



Adhesive Tape Analysis

Test No. 26-5471 Summary Report

Each participant received a sample pack containing three pairs of known and questioned tape samples for comparison, which they were asked to examine using their existing protocols. Data were returned from 28 participants and are compiled into the following tables:

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This report contains the data received from the participants in this test. Since these participants are located in many countries around the world, and it is their option how the samples are to be used (e.g., training exercise, known or blind proficiency testing, research and development of new techniques, etc.), the results compiled in the Summary Report are not intended to be an overview of the quality of work performed in the profession and cannot be interpreted as such. The Summary Comments are included for the benefit of participants to assist with maintaining or enhancing the quality of their results. These comments are not intended to reflect the general state of the art within the profession.

Participant results are reported using a randomly assigned "WebCode". This code maintains participant's anonymity, provides linking of the various report sections, and will change with every report.

Manufacturer's Information

Each sample pack contained paired known and questioned adhesive tape samples for comparison. Participants were asked to examine pairs of adhesive tape samples and determine whether the samples originated from a single source and to determine if a physical end match existed between the known and questioned items.

SAMPLE PREPARATION: Each roll of tape was inspected and any debris removed. All known and questioned items were affixed to silicone release paper and then packed in their respective pre-labeled item envelopes. The associated pairs were maintained together until sample pack assembly.

KNOWN ITEMS: One piece of tape, approximately 5" in size, was separated from the roll of tape and affixed to silicone release paper.

QUESTIONED ITEMS: One piece of tape, approximately 3" in size, was separated from the roll of tape and affixed to silicone release paper.

SAMPLE PACK ASSEMBLY: All item pairs were placed into a pre-labeled sample pack envelope and sealed. This process was repeated until all of the sample packs were prepared.

VERIFICATION: Predistribution results were consistent with each other and the manufacturer's preparation information. The following procedures were used to examine the items: Stereomicroscopy, Polarized Light Microscopy, Macroscopic Examination, UV, FTIR, SEM/EDX, and XRD.

Item	Tape Type	Color	Separation Method	Association	Physical End Match
K1 & Q1	Scotch® Sure Start Packaging Tape & DowDew Heavy Duty Packaging Tape	Clear	Scissor Cut	No	No
K2 & Q2	3M™ Automotive Refinish Multi Purpose Masking Tape	Yellow	Hand Torn	Yes	Yes
K3 & Q3	Harciety Heavy Duty Duct Tape	Dark Brown	Hand Torn	Yes	No

Summary Comments

This test was designed to allow participants to assess their proficiency in the examination and comparison of adhesive tape samples. Participants were supplied with three pairs of adhesive tape samples, each containing one known item and one questioned item (K1/Q1, K2/Q2, K3/Q3). Items K1 and Q1 were produced from different rolls with no physical end match. Items K2 and Q2 were produced from the same roll with a physical end match. Items K3 and Q3 were produced from the same roll with no physical end match. Refer to the Manufacturer's Information for preparation details.

ITEMS K1 AND Q1: All 27 (100%) responding participants reported no association between the questioned tape sample (Q1) and the known tape sample (K1). One participant did not submit results. In regard to the physical end match, 12 of the 14 participants that performed this comparison reported that Item Q1 did not exhibit a physical end match to Item K1.

ITEMS K2 AND Q2: All 27 (100%) responding participants reported an association between the questioned tape sample (Q2) and the known tape sample (K2). One participant did not submit results. In regard to the physical end match, all 24 participants that performed this comparison reported that Item Q2 did exhibit a physical end match to Item K2.

ITEMS K3 AND Q3: In this table, 25 of the 27 (93%) responding participants reported an association between the questioned tape sample (Q3) and the known tape sample (K3) and the remaining two participants reported no association. One participant did not submit results. In regard to the physical end match, 18 of the 24 participants who performed this comparison reported that Item Q3 did not exhibit a physical end match to Item K3.

CTS noted that some laboratories do not conduct a physical end match for items with cut ends due to limited features for examination.

The most commonly reported examination procedures included: Stereomicroscopy, Macroscopic Examination, and FTIR.

Examination Results

For each set of items, could the questioned tape material have originated from the adhesive tape roll represented by the associated known sample, and was there a physical end match between the paired sets?

TABLE 1 - K1 and Q1							
WebCode	Physical End Match Comparison			WebCode	Physical End Match Comparison		
	Association	Performed	End Match ID		Association	Performed	End Match ID
47HT4Z	No	Yes	No				
7WLU6Q	No	Yes	No				
86Q4AV	No	No					
9XQ4AT	No	No					
AULVJN	No	Yes	Inc				
BDTKAQ	No	No					
D9CYDP	No	No					
DBFR8M	No	Yes	No				
F8P8EN	No	No					
FE8F3K	No	No					
G3AW2K	No	No					
GKXD6G	No	N/A					
JUUZAJ	No	Yes	No				
JZYVTJ	No	Yes	No				
LVEQAE	No	Yes	No				
MT7V4F	No	Yes	No				
NUWFAC	No	Yes	No				
PGQMFE	No	No					
Q24U6D	No	No					
Q8BMY9	No	Yes	No				
QCPXCC	No	No					
RKYMPB	[No results submitted for this item.]						
T8NTB4	No	Yes	Inc				
TB44N8	No	Yes	No				
TCYMQ9	No	Yes	No				
UMW877	No	Yes	No				
XJ2PH3	No	No					
XRFBQ7	No	No					

K1 & Q1 - Summary Response

Participants: 28

No Response: 1

Association		Physical End Match Performed		End Match ID (14 Participants)	
Yes	0 (0.0%)	Yes	14	Yes	0 (0.0%)
No	27 (100.0%)	No	12	No	12 (85.7%)
Inc	0 (0.0%)	N/A	1	Inc	2 (14.3%)

TABLE 1 - K2 and Q2

<u>Physical End Match Comparison</u>				<u>Physical End Match Comparison</u>			
<u>WebCode</u>	<u>Association</u>	<u>Performed</u>	<u>End Match ID</u>	<u>WebCode</u>	<u>Association</u>	<u>Performed</u>	<u>End Match ID</u>
47HT4Z	Yes	Yes	Yes				
7WLU6Q	Yes	Yes	Yes				
86Q4AV	Yes	Yes	Yes				
9XQ4AT	Yes	Yes	Yes				
AULVJN	Yes	Yes	Yes				
BDTKAQ	Yes	Yes	Yes				
D9CYDP	Yes	Yes	Yes				
DBFR8M	Yes	Yes	Yes				
F8P8EN	Yes	Yes	Yes				
FE8F3K	Yes	Yes	Yes				
G3AW2K	Yes	No					
GKXD6G	[No results submitted for this item.]						
JUUZAJ	Yes	No					
JZYVTJ	Yes	Yes	Yes				
LVEQAE	Yes	Yes	Yes				
MT7V4F	Yes	Yes	Yes				
NUWFAC	Yes	Yes	Yes				
PGQMFE	Yes	Yes	Yes				
Q24U6D	Yes	No					
Q8BMY9	Yes	Yes	Yes				
QCPXCC	Yes	Yes	Yes				
RKYMPB	Yes	Yes	Yes				
T8NTB4	Yes	Yes	Yes				
TB44N8	Yes	Yes	Yes				
TCYMQ9	Yes	Yes	Yes				
UMW877	Yes	Yes	Yes				
XJ2PH3	Yes	Yes	Yes				
XRFBQ7	Yes	Yes	Yes				

K2 & Q2 - Summary Response**Participants: 28**

No Response: 1

<u>Association</u>		<u>Physical End Match Performed</u>		<u>End Match ID (24 Participants)</u>	
Yes	27 (100.0%)	Yes	24	Yes	24 (100.0%)
No	0 (0.0%)	No	3	No	0 (0.0%)
Inc	0 (0.0%)	N/A	0	Inc	0 (0.0%)

TABLE 1 - K3 and Q3

<u>Physical End Match Comparison</u>				<u>Physical End Match Comparison</u>			
<u>WebCode</u>	<u>Association</u>	<u>Performed</u>	<u>End Match ID</u>	<u>WebCode</u>	<u>Association</u>	<u>Performed</u>	<u>End Match ID</u>
47HT4Z	Yes	Yes	Inc				
7WLU6Q	Yes	Yes	No				
86Q4AV	Yes	Yes	No				
9XQ4AT	Yes	Yes	No				
AULVJN	Yes	Yes	Inc				
BDTKAQ	Yes	Yes	No				
D9CYDP	Yes	Yes	No				
DBFR8M	Yes	Yes	No				
F8P8EN	Yes	Yes	No				
FE8F3K	Yes	Yes	No				
G3AW2K	Yes	No					
GKXD6G	Yes	Yes	No				
JUUZAJ	Yes	No					
JZYVTJ	Yes	Yes	No				
LVEQAE	Yes	Yes	Yes				
MT7V4F	Yes	Yes	No				
NUWFAC	No	Yes	No				
PGQMFE	Yes	Yes	No				
Q24U6D	Yes	No					
Q8BMY9	No	Yes	No				
QCPXCC	Yes	Yes	Yes				
RKYMPB	[No results submitted for this item.]						
T8NTB4	Yes	Yes	Inc				
TB44N8	Yes	Yes	No				
TCYMQ9	Yes	Yes	No				
UMW877	Yes	Yes	No				
XJ2PH3	Yes	Yes	No				
XRFBQ7	Yes	Yes	Inc				

K3 & Q3 - Summary Response**Participants: 28**

No Response: 1

<u>Association</u>		<u>Physical End Match Performed</u>		<u>End Match ID (24 Participants)</u>	
Yes	25 (92.6%)	Yes	24	Yes	2 (8.3%)
No	2 (7.4%)	No	3	No	18 (75.0%)
Inc	0 (0.0%)	N/A	0	Inc	4 (16.7%)

Examination Procedures

TABLE 2 - K1 and Q1

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRF/XRF	SEM/EDX	Pyrolysis GC	Other
47HT4Z	✓	✓	✓	✓	✓	✓					Raman
7WLU6Q	✓		✓	✓		✓					width measurement
86Q4AV	✓			✓							
9XQ4AT				✓		✓					
AULVJN	✓					✓					
BDTKAQ	✓	✓			✓	✓					
D9CYDP	✓			✓		✓					Physical measurement of tape widths
DBFR8M	✓	✓			✓	✓			✓		Raman
F8P8EN	✓	✓		✓							
FE8F3K	✓	✓		✓							
G3AW2K		✓		✓	✓	✓					
GKXD6G	✓	✓	✓	✓							
JUUZAJ	✓		✓	✓	✓	✓		✓			Raman spectroscopy
JZYVTJ	✓	✓	✓	✓	✓						
LVEQAE	✓		✓			✓		✓		✓	
MT7V4F	✓			✓		✓					
NUWFAC	✓	✓		✓		✓				✓	
PGQMFE	✓	✓		✓							
Q24U6D	✓				✓	✓					
Q8BMY9	✓			✓		✓					
QCPXCC	✓			✓	✓	✓					
RKYMPB											
T8NTB4	✓		✓			✓					

TABLE 2 - K1 and Q1 - Examination Procedures

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	Pyrolysis GC	Other
TB44N8	✓		✓	✓		✓					thickness
TCYMQ9	✓	✓		✓	✓						
UMW877		✓				✓					
XJ2PH3		✓		✓		✓					Raman
XRFBQ7	✓	✓				✓					

K1 & Q1 - Exam Methods Response Summary											Participants: 28 [No Response: 1]
	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	Pyrolysis GC	
Participant	23	14	8	19	9	20	0	2	1	2	
Percent	27%	17%	10%	23%	11%	24%	0%	2%	1%	2%	

TABLE 2 - K2 and Q2 - Examination Procedures

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	Pyrolysis GC	Other
47HT4Z	✓	✓	✓	✓	✓	✓					Raman
7WLU6Q	✓		✓	✓							
86Q4AV	✓			✓							
9XQ4AT				✓		✓					
AULVJN	✓					✓					
BDTKAQ	✓	✓			✓	✓					
D9CYDP	✓			✓							
DBFR8M	✓	✓			✓	✓			✓		Raman
F8P8EN	✓			✓							
FE8F3K	✓			✓							
G3AW2K		✓		✓	✓	✓					
GKXD6G											
JUUAJ	✓			✓	✓	✓		✓			Raman spectroscopy
JZYVTJ	✓			✓							
LVEQAE	✓		✓			✓		✓		✓	
MT7V4F	✓			✓							
NUWFAC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
PGQMFE	✓			✓							
Q24U6D	✓				✓	✓	✓		✓		
Q8BMY9	✓			✓		✓					
QCPXCC	✓			✓	✓	✓					
RKYMPB	✓			✓							
T8NTB4	✓		✓			✓					
TB44N8	✓		✓	✓		✓					

TABLE 2 - K2 and Q2 - Examination Procedures

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	Pyrolysis GC	Other
TCYMQ9	✓		✓	✓							
UMW877	✓		✓								
XJ2PH3	✓		✓	✓	✓			✓			Raman
XRFBQ7	✓	✓			✓						

K2 & Q2 - Exam Methods Response Summary											Participants: 28 [No Response: 1]
	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	Pyrolysis GC	
Participant	25	6	7	20	9	16	2	3	4	2	
Percent	30%	7%	8%	24%	11%	19%	2%	4%	5%	2%	

TABLE 2 - K3 and Q3 - Examination Procedures

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	Pyrolysis GC	Other
47HT4Z	✓	✓	✓	✓	✓	✓					Raman
7WLU6Q	✓		✓	✓		✓					width measurement
86Q4AV	✓	✓	✓	✓	✓	✓			✓		
9XQ4AT				✓		✓					
AULVJN	✓					✓					
BDTKAQ	✓	✓			✓	✓			✓		
D9CYDP	✓			✓		✓		✓			Isotope ratio mass spectrometry (IRMS), GC-MS, Constructional features
DBFR8M	✓	✓			✓	✓			✓		Raman
F8P8EN	✓	✓	✓	✓	✓	✓	✓		✓		Microspectrophotometry, microchemical tests
FE8F3K	✓	✓	✓	✓		✓			✓		
G3AW2K		✓		✓	✓	✓					
GKXD6G	✓	✓	✓	✓	✓	✓	✓		✓		
JUUAJ	✓			✓	✓	✓		✓			Raman spectroscopy
JZYVTJ	✓	✓	✓	✓	✓	✓			✓		
LVEQAE	✓	✓	✓			✓		✓		✓	
MT7V4F	✓	✓	✓	✓	✓	✓			✓		
NUWFAC	✓	✓		✓		✓				✓	Melting point
PGQMFE	✓	✓	✓	✓	✓	✓			✓		
Q24U6D	✓				✓	✓	✓		✓		
Q8BMY9	✓			✓		✓					
QCPXCC	✓			✓	✓	✓					
RKYMPB											
T8NTB4	✓		✓			✓					

TABLE 2 - K3 and Q3 - Examination Procedures

WebCode	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	Pyrolysis GC	Other
TB44N8	✓		✓	✓		✓					thickness measurement, fibers analysis
TCYMQ9	✓			✓	✓	✓					
UMW877	✓	✓		✓		✓					
XJ2PH3	✓	✓	✓	✓	✓	✓			✓		Raman
XRFBQ7	✓	✓				✓					
K3 & Q3 - Exam Methods Response Summary											Participants: 28 [No Response: 1]
	Stereo Microscope	Polarized Light	Comparison	Macroscopic Exam	Fluorescence	FTIR	XRD	XRS/XRF	SEM/EDX	Pyrolysis GC	
Participant	25	16	13	20	15	27	3	3	10	3	
Percent	30%	19%	15%	24%	18%	32%	4%	4%	12%	4%	

Conclusions

TABLE 3

WebCode	Conclusions
47HT4Z	In the item Q1 there is an adhesive tape which does not correspond in physical width or in chemical composition with the adhesive tape roll represented by the item K1. The item Q1 is not originated from the item K1. In the item Q2 there is an adhesive tape which corresponds in external properties and chemical composition with the adhesive tape roll represented by the item K2. The end of adhesive tape roll represented by item K2 is torn. Both ends of the item Q2 are torn. Other end of item Q2 corresponds in shape and individual characteristics with tape roll end represented by item K2. In the item Q3 there is an adhesive tape which corresponds in external properties and chemical composition with the adhesive tape roll represented by the item K3. The number of supportive threads corresponds with the items Q3 and K3. Both ends of the item Q3 and the end of item K3 are torn. There are not enough individual characteristics between Q3 and K3 cut ends to make conclusions.
7WLU6Q	Adhesive tapes K1 and Q1 differ in width and additionally in the chemical composition of the backing and do not have a common origin. Adhesive tapes K2 and Q2 physically match and have a common origin. Adhesive tapes K3 and Q3 physically match and have a common origin. Although adhesive tapes K3 and Q3 do not have common edges, they match each other in all tested parameters (tape width, backing morphology, color and chemical composition of the backing and adhesive, fabric construction) and therefore could have a common origin.
86Q4AV	Based on the results of the examination performed, I am of the opinion that: i) The questioned packing tape (Q1) is different to the known roll of packing tape (K1) based on width, and therefore K1 could not be a source for Q1. ii) The questioned masking tape (Q2) was physically fitted back to the known roll of masking tape (K2), and therefore Q2 and K2 were once a single unit. Q2 came from the roll of masking tape represented by K2. iii) The questioned duct tape (Q3) could not be differentiated from the known roll of duct tape (K3) based on the physical and chemical properties examined, and therefore K3 could be a source for Q3. Whilst Q3 could have come from K3, duct tape is commercially available and another roll of duct tape with the same physical and chemical properties could not be excluded either.
9XQ4AT	Item 1 The results very strongly support the proposition that tape in item Q1 and K1 are not of the same type (level -3). Item 2 The results very strongly support the proposition that tape in item Q2 and K2 are of the same type (level +3). The results very strongly support the proposition that there is a physical match between Q2 and K2 (level +3). Item 3 The results very strongly support the proposition that tape in item Q3 and K3 are of the same type (level +3). The results are inconclusive whether tape in item Q3 originates from the tape roll in item K3 (level 0).
AULVJN	K1 and Q1 have different tape backing and adhesive, so they cannot have the same origin. K2 and Q2 have the same physical properties, tape backing and adhesive. In addition, they match physically, so they may have the same origin. K3 and Q3 have the same physical properties, tape backing, fibers and adhesive, so they may have the same origin.
BDTKAQ	1.The adhesive tape in Item Q1 differs from the adhesive tape roll represented by Item K1 in terms of material. They are not the same type of adhesive tape. 2.The adhesive tape in Item Q2 showed no difference from the adhesive tape roll represented by Item K2 in both physical features and chemical components. Moreover, one of their ends physically matches the other. Therefore, Item Q2 and Item K2 originated from the same adhesive tape roll. 3.The adhesive tape in Item Q3 showed no difference from the adhesive tape roll represented by Item K3 in both physical features and chemical components, based on the methods used. Item Q3 could have originated from the same adhesive tape roll as Item K3.
D9CYDP	Results of examinations were as follows: Known (K1) and Questioned (Q1) tape samples were found to be composed of different backing materials, and different adhesives, thus the tape in Item Q1 could be excluded as having originated from the roll of tape represented by tape section Item K1. Numerous points of fit and correspondence were found between Known (K2) and Questioned (Q2) tape samples. These results provide extremely strong support for the proposition that Items K2 and Q2 both once formed part of the same roll of tape. Known (K3) and Questioned (Q3) tape samples could not be differentiated on the basis of any of the following: appearance (macroscopic and microscopic), physical

TABLE 3

WebCode	Conclusions
	dimensions (width and thickness), weight per unit area, backing composition, adhesive composition, chemical profile of hexane-extractable components (excluding adhesive), inorganic components, stable carbon and hydrogen isotope ratios, scrim construction and composition. On the basis of the above results, the roll of tape represented by Known (K3) sample could not be excluded as the source of Questioned (Q3) sample. I am also unable to exclude another roll of tape from the same batch as Known (K3) as being the source of Questioned (Q3) sample.
DBFR8M	1. The adhesive tape in item Q1 was different from the adhesive tape in item K1 in regards to the properties that were examined. Additionally, neither end of the adhesive tape in item Q1 physically matched with the end of the adhesive tape represented by item K1. In summary, it can be ruled out that the adhesive tape Q1 did originate from the adhesive tape represented by item K1. 2. The adhesive tape in item Q2 was identical to the adhesive tape in item K2 in regards to the properties that were examined. Additionally, one end of the adhesive tape in item Q2 physically matched with the end of the adhesive tape represented by item K2. In summary, the findings strongly suggest that the adhesive tape Q2 did originate from the adhesive tape represented by item K2. 3. The adhesive tape in item Q3 was identical to the adhesive tape in item K3 in regards to the properties that were examined. However, neither end of the adhesive tape in item Q3 physically matched with the end of the adhesive tape represented by item K3. In summary, the findings suggest that the adhesive tapes Q3 and K3 share the same source of origin.
F8P8EN	Item Q1 could not be associated with Item K1 due to differences in thickness and optical properties (Exclusion/Elimination). Examination and comparison of Items Q2 and K2 revealed corresponding edges and features. These Items physically fit to form one continuous piece when corresponding edges and/or features are re-aligned in a specific sequence. It is therefore concluded that Items Q2 and K2 were, at one time, a portion of a single unit (Level I - Physical/Fracture Match). The Item Q3 black duct tape was consistent with the Item K3 black duct tape in overall construction and in physical and chemical properties. It was concluded that the Item Q3 tape originated from either the source represented by Item K3 or from a roll manufactured in the same manner (Level III – Association with Discriminating Characteristics). This type of conclusion was reached because other rolls of tape produced at the same manufacturing plant and produced with the same properties would also be indistinguishable. Due to differences between tape products, the techniques used in this comparative analysis can typically distinguish different tapes. TERMINOLOGY KEY FOR COMPARATIVE EXAMINATIONS: Level I - Physical/Fracture Match: Physical Fit is reached when the items that have been broken, torn, or separated exhibit physical features that correspond/re-align in a manner that is not expected to be replicated. Level II - Association with Highly Discriminating Characteristics: An association in which items could not be differentiated based on the examinations conducted. Therefore, the possibility that the items came from the same source cannot be eliminated. Additionally, the items share unusual characteristics that would rarely be expected to occur in the relevant population. This is the highest degree of association that can be determined in the absence of a Physical Fit. Level III - Association with Discriminating Characteristics: An association in which items could not be differentiated based on the examinations conducted. Therefore, the possibility that the items came from the same source cannot be eliminated. Other items have been manufactured or could occur in nature that would also be indistinguishable from the submitted items and could be encountered in the relevant population. The analytical techniques used in the analysis of these items can provide high levels of discrimination among natural and manufactured materials. This is considered a high degree of association. Level IV - Association with Limitations: An association in which items could not be differentiated based on the examinations conducted. Therefore, the possibility that the items came from the same source cannot be eliminated. As compared to the categories above, this type of association has decreased evidential value. For example, the items are more commonly encountered in the relevant population, minor variations were observed, or a complete analysis was not performed due to limited characteristics or sample size. Minor variations, for certain types of examinations, could be due to factors such as contamination of the sample(s) or having a sample of insufficient size to adequately assess heterogeneity of the entity from which it was derived. Inconclusive: No conclusion could be reached regarding an association or an elimination between the items. Exclusion with Limitations: The item exhibits differences from the comparison sample that support that it did not originate from the source, as represented by the comparison sample. An Exclusion/Elimination conclusion was not reached due to limiting factors, such as possible natural or manufactured source variations.

TABLE 3

WebCode	Conclusions
	Exclusion/Elimination: The items exhibit differences that demonstrate the items did not originate from the same source.
FE8F3K	The backing portions of the Q1 and K1 tape have different optical properties. These two pieces of tape did not come from the same source. The Q2 tape shared a fracture line with the K2 tape. These pieces of tape were once parts of the same roll of tape. The Q3 tape was similar in construction and chemical composition with the K3 tape. The Q3 tape could have come from the same roll of tape as the K3 tape or any other roll of tape manufactured in a similar process.
G3AW2K	ITEM K1 AND ITEM Q1 ARE DIFFERENT IN CHEMICAL COMPOSITION ITEM K2 AND ITEM Q2 ARE SIMILAR IN CHEMICAL COMPOSITION ITEM K3 AND ITEM Q3 ARE SIMILAR IN CHEMICAL COMPOSITION PHYSICAL MATCH COMPARISON WAS NOT PERFORMED
GKXD6G	Q1 and K1 are clear, colorless packaging tapes. Physical and microscopical examinations indicate that Q1 differs from K1 in several of its manufactured properties. Therefore, Q1 did not originate from the roll represented by K1 (Elimination). Q2 and K2 are yellow masking tapes. This tape type is not currently examined in the discipline participating in this test. Therefore, no examinations were conducted. The Q3 and K3 dark brown duct tapes were evaluated for a physical fit of their free ends. None were observed. Further physical, chemical, and microscopical examinations indicate that Q3 and K3 are indistinguishable from one another in that no exclusionary differences were observed in the physical, chemical, and optical properties that were evaluated. Therefore, Q3 originated from the roll of duct tape represented by K3, or from another roll manufactured in the same manner (Type III Association). This conclusion was reached because other rolls constructed with the same materials in the same manner would also be indistinguishable. The following categories and their descriptions are meant to provide context to the conclusions reached in this report. Every category may not be applicable in every case nor for every material. Type I Association: Physical Fit – The items exhibit physical features that demonstrate they were once part of the same object. Associations of Evidence with Class Characteristics: Class characteristics are physical and/or chemical properties that place an item within a particular group of items. Associations of evidence with class characteristics can have varying degrees of significance. In general, the smaller the size of the group relative to the relevant population, the more significant the association. A class association cannot definitively establish that the items came from the same source. Type II: Association with Highly Discriminating Characteristics – An association in which items could not be differentiated. Therefore, the possibility that the items came from the same source cannot be eliminated. Additionally, the items share unusual characteristics that would not be expected to be encountered in the relevant population. Type III: Association with Discriminating Characteristics – An association in which items could not be differentiated. Therefore, the possibility that the items came from the same source cannot be eliminated. Other items have been manufactured that would also be indistinguishable from the submitted items and could be encountered in the relevant population. Type IV: Association with Limitations – An association in which items could not be differentiated. Therefore, the possibility that the items came from the same source cannot be eliminated. As compared to the categories above, this type of association has decreased evidential value. For example, the items are more commonly encountered in the relevant population, a complete analysis was not performed due to limited characteristics or a limited analytical scheme, or minor variations were observed in the data. Inconclusive – No conclusion could be reached. Elimination – The items exhibit exclusionary differences that demonstrate they did not originate from the same source.
JUUZAJ	Based on comparative examinations of the known (K1) and questioned (Q1) adhesive tape samples, differences were observed between the known and questioned samples. The known (K2) and questioned (Q2) adhesive tape samples could not be differentiated based on their macroscopic and microscopic characteristics or the chemical composition of each component of the tape. The known (K3) and questioned (Q3) adhesive tape samples could not be differentiated based on their macroscopic and microscopic characteristics or the chemical composition of each component of the tape.
JZYVTJ	1. Comparative examinations of Exhibit 1.1 (known colorless packing tape) and Exhibit 1.2 (questioned colorless packing tape) disclosed exclusionary differences with respect to physical characteristics. As a result of these findings, Exhibit 1.2 did not originate from Exhibit 1.1 (EXCLUSION). 2. Exhibits 2.1 (known yellow masking tape from Case 2) and 2.2 (questioned yellow masking tape from Case 2) were

TABLE 3

WebCode	Conclusions
	evaluated for the presence or absence of a physical fit. Based on individual characteristics along the separation boundary realigning in a manner that is not expected to be replicated, Exhibit 2.1 and Exhibit 2.2 once formed a contiguous unit (LEVEL 1 ASSOCIATION – Physical Fit Present). 3. Exhibits 3.1 (known black duct tape from Case 3) and 3.2 (questioned black duct tape from Case 3) were evaluated for the presence or absence of a physical fit. Based on disagreement of individual characteristics, Exhibit 3.1 and Exhibit 3.2 did not once form a contiguous unit (PHYSICAL FIT ABSENT). However, comparative examinations of Exhibit 3.1 and Exhibit 3.2 disclosed them to be consistent in their physical characteristics and chemical compositions. As a result of these findings, Exhibit 3.2 originated from Exhibit 3.1 or another source of tape with the same characteristics (LEVEL 3 ASSOCIATION – Discriminating Characteristics). This type of association was reached because the typical analysis scheme was performed on mass-produced materials that have numerous features for evaluation. a. A portion of this Pressure Sensitive Tape service required the examination of textile materials that were an original component of the duct tape (Exhibits 3.1 and 3.2) as it was manufactured. The Textile Analysis (Request 1_1) portion of this Pressure Sensitive Tape service was performed by (Name redacted), Forensic Chemist.
LVEQAE	Item Q1 and K1 differ in the composition of both the backing material(surface) and the adhesive layer. In addition, the cut end of the adhesive tape and width in Q1 does not physically match that of K1. Based on these findings, it is concluded that Q1 did not originate from the same adhesive tape roll as K1. Item Q2 and K2 exhibit similar compositions in both the backing material(surface) and the adhesive layer. Furthermore, a physical end match was observed between the cut end of the adhesive tape in Q2 and that of K2. Accordingly, Q2 is identified as having originated from the same adhesive tape roll as K2. The compositional characteristics of both the backing material(surface) and the adhesive layer of Q3 are consistent with those of K3. In addition, the cut end of the adhesive tape in Item Q3 was found to physically match that of K3. Accordingly, Q3 is concluded to have originated from the same adhesive tape roll as K3.
MT7V4F	Pair K1/Q1 Items K1 and Q1 each comprised a length of clear, colourless tape. No physical fit was established between Q1 and K1. Item Q1 differed in width, appearance and composition to Item K1. These results indicate that Q1 could not have originated from the roll of tape represented by K1. Pair K2/Q2 Items K2 and Q2 each comprised a length of yellow masking tape. A physical fit was established between Q2 and K2. This result indicates that Q2 and K2 were at one stage joined, hence Q2 originated from K2 roll. Pair K3/Q3 Items K3 and Q3 each comprised a length of black duct tape with white adhesive and scrim. No physical fit was established between Q3 and K3. Item Q3 corresponded in width, appearance and composition to Item K3. These results indicate that Q3 could have originated from the roll of tape represented by K3, or another indistinguishable roll. The frequency of tapes available on the market with indistinguishable properties from those of Item K3 is unknown.
NUWFAC	K1/Q1: Macroscopic and microscopic examinations revealed differences in tape width, optical clarity (K1: transparent; Q1: translucent), and adhesive distribution. No physical fit or physical match was observed between the compared items. Examination by polarized light microscopy demonstrated different optical interactions between the tapes, with item K1 exhibiting a blue coloration and item Q1 exhibiting a yellow coloration. Infrared spectroscopy identified chemical differences in both the backing materials and adhesive layers of the two items. Furthermore, pyrolysis–gas chromatography with flame ionization detection (Py-GC/FID) revealed differences in the pyrograms obtained from items K1 and Q1. Based on the results of the examinations conducted, item Q1 is not consistent with item K1 and is not consistent with having originated from item K1. K2/Q2: Macroscopic and microscopic examinations revealed that the items exhibited the same physical characteristics in terms of morphology, surface features, and color of both the backing material and adhesive layer. In addition, no differences were observed following examination by polarized light microscopy, Fourier-transform infrared spectroscopy (FTIR), and pyrolysis–gas chromatography with flame ionization detection (Py-GC/FID). A physical fit comparison was performed, and a physical match was observed between the compared items. Based on the results of the examinations conducted, item Q2 is consistent with item K2 and is consistent with having originated from item K2. K3/Q3: Stereomicroscopic examination revealed differences in the adhesive distribution of the compared items. The adhesive layer of item K3 completely covered the backing material, whereas the adhesive layer of item Q3 did not fully cover the backing, leaving a small portion of the backing material exposed. Both items exhibited similar physical

TABLE 3

WebCode	Conclusions
	characteristics with respect to the backing material, including color, morphology, and surface features. No physical fit or physical match was observed between the compared items. Furthermore, no chemical differences were detected by melting point analysis, Fourier-transform infrared spectroscopy (FTIR), or pyrolysis–gas chromatography with flame ionization detection (Py-GC/FID). Based on the results of the examinations conducted, item Q3 is not consistent with item K3 and is not consistent with having originated from item K3.
PGQMFE	Exclusionary differences were found to exist between the microscopic properties of Q1 and K1. Therefore, Q1 could not have originated from the same source as represented by the K1. A physical match was established between one of the non-manufactured, torn, jagged, uneven edges of Q2 and the torn, jagged, uneven, non-manufactured edge of K2. These edges have distinctive features that physically match. The alignment of these features serves as the basis for the opinion that Q2 and K2 were at one time joined together. The determination of a physical match is based solely on a visual/microscopic comparison, not upon a statistical evaluation of data or an exhaustive comparison to all potential sources. No exclusionary differences in microscopic properties, and chemical (by Fourier Transform Infrared Spectroscopy) and elemental (by Scanning Electron Microscopy-Energy Dispersive Spectroscopy) composition were observed between Q3 and K3. Therefore, Q3 was not directly joined to K3 but could have originated from the same source as represented by K3 or from another source exhibiting all of the same analyzed/measured characteristics.
Q24U6D	The items K1 and Q1 can be differentiated and therefore originate from different sources. The items K2 and Q2 as well as K3 and Q3 cannot be differentiated by the methods used here. Therefore, the respective samples could originate from the same source.
Q8BMY9	Case 1: The known (K1) and questioned (Q1) sample have different sizes, have different manufacturing and composition characteristics. Case 2: The known (K2) and questioned (Q2) sample have the same size, have the same manufacturing and composition characteristics, and can be fully matched to each other. Case 3: The known (K3) and questioned (Q3) sample have similar dimensional characteristics and some manufacturing characteristics, but the adhesive coating on the side edge of the back side is different. Tape ends K3 and Q3 were separated from the tape roll in different ways and come from different tape rolls.
QCPXCC	Item 1: Using the methods employed, samples Q1 and K1 could be clearly distinguished from one another. Their dimensions and fluorescence properties are clearly different. It is not possible that, sample Q1 originated from the adhesive tape roll represented by tape section K1 or from a similar roll of adhesive tape. Item 2: Using the methods employed, samples Q2 and K2 could not be distinguished from one another. It is possible that, sample Q2 originated from the adhesive tape roll represented by tape section K2 or from a similar roll of adhesive tape. Physical end match comparison was performed. One end of the adhesive tape in Item Q2 physically matched with the end of the section of adhesive tape represented by Item K2. Item 3: Using the methods employed, samples Q3 and K3 could not be distinguished from one another. It is possible that, sample Q3 originated from the adhesive tape roll represented by tape section K3 or from a similar roll of adhesive tape. Physical end match comparison was performed. One end of the adhesive tape in Item Q3 physically matched with the end of the section of adhesive tape represented by Item K3.
RKYMPB	The following methodologies were used in the examination of this case: visual examination, physical examination and microscopy. Examination of Q2 and K2 (Item 2-1 and 2-2, respectively) each revealed a strip of yellow paper tape with at least one torn edge. A torn edge of the tape in Item 2-1 physically fits the torn edge of the tape in Item 2-2. Therefore, Items 2-1 and 2-2 were once joined to form a single item. The remaining items were not examined.
T8NTB4	Microscopic evaluation of the end of Q1 was not a definitive match to K1; further FTIR evaluation of the adhesive carrier/backing material of K1 and Q1 were found to be different as well as the adhesives being different. Microscopic evolution of the end of Q2 and the end of K2 suggested that they originated from the same piece of tape. FTIR analysis of the adhesive carrier/backing material and of the adhesive of K2 and Q2 both matched. Microscopic evaluation of the cut ends of Q3 and K3 are not a definitive match. FTIR evaluation of the backing material (black) for Q3 and K3 were found to be the same material; FTIR evaluation of the adhesive of Q3 and K3 exhibit strong correlation, indicating a highly likely match.

TABLE 3

WebCode	Conclusions
TB44N8	Item 1 : There is no physical match between the ends of K1 and Q1. Characteristics of K1 are different from Q1. K1 and Q1 can't come from the same roll. Item 2 : one end of the adhesive tape of Q2 physically corresponds to the end of the section of adhesive tape represented by item K2. Q2 comes from the roll of adhesive tape represented by the tape section item K2. Item 3 : There is no physical match between the ends of K3 and Q3. K3 and Q3 are undifferentiated. Q3 can come from the roll of adhesive tape represented by the tape section item K3 or from another roll with the same characteristics.
TCYMQ9	Q1 and K1. The piece of tape in Q3 is different from the tape in K1 and has not originated from the roll of tape in K1. Q2 and K2. The piece of tape on Q2 has characteristic edges and forms a physical fit with the piece of tape in K2. In my opinion, the two pieces in Q2 and K2 originally formed one piece of tape and hence Q2 was the last piece of tape to be taken from the roll. Q3 and K3. The piece of tape in Q3 is indistinguishable from the piece of tape in K3 in terms of its physical attributes and components. In my opinion, these two pieces of tape could have originated from the same roll.
UMW877	Items K1 and Q1 consist of clear packing tape. The questioned tape from Item Q1 was inconsistent in thickness, backing, and adhesive and did not originate from the same source as Item K1 (elimination). Items K2 and Q2 consist of yellow masking tape. The torn ends of the masking tape formed a physical fit between Items K2 and Q2, demonstrating they originated from the same source (physical fit). Items K3 and Q3 consist of black duct tape. The questioned tape from Item Q3 was consistent in scrim fiber/count, thickness, width, backing, and adhesive to Item K3 and could have originated from that source (association with discriminating characteristics). APPENDIX 1: STANDARD GUIDE FOR INTERPRETATION AND REPORTING IN FORENSIC COMPARISONS OF TRACE MATERIALS (FROM ASTM E3462-25) This guide focuses on a qualitative approach to communicate the significance of an association or exclusion, based on (1) the validated methodology used for the comparison of the items, (2) discrimination capabilities of the analytical scheme, and (3) existing knowledge of how discriminating the compared characteristics are based on survey studies, reference collections, or databases. While the significance of each association is assessed independently, cross-transfers or multiple transfers, when they occur, are examples of factors that could further increase the significance of findings. The interpretation scale is an example of descriptions for the interpretation categories and the respective opinions for forensic comparisons of trace materials. The following descriptions are meant to provide context to the interpretation categories selected within a report. Physical Fit—Physical Fit is the highest degree of association between items. It is the opinion that the observations provide the strongest support for the proposition that the items were once joined together to form a single object as opposed to originating from different sources. Physical Fit is reached when the items that have been broken, torn, or separated exhibit physical features that correspond or re-align in a manner that is not expected to be replicated. Association with Highly Discriminating Characteristics—An association in which items could not be differentiated based on the examinations conducted. Therefore, the possibility that the items came from the same source cannot be eliminated. Additionally, the items share unusual characteristics that would rarely occur in the relevant population. This type of association provides very strong to extremely strong support for the proposition that the items originated from the same source as opposed to different sources. This is the highest degree of association that can be determined in the absence of a Physical Fit. Association with Discriminating Characteristics—An association in which items could not be differentiated based on the examinations conducted. Therefore, the possibility that the items came from the same source cannot be eliminated. Other items have been manufactured or could occur in nature that would also be indistinguishable from the submitted items and could be encountered in the relevant population. This type of association provides moderately strong to strong support for the proposition that the items originated from the same source as opposed to different sources. The analytical techniques used in the analysis of these items can provide high levels of discrimination among natural and manufactured materials and therefore this is considered a strong association. Association with Limitations—An association in which items could not be differentiated based on the examinations conducted. Therefore, the possibility that the items came from the same source cannot be eliminated. This type of association provides slight to moderate support for the proposition that the items originated from the same source as opposed to different sources. As compared to the categories above, this type of association has decreased evidential value. The items are more commonly encountered in the relevant population, a complete analysis was not performed

TABLE 3

WebCode	Conclusions
	due to limited characteristics or a limited analytical scheme, or minor explainable variations were observed in the data. Inconclusive—No opinion could be reached regarding an association or an exclusion between the items. This provides an indeterminate support for the propositions that the items originated from either the same source or different sources. Exclusion with Limitations—The item exhibits differences from the comparison sample that support that it did not originate from the source, as represented by the comparison sample; however, limiting factors prevented an Exclusion (Elimination) from being reached. This provides slight to strong support for the proposition that the items originated from different sources as opposed to the same source. Exclusion (Elimination)—The items exhibit differences that provide the strongest support that the items originated from different sources as opposed to the same source.
XJ2PH3	In my opinion, - based on differences in polarising patterns of backing and chemical compositions of sampled backings and adhesives layers, Item Q1 did not originate from the roll of tape marked Item K1. - based on physical fitting and, the comparison of physical characteristics (appearance, width and surface texture) and chemical compositions of the sampled backings and adhesive layers, Item Q2 originated from the roll of tape marked Item K2. The possibility of these tapes having such correspondence if they were not a single strip of tape is exceedingly small. - based on the comparison of physical characteristics (appearance, width, surface texture and scrim characteristics) and chemical compositions of the sampled backings and adhesive layers, Item Q3 could have originated from the same source as the roll of tape marked Item K3 or from another source(s) of tape with similar characteristics.
XRFBQ7	K1, Q1: The adhesive tapes of Item 1 consist of two sections of transparent adhesive tape. Samples K1 and Q1 differ in width by approximately 1 mm. Both tapes have different adhesive layers and the same backing material. Furthermore, they exhibit a differing optical appearance under the stereomicroscope under varying lighting and magnification. The cut edges show no similarities, but also lack any distinguish features. Due to the differences in width, adhesive layer and surface, the two adhesive tape sections originate from different sources. No physical matching traces are present. The questioned tape Q1 could not have originated from the tape roll K1. K2, Q2: The crepe adhesive tapes of Item 2 consist of two pieces of yellow adhesive tape: Item Q2 (questioned) and K2 (known). There were no differences neither in adhesive layers nor in backing materials. Both sides (A and B) of Item Q2 exhibit torn edges. From a trace evidence perspective, the torn edge of the side labeled B by this laboratory forms a physical match with the torn edge of adhesive tape K2. This separation was caused by tearing and displays sufficient individual characteristics for identification. Based on the chemical analysis and the physical match, the side of Item Q2 labeled B by this laboratory and Item K2 belong together. Thus there is a very high probability that questioned tape Q2 originated from the tape roll K2. K3, Q3: The duct tapes of Item 3 consist of two pieces of black, fiber-reinforced adhesive tape: Item Q3 (questioned) and K3 (known). There were no differences neither in adhesive layers nor in backing materials nor in fibers. Both sides (A and B) of Item Q3 exhibit torn edges. The chemical analysis revealed no differentiation in the backing layer, adhesive or fibers. Visually, the two torn pieces of adhesive tape do not differ. Furthermore, the two pieces do not differ in their dimensions or the number (46) of transverse fibers. Upon examining the two possible tear locations of Item Q3 against the tear location of the Item K3, similarities are apparent, but there are no distinct physical matching characteristics. There are fiber-related differences on the side of the torn piece of Item Q3 labeled B by this laboratory. Therefore, this side can be excluded. On the second side, labeled A by this laboratory, there are a multitude of areas that argue for an exclusion. However, it may still be possible that the two adhesive tapes were separated by tearing at this location. Considering that there might have been additional tearings and the fact that the tapes cannot be distinguished by chemical analysis, the questioned tape Q3 could probably have originated from tape roll K3.

Additional Comments

TABLE 4

WebCode	Additional Comments
86Q4AV	Elemental analysis was not available for this examination.
FE8F3K	The K2/Q2 set was more of a Fractured Item test than a Tape comparison test.
GKXD6G	K2 and Q2 are masking tapes which are not evaluated in the discipline in this Laboratory that participates in CTS adhesive tape proficiency testing.
JZYVTJ	A conclusion scale is included on our report. APPENDIX The following categories and their descriptions are meant to provide context to the conclusions reached in this report. Every type of conclusion may not be applicable in every case nor for every material type. LEVEL 1 ASSOCIATION – Physical Fit Present This is the highest degree of association between items. The items display physical characteristics along the separation boundary that realign in a manner that is not expected to be replicated, supporting the conclusion that the items once formed a contiguous unit. ASSOCIATIONS OF EVIDENCE WITH CLASS CHARACTERISTICS: Class characteristics are physical or chemical properties that place an item within a particular group of items. Associations of evidence with class characteristics can have varying degrees of significance. In general, the smaller the size of the group relative to the relevant population, the more significant the association. A class association cannot definitively establish that items came from the same source. LEVEL 2 ASSOCIATION – Highly Discriminating Characteristics The items could not be differentiated based on the examinations conducted. Other items may have been manufactured that would also be indistinguishable from the submitted items and could be encountered in the relevant population. However, the items share specific characteristics that would not be expected to be encountered in the relevant population. LEVEL 3 ASSOCIATION – Discriminating Characteristics The items could not be differentiated based on the examinations conducted. Other items have been manufactured that would also be indistinguishable from the submitted items and could be encountered in the relevant population. LEVEL 4 ASSOCIATION – Limitations The items could not be differentiated based on the examinations conducted. The items are more commonly encountered in the relevant population, a complete analysis was not performed due to limited characteristics or a limited analytical scheme, or explainable variations were observed in the data. INCONCLUSIVE: No opinion could be reached regarding an association or an exclusion between the items. PHYSICAL FIT ABSENT: The items display physical characteristics along the separation boundary which do not align, or which realign in a manner that is expected to be replicated. This does not imply whether the compared items originated from the same source or from different sources. Additional comparison of class characteristics may be warranted. EXCLUSION: The items exhibit exclusionary differences in class characteristics, supporting the opinion that the items did not originate from the same source.
RKYMPB	Only Case 2 was examined by this analyst.

-End of Report-
(Appendix may follow)

Test No. 26-5471: Adhesive Tape Analysis

DATA MUST BE SUBMITTED BY **July 06, 2026, 11:59 p.m. EDT** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: JTXJXL

The Accreditation Release section can be accessed by using the "Continue to Final Submission" button above. This information can be entered at any time prior to submitting to CTS.

Scenario:

In three unrelated cases, adhesive tape material was collected and submitted for analysis. Each Item (1-3) below represents a separate, independent case.

A hole punch is located at one end of the known tape sample to indicate the end which was removed from the roll and is not intended for physical end match analysis.

Items Submitted (Sample Pack TAPE):

Item 1 - (K1, Q1): A known and a questioned sample from Case 1.

Item 2 - (K2, Q2): A known and a questioned sample from Case 2.

Item 3 - (K3, Q3): A known and a questioned sample from Case 3.

Item 1:

1.1) Could the adhesive tape in Item Q1 have originated from the adhesive tape roll represented by the tape section, Item K1?

☐ Yes ☐ No ☐ Inconclusive

1.2) Was a physical match comparison performed?

☐ Yes ☐ No ☐ N/A

1.3) If a physical match comparison was performed, does either end of the adhesive tape in Item Q1 physically match with the end of the section of adhesive tape represented by Item K1?

☐ Yes ☐ No ☐ Inconclusive

1.4) Indicate the procedure(s) used to examine the submitted items:

Please check all that apply.

<u>Microscopic Exams:</u>	☐ Stereo	☐ Comparison
	☐ Polarized Light	
☐ Macroscopic Exam	☐ Fluorescence	☐ FTIR
☐ XRD	☐ XRS/XRF	☐ SEM/EDX
☐ Pyrolysis GC		
Other (specify):		

Item 2:

2.1) Could the adhesive tape in Item Q2 have originated from the adhesive tape roll represented by the tape section, Item K2?

☐ Yes ☐ No ☐ Inconclusive

2.2) Was a physical match comparison performed?

☐ Yes ☐ No ☐ N/A

2.3) If a physical match comparison was performed, does either end of the adhesive tape in Item Q2 physically match with the end of the section of adhesive tape represented by Item K2?

☐ Yes ☐ No ☐ Inconclusive

2.4) Indicate the procedure(s) used to examine the submitted items:

Please check all that apply.

<u>Microscopic Exams:</u>	☐ Stereo	☐ Comparison
	☐ Polarized Light	
☐ Macroscopic Exam	☐ Fluorescence	☐ FTIR
☐ XRD	☐ XRS/XRF	☐ SEM/EDX
☐ Pyrolysis GC		
Other (specify):		

Item 3:

3.1) Could the adhesive tape in Item Q3 have originated from the adhesive tape roll represented by the tape section, Item K3?

☐ Yes ☐ No ☐ Inconclusive

3.2) Was a physical match comparison performed?

☐ Yes ☐ No ☐ N/A

3.3) If a physical match comparison was performed, does either end of the adhesive tape in Item Q3 physically match with the end of the section of adhesive tape represented by Item K3?

☐ Yes ☐ No ☐ Inconclusive

3.4) Indicate the procedure(s) used to examine the submitted items:

Please check all that apply.

<u>Microscopic Exams:</u>	☐ Stereo	☐ Comparison
	☐ Polarized Light	
☐ Macroscopic Exam	☐ Fluorescence	☐ FTIR
☐ XRD	☐ XRS/XRF	☐ SEM/EDX
☐ Pyrolysis GC		
Other (specify):		

4.) What would be the wording of the Conclusions in your report?

Note: Please use appropriate punctuation to indicate the end of sentences, sections, and statements in the free-form space below. Extra spacing and returns used for separation within your text will not transfer and may cause your information to be illegible in the Summary Report. The use of lists and tabular formats to deliver information is also cautioned against, as these do not transfer.

5.) Additional Comments

Note: Please use appropriate punctuation to indicate the end of sentences, sections, and statements in the free-form space below. Extra spacing and returns used for separation within your text will not transfer and may cause your information to be illegible in the Summary Report. The use of lists and tabular formats to deliver information is also cautioned against, as these do not transfer.

RELEASE OF DATA TO ACCREDITATION BODIES

The Accreditation Release is accessed by pressing the "Continue to Final Submission" button online and can be completed at any time prior to submission to CTS.

CTS submits external proficiency test data directly to ANAB and/or A2LA. Please select one of the following statements to ensure your data is handled appropriately.

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- ☐ This participant's data is **not** intended for submission to ANAB and/or A2LA.

Have the laboratory's designated individual complete the following steps
only if your laboratory is accredited in this testing/calibration discipline
by one or more of the following Accreditation Bodies.

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ANAB Certificate No.

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety.

Authorized Contact Person and Title

Laboratory Name

Location (City/State)