were used to examine the items: Stereomicroscopy, comparison microscopy, polarized light microscopy, macroscopic examination, IR/FTIR, microspectrophotometry, fluorescence microscopy, solubility, microchemical tests, ALS-fluorescence, and cross-section analysis.