



Footwear Imprint Evidence Test No. 21-5331/5 Summary Report

Each sample pack contained either digitally produced photographs (21-5331) or directly downloadable digital images (21-5335) of seven questioned imprints and photographs of two suspect shoe soles and test imprints made with those shoes. Participants were requested to compare the imprints from the crime scene with the suspect shoes and report their findings. Data were returned by 155 participants: 92 for 21-5331 and 63 for 21-5335 and are compiled into the following tables:

	<u>Page</u>
<u>Manufacturer's Information</u>	<u>2</u>
<u>Summary Comments</u>	<u>3</u>
<u>Table 1: Examination Results</u>	<u>4</u>
<u>Table 2: Conclusions</u>	<u>22</u>
<u>Table 3: Additional Comments</u>	<u>60</u>
<u>Appendix: Data Sheet</u>	

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 consists of nine photographs. One photograph (K1a) shows the soles of the two suspect shoes lit from above. Two photographs (K1b and K1c) show the suspect soles lit with oblique lighting on the heels and toes, respectively. Four photographs (K1d, K1e, K1f and K1g) show known imprints made with the suspect shoes. Two photographs contain images of the seven questioned imprints, Q1-Q3 in the first photograph and Q4-Q7 in the second photograph. Participants were asked to compare the suspect shoe soles and their known imprints with the questioned imprints to determine if any associations or identifications could be established.

SAMPLE PREPARATION -

The shoes used in this test had been worn frequently over the course of more than three months. Once the shoes were no longer worn, the soles were cleaned of any debris with water and paper towels.

KNOWN IMPRINTS (K1d-K1g): Known imprints were created by coating the sole of each suspect shoe with ink and producing individual imprints on white paper. The imprints on K1d and K1e were created by rolling the toe and heel areas of each shoe separately. The heels were placed above their respective toes to distinguish the imprints from those on K1f and K1g. The imprints on K1f and K1g were produced by having the owner wear the shoe and step down onto paper placed on top of a semi-soft surface (per ASB standards).

QUESTIONED IMPRINTS (Q1-Q7): Questioned imprints Q1-Q7 were created by coating the sole of each shoe with fingerprint ink and having the wearer walk across the substrates (see table below).

SAMPLE PACK ASSEMBLY -

Once verification was complete and sample preparation was done, each photo set was placed into a pre-labeled sample pack envelope, sealed with evidence tape, and initialed with "CTS." Digital download media were provided in a zipped file uploaded to the CTS portal.

VERIFICATION -

All laboratories that conducted the predistribution examination reported the expected associations and exclusions for all questioned imprints with the suspect shoes. Specifically, all labs associated imprints Q1 and Q4 with the suspect left shoe and associated imprints Q3 and Q5 with the suspect right shoe. The participants excluded the suspect shoes as the source of imprints Q2, Q6, and Q7.

Imprints	Shoe Type	Manufacturer	Left/Right	Size (U.S.)
Q1, Q4	Athletic sneaker (Suspect shoe K1)	Nike	Left	7.5
Q3, Q5	Athletic sneaker (Suspect shoe K1)	Nike	Right	7.5
Q2, Q6	Athletic sneaker (Shoe not provided)	Nike	Right	8.5
Q7	Athletic sneaker (Shoe not provided)	Nike	Left	8.5

Summary Comments

This test was designed to allow participants to assess their proficiency with footwear imprint examination and comparison. Test materials consisted of two photographs containing seven questioned footwear imprints (Q1-Q7), a photograph of the two suspect shoe soles (K1a), two photographs of oblique lighted images of the same soles (K1b-K1c), and four photographs of inked exemplar imprints made with the shoes (K1d-K1g). Participants were requested to determine if any of the questioned imprints were made by the suspect shoes, utilizing a seven-point conclusion scale. Two of the questioned imprints were made by the suspect left shoe (Q1, Q4), and two were made by the suspect right shoe (Q3, Q5). Three questioned imprints (Q2, Q6, Q7) were made by a second pair of unknown shoes (Refer to the Manufacturer's Information for preparation details).

Of the 155 responding participants, 144 (92.9%) reported all associations/exclusions and left/right orientations consistent with the consensus and expected results. Eleven participants were outliers in print association; no participants provided an inconsistent left/right orientation where one was reported. One participant did report an association for Item Q3, but did not report a corresponding orientation.

For those imprints that were associated with the suspect shoes (K1), all responses of association (A-D) were tallied together to determine the consensus. Overall, most participants were confident to report an Identification (A) or High Degree of Association (B) for all associated questioned items. Imprint Q3 had the lowest reported percentage of Identifications (61.9%), with 32.3% reporting a High Degree of Association (B) and another 5.2% reporting either Association (C) or Limited Association (D). This may be a result of the textured surface of the substrate in combination with the limited surface capture of the questioned imprint.

Eleven participants were outliers in their conclusions of association. Seven participants reported some level of association (A-D) between the suspect shoes and one or more of the imprints for which an exclusion was expected (Q2, Q6, Q7). Three of these seven reported associations for all three exclusion prints. Three participants reported an exclusion for one of the questioned imprints for which an association was expected; two excluded Q1, and one excluded Q3. Finally, one participant reported inconclusive (E) for imprints Q2, Q6, and Q7.

Examination Results

Indicate the results of your comparisons of the suspect shoes with the questioned imprints.

TABLE 1a (Bar Tile)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
274CPY- 5331	B	L	G		B	R	
27P9CD- 5335	A	L	G	R	A	R	
28K9GY- 5331	A	L	G		A	R	
29T4WF- 5335	A	L	G	R	A	R	
2BWC7F- 5331	A	L	G		A	R	
2D774Z- 5335	A	L	G		B	R	
2EVU48- 5331	B	L	G		A	R	
2QWV47- 5331	A	L	G		A	R	
2XURL3- 5331	A	L	G		A	R	
2ZXHV4- 5335	A	L	G	R	A	R	
34E8QZ- 5335	A	L	G	R	B	R	
3A4MKY- 5331	A	L	G		A	R	
3C6TVX- 5335	A	L	G	R	A	R	
3H9YB2- 5335	A	L	G		B	R	
3KYXPY- 5331	A	L	G		A	R	
43YBXZ- 5331	B	L	F		B	R	
463YGW- 5331	B	L	G		B	R	

TABLE 1a (Bar Tile)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
4BBK8E- 5335	A	L	G		A	R	
4E87WW- 5331	A	L	G		A	R	
4UKGM6- 5331	B	L	G		B	R	
6CJ2XX- 5331	A	L	G	R	A	R	
6KTKZU- 5331	B	L	G		B	R	
6QF9VY- 5335	A	L	G		A	R	
6TJ4E3- 5331	A	L	G		B	R	
72E994- 5335	A	L	G		A	R	
7EGYLV- 5331	C	L	G		A	R	
7FXVDV- 5335	B	L	G	R	B	R	
7XW9LW- 5335	A	L	G		B	R	
7YN8ZU- 5335	A	L	G	R	B	R	
8MEQUP- 5331	A	L	G	R	B	R	
8MQLDW- 5335	A	L	G		A	R	
8TWE8R- 5335	A	L	G		A	R	
8VKQ8X- 5331	B	L	G	R	B	R	
96PZ8V- 5331	B	L	G	R	A	R	
A4T2CU- 5331	A	L	G		A	R	
A9JGWU- 5331	A	L	G		A	R	

TABLE 1a (Bar Tile)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
AEBLWQ-5335	A	L	G		A	R	
AF3HJY-5335	A	L	G		A	R	
AJK4PQ-5335	A	L	G	R	A	R	
AM8GWA-5331	A	L	G		A	R	
ARV7BR-5335	A	L	G		A	R	
AT79WQ-5331	A	L	G		A	R	
AW6JRQ-5331	A	L	G		A	R	
BYDUNU-5331	B	L	G	R	D	R	
C9T6BQ-5335	B	L	G		C	R	
CFFXMQ-5331	A	L	G	R	B	R	
CR9A2P-5331	A	L	G		A	R	
CRQJR6-5331	A	L	G		B	R	
CW49AT-5331	B	L	G		B	R	
D2VQ86-5331	B	L	G	R	B	R	
D7JELM-5331	A	L	E		A	R	
DKL78R-5335	B	L	G		B	R	
DM9P9P-5331	A	L	G		A	R	
DQCFGP-5331	A	L	G	R	A	R	
DX9DZL-5335	B	L	G		C	R	

TABLE 1a (Bar Tile)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
E4E7UH-5331	A	L	G		A	R	
EA3UPM-5335	B	L	G		A	R	
EDGLKM-5335	A	L	G		A	R	
EHXU8L-5331	A	L	G		C	R	
ERYE9T-5335	A	L	G		A	R	
EU7W7P-5331	A	L	G	R	A	R	
EZUCY3-5335	B	L	G		B	R	
FERN7L-5331	A	L	G	R	A	R	
FJMKNK-5331	A	L	G		A	R	
FKVVKN-5331	A	L	G		A	R	
FWML2L-5331	B	L	G		B	R	
G9WD9R-5331	B	L	G		G		
GCJZ2F-5331	A	L	G	R	B	R	
GE8C2K-5335	A	L	G		A	R	
GGEMWN-5331	B	L	D	R	B	R	
GKUGDL-5331	A	L	G		A	R	
H78C2J-5335	A	L	G	R	A	R	
HAB8KL-5331	A	L	G		A	R	
HFDAPM-5335	B	L	F		A	R	

TABLE 1a (Bar Tile)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
HNR3ZH-5335	A	L	G		A	R	
HUCDVY-5331	A	L	G		A	R	
HYP4DM-5331	A	L	G		A	R	
J4D6VC-5331	A	L	G	R	A	R	
JB3KPQ-5331	A	L	G	R	B	R	
JBDKLK-5331	B	L	G		B	R	
K2AP3F-5331	B	L	G		B	R	
KF3GMF-5331	A	L	G	R	C	R	
KM82BL-5331	A	L	G	R	B	R	
KMLMKM-5335	A	L	G		A	R	
KQNKVF-5335	A	L	G		A	R	
KRGGHN-5331	B	L	G		B	R	
L647RE-5331	A	L	G		A	R	
LDDCNG-5335	A	L	G		A	R	
LNEV8W-5331	A	L	G		A	R	
LNFREL-5331	B	L	G		B	R	
LN3NT-5335	A	L	G		A	R	
LZB22V-5331	A	L	G		A	R	
MWNNUD-5331	A	L	G		B	R	

TABLE 1a (Bar Tile)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
N6DU7B-5335	A	L	G		A	R	
NQCZTG-5335	B	L	G	R	B	R	
NZJXGJ-5331	B	L	G		B	R	
P346HR-5331	A	L	G		B	R	
PJA7EE-5331	B	L	G		B	R	
PPEAZ8-5335	A	L	G		A	R	
PY29QC-5335	B	L	G		B	R	
Q6MFTH-5335	A	L	G		B	R	
QD3YCG-5331	A	L	G		A	R	
QJ83XA-5331	G		G		A	R	
QLW67H-5335	A	L	G		B	R	
QYKBYD-5335	A	L	G		A	R	
R3Y4UC-5331	A	L	G		A	R	
RE87RE-5331	A	L	G	R	B	R	
RPAADC-5335	A	L	G		A	R	
TBQ2XQ-5335	B	L	G	R	B	R	
TFYPA7-5331	A	L	G		A	R	
THM29C-5335	B	L	G		B	R	
TYBCVE-5331	B	L	F		B	R	

TABLE 1a (Bar Tile)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
U2VJWM-5335	B	L	G		A	R	
U799EB-5331	A	L	G		A	R	
U7NMN7-5335	B	L	F		A	R	
UGBG2N-5331	A	L	G		A	R	
UKBRXN-5331	A	L	G		A	R	
UR7YA2-5331	A	L	G		A	R	
UUUB98-5335	A	L	G		A	R	
UZLDGD-5331	B	L	G	R	B	R	
V8E73C-5331	A	L	G		A	R	
VBCQP9-5335	C	L	C	R	C	R	
VD7VKL-5335	A	L	C		C		
VDP4U6-5331	A	L	G	R	B	R	
VFTYD9-5335	A	L	G		A	R	
VLGX7M-5335	A	L	G		D	R	
WDK2LC-5335	A	L	G		A	R	
WHD3L7-5331	A	L	G		A	R	
WNLLN6-5331	A	L	G	R	B	R	
WPFB9L-5331	A	L	G	R	A	R	
WUPNQK-5335	A	L	G		A	R	

TABLE 1a (Bar Tile)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
WY3D99-5335	A	L	G		A	R	
WZBLF8-5331	A	L	G		A	R	
X4R6Z2-5335	A	L	G		A	R	
X9HKK3-5331	G		G		B	R	
XB9LRB-5335	B	L	G		B	R	
XBTHXJ-5335	A	L	G	R	A	R	
XKEL6J-5331	A	L	G		A	R	
XKWHP7-5335	A	L	G		A	R	
XPRCM8-5335	A	L	G		A	R	
XR7Y74-5331	A	L	G		A	R	
XW7DN3-5331	B	L	G	R	B	R	
XWVDR8-5335	A	L	G	R	A	R	
XZUPM8-5331	B	L	G		B	R	
YCHB78-5335	B	L	G		A	R	
YFFRH2-5331	A	L	G		A	R	
YXGJK4-5331	A	L	G		A	R	
YYTD6A-5335	A	L	G		A	R	
Z3BVZZ-5331	A	L	G	R	A	R	
Z6EQJ3-5331	A	L	G		A	R	

TABLE 1a (Bar Tile)

Questioned Imprints						
WebCode- Test	Q1		Q2		Q3	
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R
Z76PW2- 5331	A	L	G		A	R
Z7V4JE- 5335	B	L	G	R	A	R
ZA9KG4- 5331	B	L	G		B	R
ZNPK83- 5331	B	L	G	R	B	R
ZNR73H- 5331	A	L	G	R	A	R

Response Summary						Participants: 155	
	Q1 Conc.	L/R	Q2 Conc.	L/R	Q3 Conc.	L/R	
Identification (A)	109 (70.3%)	L 153 (98.7%)	0 (0.0%)	N/A for non-assoc.	96 (61.9%)	R 153 (98.7%)	
High Degree of Ass'n. (B)	42 (27.1%)	R 0 (0.0%)	0 (0.0%)		50 (32.3%)	L 0 (0.0%)	
Association (C)	2 (1.3%)		2 (1.3%)		6 (3.9%)		
Limited Ass'n. (D)	0 (0.0%)		1 (0.6%)		2 (1.3%)		
Inconclusive (E)	0 (0.0%)		1 (0.6%)		0 (0.0%)		
Non-Ass'n. (F)	0 (0.0%)		4 (2.6%)		0 (0.0%)		
Exclusion (G)	2 (1.3%)		147 (94.8%)		1 (0.6%)		

Examination Results

Indicate the results of your comparisons of the suspect shoes with the questioned imprints.

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		L/R
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
274CPY- 5331	A	L	A	R	G		G		
27P9CD- 5335	A	L	A	R	G	R	G		L
28K9GY- 5331	A	L	A	R	G		G		
29T4WF- 5335	A	L	A	R	G	R	G		L
2BWC7F- 5331	A	L	A	R	G		G		
2D774Z- 5335	A	L	A	R	G		G		
2EVU48- 5331	A	L	A	R	G		G		
2QWV47- 5331	A	L	A	R	G		G		
2XURL3- 5331	A	L	A	R	G		G		
2ZXHV4- 5335	A	L	A	R	G	R	D		L
34E8QZ- 5335	A	L	A	R	G	R	F		L
3A4MKY- 5331	A	L	A	R	G		G		
3C6TVX- 5335	A	L	A	R	G	R	G		L
3H9YB2- 5335	A	L	A	R	G		G		
3KYXPY- 5331	A	L	A	R	G		G		
43YBXZ- 5331	A	L	A	R	F		F		
463YGW- 5331	B	L	B	R	G		G		

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
4BBK8E- 5335	A	L	A	R	G		G		
4E87WW- 5331	A	L	A	R	G		G		
4UKGM6- 5331	A	L	A	R	G		G		
6CJ2XX- 5331	A	L	A	R	G	R	G	L	
6KTKZU- 5331	A	L	A	R	G		G		
6QF9VY- 5335	A	L	A	R	G		G		
6TJ4E3- 5331	A	L	A	R	G		F		
72E994- 5335	A	L	A	R	G		G		
7EGYLV- 5331	A	L	A	R	D	R	D	L	
7FXVDV- 5335	A	L	A	R	G	R	G	L	
7XW9LW- 5335	A	L	A	R	G		G		
7YN8ZU- 5335	A	L	A	R	D	R	G	L	
8MEQUP- 5331	A	L	A	R	G	R	G	L	
8MQLDW- 5335	A	L	A	R	G		G		
8TWE8R- 5335	A	L	A	R	G		G		
8VKQ8X- 5331	A	L	A	R	G	R	G	L	
96PZ8V- 5331	A	L	A	R	G	R	G	L	
A4T2CU- 5331	A	L	A	R	G		G		
A9JGWU- 5331	A	L	A	R	G		G		

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
AEBLWQ-5335	A	L	A	R	G		G		
AF3HJY-5335	A	L	A	R	G		G		
AJK4PQ-5335	A	L	A	R	G	R	G	L	
AM8GWA-5331	A	L	A	R	G		G		
ARV7BR-5335	A	L	A	R	G		G		
AT79WQ-5331	A	L	A	R	G		G		
AW6Jrq-5331	A	L	A	R	G		G		
BYDUNU-5331	A	L	A	R	G	R	G	L	
C9T6BQ-5335	A	L	A	R	G		F		
CFFXMQ-5331	A	L	A	R	G	R	G	L	
CR9A2P-5331	A	L	A	R	G		G		
CRQJR6-5331	A	L	A	R	G		F		
CW49AT-5331	A	L	A	R	G		G		
D2VQ86-5331	A	L	A	R	G	R	G	L	
D7JELM-5331	A	L	A	R	E		E		
DKL78R-5335	A	L	A	R	G		G		
DM9P9P-5331	A	L	A	R	G		G		
DQCFGp-5331	A	L	A	R	G	R	G	L	
DX9DZL-5335	B	L	A	R	G		G		

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
E4E7UH-5331	A	L	A	R	G		G		
EA3UPM-5335	A	L	A	R	G		G		
EDGLKM-5335	A	L	A	R	G		G		
EHXU8L-5331	A	L	A	R	G		G		
ERYE9T-5335	A	L	A	R	G		G		
EU7W7P-5331	A	L	A	R	G	L	G	L	
EZUCY3-5335	A	L	A	R	G		G		
FERN7L-5331	A	L	A	R	G	R	G	L	
FJMKNK-5331	A	L	A	R	G		G		
FKVKN-5331	A	L	A	R	G		G		
FWML2L-5331	A	L	A	R	G		G		
G9WD9R-5331	A	L	A	R	G		G		
GCJZ2F-5331	A	L	A	R	G	R	G	L	
GE8C2K-5335	A	L	A	R	G		G		
GGEMWN-5331	A	L	A	R	D	R	C	L	
GKUGDL-5331	A	L	A	R	G		G		
H78C2J-5335	A	L	A	R	G	R	G	L	
HAB8KL-5331	A	L	A	R	G		G		
HFDAPM-5335	A	L	A	R	F		F		

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
HNR3ZH-5335	A	L	A	R	G		F		
HUCDVY-5331	A	L	A	R	G		G		
HYP4DM-5331	A	L	A	R	G		G		
J4D6VC-5331	A	L	A	R	G	R	G	L	
JB3KPQ-5331	A	L	A	R	G	R	G	L	
JBDKLK-5331	A	L	A	R	G		G		
K2AP3F-5331	A	L	A	R	G		G		
KF3GMF-5331	A	L	A	R	G	R	G	L	
KM82BL-5331	A	L	A	R	G	R	G	L	
KMLMKM-5335	A	L	A	R	G		G		
KQNKVF-5335	A	L	A	R	G		G		
KRGGHN-5331	A	L	A	R	G		G		
L647RE-5331	A	L	A	R	G		G		
LDDCNG-5335	A	L	A	R	G		G		
LNEV8W-5331	A	L	A	R	G		G		
LNFREL-5331	A	L	A	R	G		G		
LN3NT-5335	A	L	A	R	G		G		
LZB22V-5331	A	L	A	R	G		G		
MWNNUD-5331	A	L	A	R	G		G		

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
N6DU7B-5335	A	L	A	R	G		G		
NQCZTG-5335	B	L	A	R	G	R	G	L	
NZJXGJ-5331	A	L	A	R	G		G		
P346HR-5331	A	L	A	R	G		G		
PJA7EE-5331	A	L	A	R	G		G		
PPEAZ8-5335	A	L	A	R	G		G		
PY29QC-5335	B	L	A	R	G		G		
Q6MFTH-5335	A	L	A	R	G		G		
QD3YCG-5331	A	L	A	R	G		G		
QJ83XA-5331	A	L	A	R	G		G		
QLW67H-5335	A	L	A	R	G		G		
QYKBYD-5335	A	L	A	R	G		G		
R3Y4UC-5331	A	L	A	R	G		G		
RE87RE-5331	A	L	A	R	G	R	G	L	
RPAADC-5335	A	L	A	R	G		G		
TBQ2XQ-5335	A	L	A	R	G	R	G	L	
TFYPA7-5331	A	L	A	R	G		G		
THM29C-5335	A	L	A	R	G		G		
TYBCVE-5331	A	L	A	R	F		F		

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
U2VJWM-5335	A	L	A	R	G		G		
U799EB-5331	A	L	A	R	G		G		
U7NMN7-5335	A	L	A	R	F		F		
UGBG2N-5331	A	L	A	R	G		G		
UKBRXN-5331	A	L	A	R	G		G		
UR7YA2-5331	A	L	A	R	G		G		
UUUB98-5335	A	L	A	R	G		G		
UZLDGD-5331	A	L	A	R	G	R	C		L
V8E73C-5331	A	L	A	R	G		G		
VBCQP9-5335	B	L	B	R	B	R	B		L
VD7VKL-5335	A	L	A	R	C		C		
VDP4U6-5331	A	L	A	R	G	R	G		L
VFTYD9-5335	A	L	A	R	G		G		
VLGX7M-5335	A	L	A	R	G		G		
WDK2LC-5335	A	L	A	R	G		G		
WHD3L7-5331	A	L	A	R	G		G		
WNLLN6-5331	A	L	A	R	G	R	G		L
WPFB9L-5331	A	L	A	R	G	R	G		L
WUPNQK-5335	A	L	A	R	G		G		

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
WY3D99-5335	A	L	A	R	G		G		
WZBLF8-5331	A	L	A	R	G		G		
X4R6Z2-5335	A	L	A	R	G		G		
X9HKK3-5331	A	L	A	R	G		G		
XB9LRB-5335	A	L	A	R	G		G		
XBTHXJ-5335	A	L	A	R	G	R	G	L	
XKEL6J-5331	A	L	A	R	G		G		
XKWHP7-5335	A	L	A	R	G		G		
XPRCM8-5335	A	L	A	R	G		F		
XRVY74-5331	A	L	A	R	G		G		
XW7DN3-5331	A	L	A	R	G	R	G	L	
XWVDR8-5335	A	L	A	R	G	R	G	L	
XZUPM8-5331	A	L	A	R	G		G		
YCHB78-5335	A	L	A	R	G		G		
YFFRH2-5331	A	L	A	R	G		G		
YXGJK4-5331	A	L	A	R	G		G		
YYTD6A-5335	A	L	A	R	G		G		
Z3BVZZ-5331	A	L	A	R	G	R	G	L	
Z6EQJ3-5331	A	L	A	R	G		G		

TABLE 1b (Office Tile)

Questioned Imprints									
WebCode- Test	Q4		Q5		Q6		Q7		L/R
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
Z76PW2-5331	A	L	A	R	G		G		
Z7V4JE-5335	A	L	A	R	G	R	G	L	
ZA9KG4-5331	A	L	A	R	G		G		
ZNPK83-5331	B	L	B	R	G	R	G	L	
ZNR73H-5331	A	L	A	R	G	R	G	L	

Response Summary								Participants: 155	
	Q4 Conc.		Q5 Conc.		Q6 Conc.		Q7 Conc.		
		L/R		L/R		L/R		L/R	
Identification (A)	149 (96.1%)	L	152 (98.1%)	R	0 (0.0%)	N/A for non-assoc.	0 (0.0%)	N/A for non-assoc.	
High Degree of Ass'n. (B)	6 (3.9%)	R	3 (1.9%)	L	1 (0.6%)		1 (0.6%)		
Association (C)	0 (0.0%)		0 (0.0%)		1 (0.6%)		3 (1.9%)		
Limited Ass'n. (D)	0 (0.0%)		0 (0.0%)		3 (1.9%)		2 (1.3%)		
Inconclusive (E)	0 (0.0%)		0 (0.0%)		1 (0.6%)		1 (0.6%)		
Non-Ass'n. (F)	0 (0.0%)		0 (0.0%)		4 (2.6%)		10 (6.5%)		
Exclusion (G)	0 (0.0%)		0 (0.0%)		145 (93.5%)		138 (89.0%)		

Conclusions

TABLE 2

WebCode-Test	Conclusions
274CPY-5331	<p>The questioned impressions, Exhibits 1 through 7, were compared to the outsole tread design elements, physical size, and randomly acquired characteristics present on Exhibits 8 and 9, the recovered shoes. Exhibit 5 has been identified as coming from the same source as the recovered right shoe in Exhibits 8 and 9. Exhibit 4 has been identified as coming from the recovered left shoe in Exhibits 8 and 9. An identification conclusion is the decision that the outsole tread design elements, physical size, and randomly acquired characteristics are in sufficient correspondence and the probability the questioned impression was made by a different source is so small that it is negligible. Exhibit 1 has been included based on class and randomly acquired characteristics (high degree of association) with the recovered left shoe. Exhibit 3 has been included based on class and randomly acquired characteristics (high degree of association) with the recovered right shoe. This conclusion is based on observed corresponding class characteristics and one or more randomly acquired characteristics with no meaningful differences; however the questioned impressions are limited by amount of recovered outsole. For another footwear item to have made the questioned impression, it would have to exhibit the same observed corresponding characteristics. Exhibits 8 and 9 can be excluded as the source of questioned impressions Exhibits 2, 6, and 7. This is based on the differences in randomly acquired characteristics, wear, and spacing of the tread elements. However, the tread design elements in Exhibits 2, 6, and 7 are similar to the recovered shoes.</p>
27P9CD-5335	<p>Q1 and Q4 : Identified(A) Left shoe. Q3 and Q5 : Identified(A) Right shoe. Q2, Q6 and Q7 : Eliminated(G) suspect's shoes.</p>
28K9GY-5331	<p>Comparison of the known shoe exemplars against the questioned left shoe sole impressions (Q1 and Q4) reveals sufficient similarities in tread design, size, wear, and randomly acquired characteristics such that it can be concluded that the left shoe that made the exemplar impressions also made the questioned impressions. Comparison of the known shoe exemplars against the questioned right shoe sole impressions (Q3 and Q5) reveals sufficient similarities in tread design, size, wear, and randomly acquired characteristics such that it can be concluded that the right shoe that made the exemplar impressions also made the questioned impressions. Comparison of the known shoe exemplars against the questioned shoe sole impressions (Q2, Q6 and Q7) reveals similarities in tread design; however, the questioned impressions exhibited a difference in size such that it can be concluded that the shoes that made the exemplar impressions did not make the questioned impressions.</p>
29T4WF-5335	<p>1 a) Questioned items "Q1-Q4" and left part of the shoe are share agreement class and randomly acquired characteristics of sufficient quality and quantity. Highest degree of association between the left part of the shoe and Questioned items "Q1-Q4". 1 b) Questioned item "Q7" and left part of the shoe exhibit sufficient differences of class and randomly acquired characteristics. Highest degree of non-association between the left part of the shoe and Questioned item Q7. 2 a) Questioned items "Q3-Q5" and right part of the shoe are share agreement class and randomly acquired characteristics of sufficient quality and quantity. Highest degree of association between the left part of the shoe and Questioned items Q3 and Q5. 2 b) Questioned: "Q2-Q6" known items exhibit sufficient differences of class and randomly acquired characteristics. Highest degree of non-association between the right part of the shoe Questioned items "Q2-Q6".</p>
2BWC7F-5331	<p>The photographs of the soles (K1a-K1c) and the known imprints (K1d-K1g) from the Nike size 7.5 athletic shoes were visually compared to the three questioned imprints (Q1-Q3) on the textured rubber tile floor and to the four questioned imprints (Q4-Q7) on the smooth vinyl tile floor. The tread design observed on the Nike athletic shoes consisted of concentric circles. All seven questioned imprints (Q1-Q7) have a tread design consisting of concentric circles. The concentric circle tread design observed in the questioned imprint (Q1) corresponds to the concentric circle tread design observed on the outsole of the LEFT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g). Upon closer examination, correspondence in physical shape and size, the location and position of wear, and the size, shape, position, and location of randomly acquired individual characteristics was observed between the questioned imprint (Q1) and the LEFT Nike shoe. Therefore,</p>

TABLE 2

WebCode-Test	Conclusions
	<p>the LEFT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g) can be IDENTIFIED as the source of, and made, the questioned imprint (Q1) on the textured rubber tile floor. The concentric circle tread design observed in the questioned imprint (Q2) is similar to the concentric circle tread design observed on the outsole of the RIGHT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g). Upon closer examination, differences in the physical size and shape, the location and position of wear, and the size, shape, position, and location of randomly acquired individual characteristics were observed between the questioned imprint (Q2) and the RIGHT Nike shoe. Therefore, the Nike shoes observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g) can be EXCLUDED as the source of, and did not make, the questioned imprint (Q2) on the textured rubber tile floor. Furthermore, the questioned imprint (Q2) was made by a Nike shoe bearing the concentric circle tread design that is larger than a size 7.5. The concentric circle tread design observed in the questioned imprint (Q3) corresponds to the concentric circle tread design observed on the outsole of the RIGHT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g). Upon closer examination, correspondence in physical shape and size, the location and position of wear, and the size, shape, position, and location of randomly acquired individual characteristics was observed between the questioned imprint (Q3) and the RIGHT Nike shoe. Therefore, the RIGHT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g) can be IDENTIFIED as the source of, and made, the questioned imprint (Q3) on the textured rubber tile floor. The concentric circle tread design observed in the questioned imprint (Q4) corresponds to the concentric circle tread design observed on the outsole of the LEFT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g). Upon closer examination, correspondence in physical shape and size, the location and position of wear, and the size, shape, position, and location of randomly acquired individual characteristics was observed between the questioned imprint (Q4) and the LEFT Nike shoe. Therefore, the LEFT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g) can be IDENTIFIED as the source of, and made, the questioned imprint (Q4) on the smooth vinyl tile floor. The concentric circle tread design observed in the questioned imprint (Q5) corresponds to the concentric circle tread design observed on the outsole of the RIGHT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g). Upon closer examination, correspondence in physical shape and size, the location and position of wear, and the size, shape, position, and location of randomly acquired individual characteristics was observed between the questioned imprint (Q5) and the RIGHT Nike shoe. Therefore, the RIGHT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g) can be IDENTIFIED as the source of, and made, the questioned imprint (Q5) on the smooth vinyl tile floor. The concentric circle tread design observed in the questioned imprint (Q6) is similar to the concentric circle tread design observed on the outsole of the RIGHT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g). Upon closer examination, differences in the physical size and shape, the location and position of wear, and the size, shape, position, and location of randomly acquired individual characteristics were observed between the questioned imprint (Q6) and the RIGHT Nike shoe. Therefore, the Nike shoes observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g) can be EXCLUDED as the source of, and did not make, the questioned imprint (Q6) on the smooth vinyl tile floor. Furthermore, the questioned imprint (Q6) was made by a Nike shoe bearing the concentric circle tread design that is larger than a size 7.5. The concentric circle tread design observed in the questioned imprint (Q7) is similar to the concentric circle tread design observed on the outsole of the LEFT Nike shoe observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g). Upon closer examination, differences in the physical size and shape, the location and position of wear, and the size, shape, position, and location of randomly acquired individual characteristics were observed between the questioned imprint (Q7) and the LEFT Nike shoe. Therefore, the Nike shoes observed in the photographs (K1a-K1c) and the known imprints (K1d-K1g) can be EXCLUDED as the source of, and did not make, the questioned imprint (Q7) on the smooth vinyl tile floor. Additionally, the questioned imprints (Q2 and Q6) are consistent in tread design, physical size and shape, wear, and a few randomly acquired individual characteristics. The questioned imprints (Q2 and Q6) were likely made by the same unknown RIGHT shoe.</p>
2D774Z-5335	The evidence in items 1D and 1E (Q1-Q3 and Q4-Q7) was visually examined for impression evidence. Seven questioned imprints of value were determined to be present in items 1D and 1E (Q1-Q3 and

TABLE 2

WebCode-Test	Conclusions
	<p>Q4-Q7). All seven of the questioned imprints in items 1D and 1E (Q1-Q3 and Q4-Q7) were compared against the recovered shoes in items 1A-1C (K1a-K1g). Two of the questioned imprints in Q1 in item 1D and Q4 in item 1E were determined to have been made by the recovered left shoe in items 1A-1C (K1a-K1g). The questioned imprint in Q5 in item 1E was determined to have been made by the recovered right shoe in items 1A-1C (K1a-K1g). The questioned imprint in Q3 in item 1D was determined to have the same tread design and size as the recovered right shoe in item 1A-1C (K1a-K1g), but was of insufficient quality for identification to the shoe. Three of the questioned imprints in Q2 in item 1D and Q6 and Q7 in item 1E were determined not to have been made by the recovered shoes in items 1A-1C (K1a-K1g). Further analysis is pending submission of another pair of shoes for additional comparison.</p>
2EVU48-5331	<p>In the opinion of this examiner, the characteristics observed exhibit strong associations between Item 001.B.01 (Q1) left questioned full shoe impression found behind the bar and 001.A (K1a) left recovered Nike brand shoe (US size 7.5); however, the quality and or quantity were insufficient for an identification. Other footwear with the same class characteristics observed in the impression are included in the population of possible sources only if they display the same wear and/or randomly acquired characteristics observed in Item 001.B.01 (Q1). In the opinion of this examiner, Item 001.A (K1a) recovered right Nike brand shoe (US size 7.5) was not the source of, and did not make, Item 001.B.02 (Q2) right questioned full shoe impression found behind the bar. In the opinion of this examiner, Item 001.A (K1a) recovered right Nike brand shoe (US size 7.5) was the source of, and made, Item 001.B.03 (Q3) right questioned full shoe impression found behind the bar. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, Item 001.A (K1a) recovered left Nike brand shoe (US size 7.5) was the source of, and made, Item 001.C.01 (Q4) left questioned full shoe impression found in the manager's office. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, Item 001.A (K1a) recovered right Nike brand shoe (US size 7.5) was the source of, and made, Item 001.C.02 (Q5) right questioned full shoe impression found in the manager's office. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, Item 001.A (K1a) recovered right Nike brand shoe (US size 7.5) was not the source of, and did not make, Item 001.C.03 (Q6) right questioned full shoe impression found in the manager's office. In the opinion of this examiner, Item 001.A (K1a) recovered left Nike brand shoe (US size 7.5) was not the source of, and did not make, Item 001.C.04 (Q7) left questioned partial shoe impression found in the manager's office.</p>
2QWW47-5331	<p>Comparison examinations were conducted and the findings of this examiner are as follows: Impressions Q1 and Q4 were identified as having been made by the submitted left shoe (K1). Impressions Q3 and Q5 were identified as having been made by the submitted right shoe (K1). Impressions Q2 and Q6 were made by a second right shoe of similar outsole design as the recovered Nike shoe, K1. Impression Q7 was made by a second left shoe of similar outsole design as the recovered Nike shoe, K1.</p>
2XURL3-5331	<p>[No Conclusions Reported.]</p>
2ZXHV4-5335	<p>Shoes - Nike brand, Size US 7.5 01NVKJAA2H8FJ (tag). Q1 - was an identification in that both the questioned print and the suspect shoe had similar class characteristics in size and tread pattern and consistent wear pattern. Four randomly acquired individual characteristics were identified on both the shoe and questioned mark. These were of sufficient quality to identify the shoe as making the suspect mark. Q2 - was excluded as being made by the suspect shoes. Both brand and tread pattern were consistent with the suspect mark however there was sufficient size discrepancy (>5mm) between the questioned mark and the suspect shoes to negate the suspect shoe. Q3 - was an identification in that both the questioned print and the suspect shoe had similar class characteristics in size and tread pattern and consistent wear pattern. Three randomly acquired individual characteristics were identified on both the shoe and questioned mark. These were of sufficient quality to identify the shoe as making the suspect mark. Q4 - was an identification in that both the questioned print and the suspect shoe had similar class characteristics in size and tread pattern and consistent wear pattern. Four randomly acquired individual characteristics were identified on both the shoe and questioned mark. These were of</p>

TABLE 2

WebCode-Test	Conclusions
34E8QZ-5335	sufficient quality to identify the shoe as making the suspect mark. Q5 - was an identification in that both the questioned print and the suspect shoe had similar class characteristics in size and tread pattern and consistent wear pattern. Three randomly acquired individual characteristics were identified on both the shoe and questioned mark. These were of sufficient quality to identify the shoe as making the suspect mark. Q6 - was excluded as being made by the suspect shoes. Both brand and tread pattern were consistent with the suspect mark however there was sufficient size discrepancy between the partial questioned mark and the suspect shoes to negate the suspect shoe. Q7 - had limited association of class characteristics. Both brand and tread pattern were consistent with the suspect mark however there was minor size discrepancy (<3mm) between the questioned mark and the suspect shoes to be able to confirm or negate the shoe. No randomly acquired individual characteristics were identified.
3A4MKY-5331	[No Conclusions Reported.] This report refers to exhibits by Lab Number. The following results only apply to the items tested. The questioned impressions in Exhibits 1 - 7 were compared to images of the known shoes (Exhibit 8) and images of known impressions (Exhibit 9 - 10) said to be from the recovered shoes. A complete evaluation of a questioned impression and a known shoe includes looking at correspondence in tread design, physical size and shape of design present, wear characteristics, and any distinctive characteristics randomly acquired on the sole of the known shoe that are represented in the questioned impression. The questioned impression in Exhibit 1 and Exhibit 4 corresponded in physical shape, tread design, wear and randomly acquired characteristics to the known left shoe represented in Exhibits 8 - 10. Therefore, the known left shoe represented in Exhibits 8 - 10 is the source of the questioned shoe impressions in Exhibits 1 and 4 (Source Identification). The basis for a Source Identification conclusion is an examiner's opinion that the observed corresponding characteristics provide extremely strong support for the proposition that the known footwear item made the questioned impression and extremely weak support for the proposition that a different footwear item made the questioned impression. The questioned impression in Exhibit 3 and Exhibit 5 corresponded in physical shape, tread design, wear and randomly acquired characteristics to the known right shoe represented in Exhibits 8 - 10. Therefore, the known right shoe represented in Exhibits 8 - 10 is the source of the questioned shoe impressions in Exhibits 3 and 5 (Source Identification). The basis for a Source Identification conclusion is an examiner's opinion that the observed corresponding characteristics provide extremely strong support for the proposition that the known footwear item made the questioned impression and extremely weak support for the proposition that a different footwear item made the questioned impression. The questioned impressions in Exhibit 2, Exhibit 6 and 7, although similar in general tread pattern, differed in spacing, wear and/or randomly acquired characteristics to the known shoes represented in Exhibits 8 - 10. Therefore, the questioned impressions in Exhibits 2, 6 and 7 were not made by the known shoes represented in Exhibits 8 - 10 (Exclusion). The basis for Exclusion conclusion is an examiner's opinion that the observed characteristics provide extremely strong support for the proposition that a different footwear item made the questioned impression and extremely weak or no support for the proposition that the known footwear item made the questioned impression. These conclusions conform with the relevant Department of Justice policy on Uniform Language for Testimony and Reports available at www.justice.gov .
3C6TVX-5335	[No Conclusions Reported.]
3H9YB2-5335	1 - Marks Q1, Q3, Q4 and Q5 (collectively) provide a conclusive association to the known footwear K1. 2 - Marks Q2, Q6 and Q7 were not made by the submitted footwear (K1 can be excluded from having made these marks) but by some other shoe.
3KYXPY-5331	Comparison of the seven footwear impressions to the known footwear and test impressions of Lab Items #1-3 resulted in the following conclusions: In the opinion of the examiner, the left shoe of the known footwear of K1 (Lab Items #1-3) was the source of, and made, the questioned impressions labeled Q1 and Q4. Another item of footwear being the source of the impression is considered a practical impossibility based on the agreement of class and randomly acquired characteristics in the questioned

TABLE 2

WebCode-Test	Conclusions
	<p>impressions and the known footwear. In the opinion of the examiner, the right shoe of the known footwear of K1 (Lab Items #1-3) was the source of, and made, the questioned impressions labeled Q3 and Q5. Another item of footwear being the source of the impression is considered a practical impossibility based on the agreement of class and randomly acquired characteristics in the questioned impressions and the known footwear. In the opinion of the examiner, the left and right known footwear of K1 (Lab Items #1-3) were not the source of, and did not make, the impressions labeled Q2, Q6 and Q7. In the opinion of the examiner, the left known footwear of K1 (Lab Items #1-3) was not the source of, and did not make, the impression labeled Q3 and Q5. In the opinion of the examiner, the right known footwear of K1 (Lab Items #1-3) was not the source of, and did not make, the impressions labeled Q1 and Q4.</p>
43YBXZ-5331	<p>a. The questioned imprints item Q4 and Q5 share agreement of class and identifying characteristics of sufficient impression quality and quantity with the known imprint items K1d - K1g made with the recovered suspect left and right shoe, respectively. Therefore, in my professional opinion, the questioned imprint items Q4 and Q5 were identified as having been made with the recovered suspect left shoe and right shoe, respectively. b. The questioned imprints item Q1 and Q3 share agreement of class characteristics, in addition to unusual wear and/ or one or more randomly acquired characteristics with the known imprint items K1d - K1g made with the recovered suspect left and right shoe, respectively. Therefore, in my professional opinion, the questioned imprint items Q1 and Q3 were identified as having been made with the recovered suspect left shoe and right shoes, respectively. c. The questioned imprints item Q2, Q6 and Q7 exhibit dissimilarities with respect to class characteristics and identifying characteristics in comparison to the known imprint items K1d - K1g made with the recovered suspect shoes. Therefore, in my professional opinion, the questioned imprint item Q2, Q6 and Q7 were excluded as having been made with the recovered suspect shoes.</p>
463YGW-5331	<p>The overall results offer extremely strong support for the proposition that some impressions at the scene were made by the footwear of the suspect (K1) rather than other footwear. I have chosen the above from the following scale: weak support, moderate support, moderately strong support, strong support, very strong support, extremely strong support. The findings show impressions Q2, Q6 and Q7 were made by footwear other than the footwear submitted (K1).</p>
4BBK8E-5335	<p>Test No. 21-5335: by [Analysts] (individually performed – same result). In a first step all the questioned items were checked for class association. All Scene of crime prints show the same class characteristics. In the next step the pictures were given a closer look, with the result, that all pictures could be “associated” with one of the questioned shoes (K1) or “excluded”: CONCLUSION: Q1, Q3, Q4 and Q5 show a high degree of association or evidence beyond doubt (Identification), that the aforementioned Q-Pictures were made /caused by one of the soles of the suspect shoes K1 (class association and enough individualizing characteristics or wear). Q2, Q6 and Q7 have been excluded.</p>
4E87WW-5331	<p>Photographs of questioned shoe prints submitted as Items Q1-Q7 were visually compared to photographs of the soles of known shoes submitted as Items K1a-K1c and photographs of shoe prints made with known shoes submitted as Items K1d-K1g. Items Q1 and Q4 were made by the known left shoe. Items Q3 and Q5 were made by the known right shoe. Items Q2, Q6, and Q7 were not made by either known shoe.</p>
4UKGM6-5331	<p>Identification: Q4, a left footwear imprint, was made by the K1 left shoe. This identification is based on shared class characteristics and sufficient, corresponding random accidental characteristics that are visible in both the imprint and the shoe. Q5, a right footwear imprint, was made by the K1 right shoe. This identification is based on shared class characteristics and sufficient, corresponding random accidental characteristics that are visible in both the imprint and the shoe. High Degree of Association: Q1, a left footwear imprint, exhibits a high degree of association with the K1 left shoe. There are shared class characteristics of outsole design, size and general wear along with one or more randomly acquired characteristics that are visible in both the imprint and the shoe. Q3, a right footwear imprint, exhibits a high degree of association with the K1 right shoe. There are shared class characteristics of outsole design, size and general wear along with one or more randomly acquired characteristics that are visible in both the imprint and the shoe. Exclusion: Q2, a right footwear imprint, could not have</p>

TABLE 2

WebCode-Test	Conclusions
6CJ2XX-5331	<p>been made by the K1 right shoe. There are differences in the class characteristic of size. The imprint, Q2, was made by a larger right shoe than the K1 right shoe. Q6, a partial right footwear imprint, could not have been made by the K1 right shoe. There are differences in the class characteristics of size and the imprint, Q6, was made by a larger right shoe than the K1 right shoe. Q7, a partial left footwear imprint, could not have been made by the K1 left shoe. There are differences in the class characteristics of general wear. The imprint, Q7, was made by a left shoe with more wear than the K1 left shoe.</p> <p>ITEMS Q1 AND Q4 HAVE BEEN IDENTIFIED WITH ITEM K1-LEFT. ITEMS Q3 AND Q5 HAVE BEEN IDENTIFIED WITH ITEM K1-RIGHT. ITEMS Q2, Q6 AND Q7 HAVE DIFERENT SIZE. Q2 AND Q6 HAVE HIGH DEGREE ASSOCIATION (b).</p>
6KTKZU-5331	<p>The left outsole has a high degree association with the Q1 impression and is identified as the source for the Q4 impression. The right outsole is excluded as a source for the Q1 and Q4 impressions. The right outsole has a high degree association with the Q3 impression and is identified as the source for the Q5 impression. The right outsole is excluded as a source for the Q3 and Q5 impressions. Both outsoles are excluded as a possible source for the Q2, Q6, and Q7 impressions.</p>
6QF9VY-5335	<p>Based on the quality and quantity of corresponding randomly acquired characteristics observed in the shoe marks labelled Q1 and Q4 and the left shoe submitted as Item K1, it is my opinion that this shoe was the source of, and made, the shoe marks. The chance of another shoe being the source of the marks is considered negligible. Based on the quality and quantity of corresponding randomly acquired characteristics observed in the shoe marks labelled Q3 and Q5 and the right shoe submitted as Item K1, it is my opinion that this shoe was the source of, and made, the shoe marks. The chance of another shoe being the source of the marks is considered negligible. The shoe marks labelled Q2, Q6 and Q7 displayed a similar sole pattern to the submitted shoes, however due to differences observed they were excluded as having produced the marks.</p>
6TJ4E3-5331	<p>Examination of each of Exhibits Q1 through Q7 revealed that they were all suitable for source identification. Exhibit Q1 was compared with the known shoes and impressions depicted in Exhibit K1 (a-g). Q1 corresponds in overall design, physical shape, mold characteristics, and observable Randomly Acquired Characteristics (RAC) with the left shoe in Exhibit K1. Based upon the correspondence of features between Exhibit Q1 and the known left shoe in Exhibit K1, Exhibit Q1 was identified as having originated from Exhibit K1. Exhibit Q2 was compared with the known shoes and impressions depicted in Exhibit K1 (a-g). Q2 corresponds in overall design and physical shape with the known right shoe in Exhibit K1. Exhibit Q2 has different mold characteristics, wear, and RAC than Exhibit K1. Based on the observed discrepancies, Exhibit Q2 was excluded as having been made by the known shoes in Exhibit K1. Exhibit Q3 was compared with the known shoes and impressions depicted in Exhibit K1 (a-g). Q3 corresponds in overall design, physical shape, mold characteristics, and observable RAC) with the right shoe in Exhibit K1. Based upon the correspondence of features between Exhibit Q3 and the known right shoe in K1, Exhibit Q3 has a high degree of association with the known right shoe in K1. Exhibit Q4 was compared with the known shoes and impressions depicted in Exhibit K1 (a-g). Q4 corresponds in overall design, physical shape, mold characteristics, and observable RAC with the left shoe in Exhibit K1. Based upon the correspondence of features between Exhibit Q4 and the known left shoe in Exhibit K1, Exhibit Q4 was identified as having originated from Exhibit K1. Exhibit Q5 was compared with the known shoes and impressions depicted in Exhibit K1 (a-g). Q5 corresponds in overall design, physical shape, mold characteristics, and observable RAC with the right shoe in Exhibit K1. Based upon the correspondence of features between Exhibit Q5 and the known right shoe in Exhibit K1, Exhibit Q5 was identified as having originated from Exhibit K1. Exhibit Q6 was compared with the known shoes and impressions depicted in Exhibit K1 (a-g). Q6 corresponds in overall design and physical shape with the known right shoe in Exhibit K1. Exhibit Q6 has different mold characteristics, wear, and RAC than Exhibit K1. Based on the observed discrepancies, Exhibit Q6 was excluded as having been made by the known shoes in Exhibit K1. Exhibit Q7 was compared with the known shoes and impressions depicted in Exhibit K1 (a-g). Q7 corresponds in overall design and physical shape with the known left shoe in Exhibit K1. Based on observed discrepancies in wear and RAC, Q7 had indications of non-association with Exhibit K1.</p>

TABLE 2

WebCode-Test	Conclusions
72E994-5335	Two (2) manufactured pattern impressions noted in Exhibits Q1-Q3 (Q1) and Q4-Q7 (Q4) were made by the left shoe depicted in Exhibits K1a through K1g based on design, physical size, shape, wear and randomly acquired characteristics. This opinion means that the observed class characteristics and randomly acquired characteristics correspond and the examiner would not expect to see the same agreement of features repeated in an impression that came from a different source. Two (2) manufactured pattern impressions noted in Exhibits Q1-Q3 (Q3) and Q4-Q7 (Q5) were made by the right shoe depicted in Exhibits K1a through K1g based on design, physical size, shape, wear and randomly acquired characteristics. This opinion means that the observed class characteristics and randomly acquired characteristics correspond and the examiner would not expect to see the same agreement of features repeated in an impression that came from a different source. The remaining manufactured pattern impressions noted in Exhibits Q1-Q3 (Q2) and Q4-Q7 (Q6 and Q7) were not made by the shoes depicted in Exhibit K1a through K1g based on differences in physical size, wear and randomly acquired characteristics. This opinion means that there are sufficient features in disagreement such that the examiner would not expect to see the same disagreement repeated in an impression that came from the same source
7EGYLV-5331	The footwear impressions in Items Q3, Q4 and Q5 were determined to have similar physical size, tread design and wear characteristics to the known impressions of the shoes from Item K1. Also, individual identifying characteristics were associated between Items Q3, Q4, Q5 and K1. These characteristics allowed an identification of Items Q3 and Q5 to the right shoe of K1 and Item Q3 to the left shoe of K1. Therefore no other shoe could have made these impressions. Items Q1, Q6 and Q7 had similar tread design and physical size of the shoes in Item K1. However, a lack of sufficient detail precluded a closer association to the shoes of K1. Item Q2 was determined to not to have been able to be made by the shoes of K1.
7FXVDV-5335	[No Conclusions Reported.]
7XW9LW-5335	In my opinion, there is conclusive support for the proposition that at least three of the footwear impressions recovered from behind the bar and the manager's office at the local restaurant, were made by the shoes in the supplied images. There were three footwear impressions, recovered from behind the bar and the manager's office of this scene, which could not have been made by the shoes in the supplied images, (conclusive elimination).
7YN8ZU-5335	[No Conclusions Reported.]
8MEQUP-5331	Q1 - CONCLUSIVE evidence. Q2- EXCLUDED. Q3- VERY STRONG evidence. Q4- CONCLUSIVE evidence. Q5- CONCLUSIVE evidence. Q6- EXCLUDED. Q7- EXCLUDED.
8MQLDW-5335	Q1 and Q4 impressions correspond in physical size, outsole design, and multiple randomly acquired characteristics to the known left sneaker shoe and therefore, were made by that sneaker. Q3 and Q5 impressions correspond in physical size, outsole design, and multiple randomly acquired characteristics to the known right sneaker and therefore, were made by that sneaker. Q2, Q6, and Q7 impressions are similar in general design to the known sneakers; however there are differences in size, wear and randomly acquired characteristics. Therefore these impressions were not made by the known sneakers.
8TWE8R-5335	In the opinion of the examiner, the left known footwear was the source of, and made, the questioned impressions at Q1-IMP1 and Q4-IMP1. Another item of footwear being the source of the impression is considered a practical impossibility. It is also the opinion of the examiner, the right known footwear was the source of, and made, the questioned impressions at Q3-IMP1 and Q5-IMP1. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, the right and left known footwear was not the source, and did not make, the questioned impression at Q2-IMP1, Q6-IMP1, and Q7-IMP1.
8VKQ8X-5331	Among the items received for examination were 7 scene impression labelled Q1-Q7. I was asked to compare these with the photographs and inked impression from a pair of size 7.5 "Nike" brand shoes

TABLE 2

WebCode- Test	Conclusions
	<p>K1a-K1g to determine whether or not the shoes could have made any of the scene impressions. By comparing the sole pattern of a shoe to a shoeprint impression it is often possible to determine whether or not that particular shoe made that impression. In the normal course of use, the sole of footwear will gradually become worn and damaged. It is common for this damage to be visible as a series of small nicks and cuts. Because of its random nature this damage is likely to be unique. I have compared the photographs and imprints from K1 to the questioned impressions Q1 to Q7. This comparison process investigates any differences or correspondences in sole pattern and dimensions, the presence of any wear features and the location size and shape of any randomly acquired damage features. In determining the strength of any correspondences, I have considered: the probability of finding the shoe impression evidence if the shoe made the impression, and the probability of finding the shoe impression evidence if the shoe did not make impression. The statement of opinion as to the scientific significance of the correspondence between the shoe and the shoe impression is selected from the following scale: is neutral, provides slight support, provides moderate support, provides strong support, provides very strong support, provides extremely strong support, is conclusive. Q1 - Q3 – rubber tile: Q1 was a partial impression of a left shoe, with the outer aspect missing. Q3 was a partial impression of a right shoe, also with the outer aspect missing. Q2 was a complete impression of a right shoe. A correspondence in the sole design and degree of wear and two damage features was observed with Q1 and the left imprint of K1. In my opinion these correspondences provide extremely strong support for the proposition that the left shoe from K1 made the scene impressions Q1. A correspondence in the sole design and four damage features were observed with Q3 and the right imprint of K1. However, some wear and damage features present in K1 were not displayed in the scene impression. This could be explained by the uneven texture of the surface or the heavy deposition of the inking material on the shoe when the impression was made. In my opinion the correspondences provide very strong support for the proposition that the right shoe from K1 made the scene impression Q3. Although Q2 expressed the same sole design as the questioned shoes obvious differences were observed in the spacing of the tread elements and the wear and damage patterns. I have therefore concluded that the questioned shoes K1 are excluded from making scene impressions Q2. Q4 -Q7 – vinyl tile: Q4 and Q5 were almost complete impressions of a left and right shoe respectively. A correspondence in the sole design and size, degree of wear and the majority of features of damage were observed with both scene impressions and the corresponding areas on the questioned shoes K1. In my opinion these correspondences provide conclusive support for the proposition that the questioned shoes K1 made the scene impressions Q4 and Q5. Q6 was a partial impression of a right shoe missing the toe area. Q7 was a partial impression of the toe area only of a left shoe. Although impressions Q6 and Q7 expressed the same sole design as the questioned shoes obvious differences were observed in the spacing of the tread elements and the wear and damage patterns. I have therefore concluded that the questioned shoes K1 are excluded from making the scene impressions Q6 and Q7.</p>
96PZ8V- 5331	<p>1. Questioned imprints Q3, Q4, Q5 and Known imprints of oblique lighted images of the soles of the recovered shoes share agreement of class and randomly acquired characteristics of sufficient quality and quantity. 2. Questioned imprints Q1 and Known imprints of oblique lighted images of the soles of the left recovered shoes have correspondence of class characteristics, in addition to unusual wear and/or randomly acquired characteristics. 3. Questioned imprints Q2, Q6, Q7 and Known imprints of oblique lighted images of the soles of the recovered shoes exhibit sufficient differences of class and randomly acquired characteristics.</p>
A4T2CU- 5331	<p>The submitted photographs of questioned impressions depicted seven dark-colored footwear impressions. The questioned impressions were reportedly observed behind the bar on textured rubber tile (Q1 through Q3) and in the manager's office on smooth vinyl tile (Q4 through Q7). These questioned impressions were visually compared to photographs of the outsoles of the known shoes and test impressions of the shoes. Although Impressions Q2, Q6, and Q7 corresponded in tread design to portions of the known shoes, the physical size of these impressions did not correspond to the outsole of the known shoes. In the opinion of the examiner, the known shoes did not make Impressions Q2, Q6, and Q7 (Exclusion, see Association Scale below). Impressions Q1 and Q4 corresponded in tread design, physical size, and wear characteristics to the outsole of the known left shoe. Voids in the tread design (apparent randomly acquired characteristics (RACs)) of Impressions Q1 and Q4 corresponded in</p>

TABLE 2

WebCode-Test	Conclusions
	<p>position, orientation, shape, and size to RACs present on the known left shoe. See below for cropped images of Q4 compared to the known left shoe. In the opinion of the examiner, the known left shoe made Impressions Q1 and Q4 (Identification). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. Impressions Q3 and Q5 corresponded in tread design, physical size, and wear characteristics to the outsole of the known right shoe. Apparent RACs seen on Impressions Q3 and Q5 corresponded in position, orientation, shape, and size to RACs present on the known right shoe. In the opinion of the examiner, the known right shoe made Impressions Q3 and Q5 (Identification). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. Additional shoes may be submitted for comparison to Impressions Q2, Q6, and Q7. Association Scale for Footwear and Tire Impressions: The following descriptions are meant to provide context to the levels of opinions reached in footwear and tire impression comparisons. Each level may not include every variable in every case. Lacks sufficient detail – No comparison was conducted: the examiner determined there were no discernible questioned footwear/tire impressions or features present. Or – A comparison was conducted: the examiner determined that there was insufficient detail in the questioned impression for a meaningful conclusion. This opinion only applies to the known footwear or tire that was examined and does not necessarily preclude future examinations with other known footwear or tires. Exclusion – This is the highest degree of non-association expressed in footwear and tire impression examinations. Sufficient differences were noted in the comparison of class and/or randomly acquired characteristics between the questioned impression and the known footwear or tire. Indications of non-association – The questioned impression exhibits dissimilarities when compared to the known footwear or tire; however, the details or features were not sufficiently clear to permit an exclusion. Limited association of class characteristics – Some similar class characteristics were present; however, there were significant limiting factors in the questioned impression that did not permit a stronger association between the questioned impression and the known footwear or tire. These factors may include but were not limited to: insufficient detail, lack of scale, improper position of scale, improper photographic techniques, distortion or significant lengths of time between the date of the occurrence and when the footwear or tires were recovered that could account for a different degree of general wear. No confirmable differences were observed that could exclude the footwear or tire. Association of class characteristics – The class characteristics of both design and physical size must correspond between the questioned impression and the known footwear or tire. Correspondence of general wear may also be present. High degree of association – The questioned impression and known footwear or tire must correspond in the class characteristics of design, physical size, and general wear. For this degree of association there must also exist: (1) wear that, by virtue of its specific location, degree and orientation make it unusual and/or (2) one or more randomly acquired characteristics. Identification – This is the highest degree of association expressed by a footwear and tire impression examiner. The questioned impression and the known footwear or tire share agreement of class and randomly acquired characteristics of sufficient quality and quantity.</p>
A9JGWU-5331	Q1 and Q4 come from left shoe K1. Q3 and Q5 come from right shoe K1. Q2, Q6 and Q7 do not come from shoes K1.
AEBLWQ-5335	<p>Q1-IMP1: Identification. The questioned impression and the known footwear left shoe share agreement of class and randomly acquired characteristics of sufficient quality and quantity. The left shoe was the source of, and made, the questioned impression. Another item of footwear being the source of the impression is considered a practical impossibility. Q2-IMP1: Exclusion. Sufficient differences were noted in the comparison of class and/or randomly acquired characteristics between this questioned impression and both the right and left shoes. The right and left shoes were not the source of and did not make this impression. Q3-IMP1: Identification. The questioned impression and the known footwear right shoe share agreement of class and randomly acquired characteristics of sufficient quality and quantity. The right shoe was the source of, and made, the questioned impression. Another item of footwear being the source of the impression is considered a practical impossibility. Q4-IMP1: Identification. The questioned impression and the known footwear left shoe share agreement of class and randomly acquired characteristics of sufficient quality and quantity. The left shoe was the source of, and made, the questioned impression. Another item of footwear being the source of the impression is considered a</p>

TABLE 2

WebCode-Test	Conclusions
	<p>practical impossibility. Q5-IMP1: Identification. The questioned impression and the known footwear right shoe share agreement of class and randomly acquired characteristics of sufficient quality and quantity. The right shoe was the source of, and made, the questioned impression. Another item of footwear being the source of the impression is considered a practical impossibility. Q6-IMP1: Exclusion. Sufficient differences were noted in the comparison of class and/or randomly acquired characteristics between this questioned impression and both the right and left shoes. The right and left shoes were not the source of and did not make this impression. Q7-IMP1: Exclusion. Sufficient differences were noted in the comparison of class and/or randomly acquired characteristics between this questioned impression and both the right and left shoes. The right and left shoes were not the source of and did not make this impression.</p>
AF3HJY-5335	Not required per policy
AJK4PQ-5335	<p>Q1 and Q4 are partial left athletic shoe imprints. The imprints appear similar in physical size, tread design, wear and randomly acquired characteristics to the K1 left shoe. In the opinion of the examiner, the left shoe in K1 was the source of, and made, the left footwear imprints Q1 and Q4. Another item of footwear being the source of the imprints is considered a practical impossibility. See IDENTIFICATION in Appendix C. Q3 and Q5 are right athletic shoe imprints. The imprints appear similar in physical size, tread design, wear and randomly acquired characteristics to the K1 right shoe. In the opinion of the examiner, the right shoe in K1 was the source of, and made, the right footwear imprints Q3 and Q5. Another item of footwear being the source of the imprints is considered a practical impossibility. See IDENTIFICATION in Appendix C. Q2 and Q6 are right athletic shoe imprints. The imprints are similar in design to the right shoe in K1, but were not similar in size and wear characteristics; therefore the imprints were not made by the right shoe in K1. See EXCLUSION in Appendix C. Q7 is a left athletic shoe imprint. The imprint is similar in design to the left shoe in K1, but was not similar in size and wear characteristics; therefore the imprint was not made by the left shoe in K1. See EXCLUSION in Appendix C [Table 3 - Additional Comments].</p>
AM8GWA-5331	<p>The submitted images and known impressions of the suspect shoes (K1a-K1g) were examined and compared to the questioned impressions visible in Q1-Q7. Q1 and Q4 correspond to the known left shoe in tread pattern, tread size, tread wear, and individual characteristics including scratches, nicks and gouges in the tread surface. Thus Q1 and Q4 were made by the known left shoe. Q3 and Q5 correspond to the known right shoe in tread pattern, tread size, tread wear, and individual characteristics including scratches, nicks and gouges in the tread surface. Thus Q3 and Q5 were made by the known right shoe. Q2 and Q6 correspond to the known right shoe in tread pattern, however, Q2 and Q6 are different than the known right shoe in tread wear and individual characteristics. Thus, Q2 and Q6 could not have been made by the known right shoe. Q7 corresponds to the known left shoe in tread pattern, however, Q7 and the known left shoe are different in tread size, tread wear, and individual characteristics. Thus, Q7 could not have been made by the known left shoe.</p>
ARV7BR-5335	<p>The evidence in items 1D and 1E was visually examined for impression evidence. Seven (7) partial footwear impressions of value were determined to be present in items 1D (Q1, Q2, and Q3) and 1E (Q4, Q5, Q6, and Q7). All the partial footwear impressions (Q1 – Q7) in items 1D and 1E were visually examined and compared against the recovered shoes (K1a - K1g) in items 1A, 1B, and 1C. Two (2) partial footwear impressions (Q1 and Q4) present in items 1D and 1E were determined to have been made by the left shoe (K1a - K1g) in items 1A, 1B, and 1C. Two (2) partial footwear impressions (Q3 and Q5) present in items 1D and 1E were determined to have been made by the right shoe (K1a - K1g) in items 1A, 1B, and 1C. Three (3) partial footwear impressions (Q2, Q6, and Q7) present in items 1D and 1E were determined not to have been made by the shoes in items 1A, 1B, and 1C. Further analysis is pending submission of another pair of shoes for additional comparison.</p>
AT79WQ-5331	[No Conclusions Reported.]
AW6JRQ-5331	The photographs of the suspect's shoes and questioned impressions were visually examined and processed by superimposed comparison. We copied the photographs of known imprints of suspect's

TABLE 2

WebCode-Test	Conclusions
BYDUNU-5331	<p>shoes K1f and K1g on transparent films and superimposed them over the photographs of questioned impressions Q1 to Q7, and the result as below : 1.Questioned impressions labelled Q1 and Q4 were found to be consistent in shape, physical size and individual characteristics with the suspect's left shoe. 2.Questioned impressions labelled Q3 and Q5 were found to be consistent in shape, physical size and individual characteristics with the suspect's right shoe. 3.Questioned impressions labelled Q2, Q5 and Q7 were found to have similar shape with the suspect's shoes, however they were dissimilar in physical size and individual characteristics from the suspect's shoes. Therefore, questioned impressions labelled Q2, Q5 and Q7 can be eliminated.</p> <p>I have compared the Nike shoes to the shoeprint impressions in the supplied photographs. By comparing the sole pattern of a shoe to a shoeprint impression it is often possible to determine whether or not that particular shoe made that impression. I have compared the relevant shoe to each shoe impression. This comparison process examines the shoe and the shoe impression to investigate any correspondence or difference in sole pattern and dimensions, the presence of any wear, and the location, size and shape of any randomly acquired characteristics. In determining the strength of this correspondence I have considered: the probability of finding the shoe impression evidence if the shoe made the impression, and the probability of finding the shoe impression evidence if another shoe made the impression. The statement of opinion as to the scientific significance of the correspondence between the shoe and the shoe impression is selected from the following scale: is excluded, neutral, provides slight support, provides moderate support, provides strong support, provides very strong support, provides extremely strong support and conclusive. The shoeprint impressions Q1, Q2 and Q3 were described as having been located on a textured rubber tile. The shoeprint impression Q1 was a left shoeprint. A correspondence of pattern, dimensions, wear, and randomly acquired characteristics were present between the left shoe and the shoeprint impression Q1. In my opinion, the probability of observing a correspondence of sole pattern, size, wear and randomly acquired characteristics given the left shoe made the corresponding impression is very high. Conversely, it is my opinion, that the probability of obtaining a correspondence of sole pattern, size, wear and randomly acquired characteristics given the left shoe did not make the shoe impression is so low. Therefore, in my opinion, there is extremely strong scientific support that the left Nike shoe made the shoe impression Q1. The shoeprint impression Q2 was a right shoe. The dimensions of the shoe sole pattern were different to the shoe impression and therefore the left or right shoes did not make the shoe impression Q2. The shoeprint impression Q3 was a right shoeprint. There was a correspondence of pattern, and dimensions, and possibly randomly acquired characteristics between the right shoe and the shoeprint impression Q3. However, there were also some differences in apparent wear and randomly acquired characteristics between the right shoe and impression Q3. In my opinion the probability of obtaining a correspondence of sole pattern, size, and differences in wear and randomly acquired characteristics is equal for the two scenarios. Therefore, in my opinion, the scientific support for the left Nike shoe having made the shoe impression Q3 is neutral. The shoeprint impressions Q4 to Q7 were described as having been located on a smooth vinyl tile. A correspondence of pattern, dimensions, wear, and randomly acquired characteristics were present between the left shoe and the shoeprint impression Q4 and between the right shoe and the shoeprint impression Q5. In my opinion, the probability of observing a correspondence of sole pattern, size, wear and randomly acquired characteristics given each shoe made the corresponding impressions is extremely high. Conversely, it is my opinion, that the probability of obtaining a correspondence of sole pattern, size, wear and randomly acquired characteristics given each shoe did not make the shoe impression is so low that I consider it negligible. Therefore, in my opinion, the left Nike shoe made the shoe impression Q4 and the right Nike shoe made the shoe impression Q5. These are conclusive results. The shoeprint impression Q6 was a right shoeprint, and the shoeprint impressions Q7 was a left shoe. The dimensions of the shoes sole pattern were different to the shoe impressions and therefore the left or right shoes did not make the shoe impressions Q6 or Q7.</p>
C9T6BQ-5335	<p>Q1: The results gives strong support for that imprint Q1 has been made by the left shoe (grad +3). Q2: Imprint Q2 has not been made by any of the shoes (exclusion). Q3: The results gives support for that imprint Q3 has been made by the right shoe (grad +2). Q4: The results gives extremely strong support for that imprint Q4 has been made by the left shoe (grad +4). Q5: The results gives extremely</p>

TABLE 2

WebCode-Test	Conclusions
CFFXMQ-5331	<p>strong support for that imprint Q5 has been made by the right shoe (grad +4). Q6: Imprint Q6 has not been made by any of the shoes (exclusion). Q7: The results gives extremely strong support for that imprint Q7 has not been made by the left shoe (grad -4).</p> <p>Q1 and Q4 - In our opinion, the submitted left shoe is responsible for the mark. Q5 - In our opinion, the submitted right shoe is responsible for the mark. Q3 - In our opinion, it is probable that the right shoe is responsible for the mark. For another shoe to have made this mark, it would have to bear a similar pattern size, manufacturer mould detail and corresponding areas of fine detail to this right shoe. Q2, Q6 and Q7 - Neither submitted shoe is responsible for the mark.</p>
CR9A2P-5331	<p>Item Q1 through Q7 questioned footwear impressions were analyzed, compared and evaluated with the Item K1 known footwear. The Item Q1 and Q4 questioned footwear impressions correspond in tread design, physical size, general wear and randomly acquired / accidental characteristics with the Item K1 left shoe. The Item Q3 and Q5 questioned footwear impressions correspond in tread design, physical size, general wear and randomly acquired / accidental characteristics with the Item K1 right shoe. The Item Q2, Q6 and Q7 questioned footwear impressions do not correspond in physical size with the Item K1 right and left shoe. Based upon the above factors, it is the opinion of this examiner that: The Item Q1 and Q4 questioned footwear impressions were made by the K1 left shoe. The Item Q3 and Q5 questioned footwear impressions were made by the K1 right shoe. The Item K1 known shoes can be excluded as a source of the Item Q2, Q6 and Q7 questioned footwear impressions.</p>
CRQJR6-5331	<p>I have considered the proposition that the left shoe in item 1 (GHE 01) made the detail noted in item 1 (GHE 01), marks Q1 and Q4. The results of this examination provide conclusive support for this proposition. I have considered the proposition that the right shoe in item 1 (GHE 01) made the detail noted in item 1 (GHE 01), marks Q3 and Q5. The results of this examination provide strong support and conclusive support respectively for this proposition. I have considered the proposition that the shoes in item 1 (GHE 01) made the detail noted in item 1 (GHE 01) marks Q2 and Q6. As a result of this examination the shoes can be excluded as being the source of the recovered detail in marks Q2 and Q6. I have considered the proposition that the shoes in item 1 (GHE 01) made the detail noted in item 1 (GHE 01) mark Q7. The result of this examination provides indications of non association for this proposition.</p>
CW49AT-5331	<p>In my opinion, the findings provide conclusive evidence that certain of the footwear marks recovered from behind the bar and the manager's office at 'Local Restaurant', were made by the left and right 'Nike' training shoes attributed to SUSPECT (item K1).</p>
D2VQ86-5331	<p>The questioned partial left footwear impression Q4 (Item #5) share class and numerous unique characteristics with the known left shoe sole indicating the footwear impression was made by the known left shoe. The questioned right footwear impression Q5 (Item #5) share class and numerous unique characteristics with the known right shoe sole indicating the footwear impression was made by the known right shoe. The questioned partial left footwear impressions Q1 (Item #4) share class and a few unique characteristics with the known left shoe sole indicating the footwear impression could have been made by the known left shoe. The questioned partial right footwear impression Q3 (Item #4) share class and a few unique characteristics with the known right shoe sole indicating the footwear impression could have been made by the known right shoe. The questioned right footwear impression Q2 (Item #4), the questioned partial right impression Q6 (Item #5), and the questioned partial left impression Q7 (Item #5) share general class characteristics with the known shoe soles however the sizing, general wear pattern, and unique characteristics are not consistent with each other, indicating the footwear impressions were made by other shoes of the same overall design.</p>
D7JELM-5331	<p>The report below reflects the professional opinion reached by this examiner, based on the information available at the time of analysis. The following items were received from Forensics Proficiency Testing on April 19, 2021, and were used for this footwear examination: EVIDENCE: Item #Q1: One partial footwear imprint found behind the bar (textured rubber tile). Item #Q2: One partial footwear imprint found behind the bar (textured rubber tile). Item #Q3: One partial footwear imprint found behind the bar (textured rubber tile). Item #Q4: One partial footwear imprint found in the manager's office (smooth vinyl tile). Item #Q5: One partial footwear imprint found in the manager's office (smooth vinyl</p>

TABLE 2

WebCode-Test	Conclusions
	<p>tile). Item #Q6: One partial footwear imprint found in the manager's office (smooth vinyl tile). Item #Q7: One partial footwear imprint found in the manager's office (smooth vinyl tile). Item #K1a – K1c: One pair of Nike athletic shoes, US 7.5. Item #K1d – K1g: Known imprints made with the recovered shoes. COMPARISON: The listed footwear imprints were compared to the known shoes with the following results: The questioned imprints labeled Item #Q1 and Q4 correspond in design, pattern, size and wear, and shares many individual random characteristics or defects with the left known shoe labeled Item #K1. In the opinion of the examiner, the imprints labeled Items #Q1 and Q4 were made by the known left shoe, Item K1. The possibility of another item of footwear being the source of the impression is considered a practical impossibility. The questioned imprints labeled Items #Q3 and Q5 corresponds in physical shape, pattern, design, and wear, and shares many individual random characteristics or defects with the right known shoe labeled Item K1. In the opinion of the examiner, the imprints labeled Items #Q3 and Q5 were made by the known right shoe, Item K1. The possibility of another item of footwear being the source of the impression is considered a practical impossibility. The questioned imprints labeled Items #Q2, Q6 and Q7 did not correspond in size and wear. The shoes labeled Item K1 were eliminated as having been the source of the imprints. The results of this comparison have not been verified by a second footwear examiner. If a verification is required, please contact the lab.</p>
DKL78R-5335	<p>Suspect footwear/imprints examined: Tread pattern consists of a concentric circular pattern on the ball and heel areas with the central/arch area containing the brand name and logo. Tread border at the top and bottom heel area appears to be a star pattern and shows some wear. The remaining border consists of lined grooves. Some randomly acquired characteristics (RAC) are visible in the tread of both left (L) and right (R) shoes, including apparent cuts and gouges. Questioned imprints examined and compared with known/suspect samples: Questioned imprints numbered 1 to 7: all appear to exhibit similar class characteristics in terms of tread pattern. Q1 to Q3 located on a textured rubber tile – consisting of a repetitive pattern of raised circles (i.e. non-slip type tile). Q1 - High degree of association: Partial imprint of the heel, arch, ball and toe sections of a L shoe (missing the lateral/outer side of the imprint/shoe only). Exhibits similar class characteristics in terms of tread and size. Q1 also appears to exhibit 2 x RAC of that found in the L shoe tread of the suspect imprint/shoe. Possible similar wear on the lower (bottom) heel and medial/inside toe tread border – although floor tile texture does prohibit this comparison slightly. Q2 - Excluded: Full imprint of a R shoe. Exhibits similar class characteristic in terms of tread pattern only. Nil apparent other similarities exist – i.e. size difference apparent. 4 x RACs which appear to be present in the questioned imprint do not match that of the known imprint. Q3 - High degree of association: Partial imprint of the heel, arch, ball and toe sections of a R shoe (missing the lateral/outer side of the imprint/shoe only). Exhibits similar class characteristics in terms of tread and size. Q3 also appears to exhibit 2 x RAC of that found in the R shoe tread of the suspect imprint/shoe. Q4 to Q7 located on a smooth office tile. Q4 - Highest degree of association/identification: Partial imprint of the heel, arch, ball and toe sections of a R shoe (missing the lateral/outer side of the imprint/shoe only). Exhibits similar class characteristics in terms of tread and size. Q4 also appears to exhibit 4 x RAC of that found in the L shoe tread of the suspect imprint/shoe. Similar wear located on the outer heel and inner toe/ball tread border. Q5 - Highest degree of association/identification: Full imprint of a R shoe (partial overlap with Q6). Exhibits similar class characteristics in terms of tread and size. Q5 also appears to exhibit 4 x RAC of that found in the R shoe tread of the suspect imprint/shoe. Similar wear located on the outer heel and outer and inner toe tread border. Q6 - Excluded: Partial imprint of the heel, arch and ball sections of a R shoe (partial overlap with Q5 and Q7). Exhibits similar class characteristic in terms of tread pattern only. Nil apparent other similarities exist - i.e. size difference apparent. 4 x RACs which appear to be present in the questioned imprint does not match that of the known imprint. (Likely Q2 and Q6 have been made by the same shoe which is not the suspect shoe). Q7 - Excluded: Partial imprint of the ball and toe sections of a L shoe (partial overlap with Q6). Exhibits similar class characteristic in terms of tread pattern only. Nil apparent other similarities exist – i.e. size difference apparent. 1x RAC which appears to be present in the questioned imprint does not match that of the known imprint. Wear pattern apparent in the lateral/outer side border of toe area in questioned imprint does not appear to match with the suspect shoe/imprint.</p>

TABLE 2

WebCode-Test	Conclusions
DM9P9P-5331	In my opinion there is conclusive support that the suspect footwear labelled K1 made crime scene marks labelled Q1, Q3, Q4 and Q5..
DQCFGP-5331	The design, physical size and mold features of question impressions Q1 & Q4 were found to correspond to the position and orientation of general wear present on the left Nike shoe and void areas in the impression were found to correspond to the damage on the left shoe outsole. The design, physical size and mold features of Q3 & Q5 were found to correspond to the position and orientation of general wear present on the right Nike shoe and void areas in the impression were found to correspond to the damage on the right shoe outsole. Based on manufactured and random accidental characteristics that were found to correspond between the question impressions Q1 & Q4 to the outsole of the left Nike shoe and between Q3 & Q5 to the outsole of the right Nike shoe. These association are significant enough to determine an identification, that in my opinion the left Nike shoe was the source of the impressions Q1 & Q4 and the right Nike shoe was the source of impressions Q3 & Q5. The general wear and random characteristics of the left Nike shoe were found to be different than the question impressions Q2, Q6, and Q7. In my opinion, the Nike shoes were not the source of impressions Q2, Q6, and Q7.
DX9DZL-5335	IMO The findings provide conclusive support for at least one of the recovered impressions having been made by the submitted shoes. There were impressions present which have been made by a larger shoe of the same pattern type.
E4E7UH-5331	Impressions Q1 and Q4 orient with a left shoe. These impressions correspond with the K1 left shoe in outsole design, physical size, wear, and randomly acquire characteristics (RACs). Therefore, this shoe was identified as the source of these impressions. Impressions Q3 and Q5 orient with a right shoe. These impressions correspond with the K1 right shoe in outsole design, physical size, wear, and RACs. Therefore, this shoe was identified as the source of these impressions. Impressions Q2, Q6, and Q7 correspond with the Item K1 shoes in outsole design. However, these impressions do not correspond with these shoes in physical size and wear. Therefore, these shoes were excluded as the source of these impressions.
EA3UPM-5335	Item 10 Examined visually, with low-power magnification, and with 1 to 1 transparency overlays. One 1 to 1 photograph of a partial left shoe imprint labeled found behind the bar, textured rubber tile, Q1. Comparison of the partial left shoe imprint labeled found behind the bar, textured rubber tile, Q1, (item 10), to the recovered left "Nike" shoe revealed a high degree of association. Item 11 Examined visually, with low-power magnification, and with 1 to 1 transparency overlays. One 1 to 1 photograph of a right shoe imprint labeled found behind the bar, textured rubber tile, Q2. Comparison of the right shoe imprint labeled found behind the bar, textured rubber tile, Q2, (item 11), to the recovered right "Nike" shoe revealed an elimination. Item 12 Examined visually, with low-power magnification, and with 1 to 1 transparency overlays. One 1 to 1 photograph of a partial right shoe imprint labeled found behind the bar, textured rubber tile, Q3. Comparison of the partial right shoe impression labeled found behind the bar, textured rubber tile, Q3, (item 12), to the recovered right "Nike" shoe revealed an identification. Item 13 Examined visually, with low-power magnification, and with 1 to 1 transparency overlays. One 1 to 1 photograph of a partial left shoe imprint labeled found in the manager's office, smooth vinyl tile, Q4. Comparison of the partial left shoe impression labeled found in the manager's office, smooth vinyl tile, Q4, (item 13), to the recovered left "Nike" shoe revealed an identification. Item 14 Examined visually, with low-power magnification, and with 1 to 1 transparency overlays. One 1 to 1 photograph of a right shoe imprint labeled found in the manager's office, smooth vinyl tile, Q5. Comparison of the right shoe imprint labeled found in the manager's office, smooth vinyl tile, Q5, (item 14), to the recovered right shoe revealed an identification. Item 15 Examined visually, with low-power magnification, and with 1 to 1 transparency overlays. One 1 to 1 photograph of a partial right shoe imprint labeled found in the manager's office, smooth vinyl tile, Q6. Comparison of the partial right shoe imprint labeled found in the manager's office, smooth vinyl tile, Q6, (item 15), to the recovered right shoe revealed an elimination. Item 16 Examined visually, with low-power magnification, and with 1 to 1 transparency overlays. One 1 to 1 photograph of a partial left shoe imprint labeled found in the manager's office, smooth vinyl tile, Q7. Comparison of the partial left shoe imprint labeled found in the manager's office, smooth vinyl tile, Q7, (item 16), to the recovered left shoe revealed an elimination.

TABLE 2

WebCode- Test	Conclusions
EDGLKM- 5335	The Item K1 left shoe has been identified as being the source of the Q1FW1 impression. The Q1FW1 impression was not made by the Item K1 right shoe. The Item K1 right shoe has been identified as being the source of the Q3FW1 impression. The Q3FW1 impression was not made by the Item K1 left shoe. The Item K1 left shoe has been identified as being the source of the Q4FW1 impression. The Q4FW1 impression was not made by the Item K1 right shoe. The Item K1 right shoe has been identified as being the source of the Q5FW1 impression. The Q5FW1 impression was not made by the Item K1 left shoe. The Q2FW1, Q6FW1, and Q7FW1 impressions were not made by the Item K1 shoes.
EHXU8L- 5331	The Q1 and Q4 questioned impressions were made by the Item K1 Left shoe. These identifications are based on sufficient agreement of the combination of individual characteristics and all discernible class characteristics. The Q5 questioned impression was made by the Item K1 Right shoe. This identification is based on sufficient agreement of the combination of individual characteristics and all discernible class characteristics. The Q3 questioned partial impression and the Item K1 Right shoe share the association of similar class characteristics including design and physical size and shape in the respective areas. However, the Q3 questioned impression could not be identified or eliminated as having been made by the Item K1 Right shoe. In addition, other footwear with the same class characteristics observed in the Q3 impression cannot be excluded as possible sources at this time. This inconclusive result is due to slight differences and lack of quality/detail to confirm the presence of possible individual characteristics in the Q3 questioned impression and there are some similarities and differences in the wear patterns in the respective areas. The differences in the wear patterns cannot be confirmed due to the textured nature of the tile floor and if there was a possibility of slippage when the impression was made. The Q3 questioned partial impression was not made by the Item K1 Left shoe. This elimination is based on differences of class characteristics (Q3 is that of a right outsole not a left). The Q2, Q6, and Q7 questioned impressions were not made by either the Item K1 Left shoe or the Item K1 Right shoe. These eliminations are based on differences in class and/or individual characteristics.
ERYE9T- 5335	Footwear Impression Results: Impression Q1, Impression Q4: The impressions listed above are similar in size, shape, tread design, and individualizing characteristics to the left shoe in Item K1 and the exemplar created from the left shoe, Item K1 TESTIMP. Comparison results: The impressions are identified as being made by the left shoe in Item K1. Impression Q3, Impression Q5: The impressions listed above are similar in size, shape, tread design, and individualizing characteristics to the right shoe in Item K1 and the exemplars created from the right shoe, Item K1 TESTIMP. Comparison results: The impressions are identified as being made by the right shoe in Item K1. Impression Q2, Impression Q6, Impression Q7: The impressions listed above are not similar in size, shape, or tread design to the shoes in Item K1 and the exemplars created from the shoe, Item K1 TESTIMP. Comparison results: The impressions are excluded as being made by the shoes in Item K1.
EU7W7P- 5331	Examination of the submitted material disclosed the presence of seven, 7, questioned footwear impressions, designated as Q1 through Q7, and a pair of "Nike" shoes. Examination and comparison of the submitted material yielded the following results and conclusions: Q2, Q6, Q7 and the known 'Nike' shoes are similar with respect to tread design, dissimilar with respect to size and individualizing characteristics. Therefore, Q2, Q6, and Q7 were NOT made by the submitted 'Nike' shoes. Q1, Q4 and the left, known 'Nike' shoe are consistent with respect to tread design, size, wear and individualizing characteristics. Therefore, Q1 and Q4, were made by the left, known 'Nike' shoe. Q3, Q5 and the right, known 'Nike' shoe are consistent with respect to tread design, size, wear and individualizing characteristics. Therefore, Q3 and Q5 were made by the right, known 'Nike' shoe.
EZUCY3- 5335	The questioned prints Q2, Q6, Q7 show differences in size, details and wear. They could not have been made by the suspects shoes K1. There is sufficient correspondance in pattern, size, wear and randomly acquired characteristics between the questioned prints Q4 and Q5 and the suspects shoes K1. Q1 and Q3 are partial prints on an uneven, textured rubber tile. The prints show the same details in pattern and size, almost the same in wear and only very few, small RAC`s. Therefor it is an high degree of association between Q1/Q3 and K1.
FERN7L- 5331	Comparative analysis between the Item K1a left shoe and the Item Q1 and Q4 left shoe impressions revealed correspondence of class characteristics (pattern, physical size and general condition of wear)

TABLE 2

WebCode-Test	Conclusions
	<p>and correspondence of multiple randomly acquired characteristics. It was concluded that the Item K1a left shoe was the source of, and made, the Item Q1 and Q4 impressions. Another shoe being the source of the listed impressions is considered a practical impossibility. Comparative analysis between the Item K1a right shoe and the Item Q3 and Q5 right shoe impressions revealed correspondence of class characteristics (pattern, physical size and general condition of wear) and correspondence of multiple randomly acquired characteristics. It was concluded that the Item K1a right shoe was the source of, and made, the Item Q3 and Q5 impressions. Another shoe being the source of the listed impressions is considered a practical impossibility. Comparative analysis revealed significant differences (physical size, general condition of wear, and randomly acquired characteristics) between the Item K1a left shoe and the Item Q7 left shoe impression. It was concluded that the Item K1a left shoe did not make the Item Q7 impression. Comparative analysis revealed significant differences (physical size, general condition of wear, and randomly acquired characteristics) between the Item K1a right shoe and the Item Q2 and Q6 right shoe impressions. It was concluded that the Item K1a right shoe did not make the Item Q2 and Q6 impressions. The Item K1a left shoe could not have made the Item Q2, Q3, Q5, and Q6 right shoe impressions due to incorrect orientation. The Item K1a right shoe could not have made the Item Q1, Q4, and Q7 left shoe impressions due to incorrect orientation.</p>
FJMKNK-5331	<p>Questioned imprints of Q1-Q7 were compared with known imprint made with the recovered shoes. Questioned imprints of Q3, Q5 were found to be consistent in shape, physical size, and individual characteristics with the imprint of the recovered right shoe. Questioned imprints of Q1, Q4 were found to be consistent in shape, physical size, and individual characteristics with the imprint of the suspect left shoe. Questioned imprints of Q2, Q6, Q7 were eliminated as having been made by the recovered shoe.</p>
FKWKKN-5331	<p>Q1- The submitted images and known impressions of the suspects shoes (K1a-K1g) were examined and compared to the impression visible in Q1. Q1 and the known left shoe correspond in tread pattern, tread wear and tread size as well as individual characteristics including scratches on the tread within the center of the heel. Thus, Q1 was made by the known left shoe. Q2- The submitted images and known impressions of the suspects shoes (K1a-K1g) were examined and compared to the impression visible in Q2. The questioned impression corresponds to the known right shoe in tread pattern but not in tread size. The individual characteristics including a notch in the tread of the toe region in the 13th outer circle of the known right shoe are not visible on Q2. Thus, Q2 was not made by the known right shoe. Q3- The submitted images and known impressions of the suspects shoes (K1a-K1g) were examined and compared to the impression visible in Q3. Q3 and the known right shoe correspond in tread pattern, tread wear and tread size. Q3 also has individual characteristics including gouges and slash marks in the tread of the upper foot region. Thus, Q3 was made by the known right shoe. Q4- The submitted images and known impressions of the suspects shoes (K1a-K1g) were examined and compared to the impression visible in Q4. The questioned impression corresponds to the known left shoe in tread pattern, tread wear and tread size and individual characteristics including slash marks in the center most circle of the heel. Thus, Q4 was made by the known left shoe. Q5- The submitted images and known impressions of the suspects shoes (K1a-K1g) were examined and compared to the impression visible in Q5. The questioned impression corresponds to the known right shoe in tread pattern, tread wear and tread size as well as individual characteristics including a gouge and slash marks in the tread of the upper foot region. Thus, Q5 was made by the known right shoe. Q6- The submitted images and known impressions of the suspects shoes (K1a-K1g) were examined and compared to the impression visible Q6. The questioned impression corresponds to the known right shoe in tread pattern but not in tread size. A gouge in the tread in the 8th outer circle of the known right shoe is not present on Q6. Thus, Q6 could not have been made by the known right shoe. Q7- The submitted images and known impressions of the suspects shoes (K1a-K1g) were examined and compared to the impression visible in Q7. The questioned impression corresponds to the known left shoe in tread pattern but not in tread size. A gouge in the tread of the upper foot region of the known left shoe is also not present on Q7. Thus, Q7 could not have been made by the known left shoe.</p>
FWML2L-5331	<p>Q2, Q6 AND Q7 were not made by item K1. Q1 corresponds with the left shoe of item K1 in class characteristics as well as wear and one or more randomly acquired characteristics. Q3 corresponds</p>

TABLE 2

WebCode-Test	Conclusions
	with the right shoe of item K1 in class characteristics as well as wear and one or more randomly acquired characteristics. Q4 was made by the Left Shoe of Item K1. Q5 was made by the Right Shoe of Item K1.
G9WD9R-5331	Impressions Q2, Q3, Q6, and Q7 are dissimilar in size and/or wear to the known shoes. The known shoes are eliminated from making impressions Q2, Q3, Q6, and Q7. Impression Q1 is similar in class characteristics and wear to the known left shoe. Impression Q1 has two randomly acquired characteristics that are present on the known left shoe. Impression Q1 has a high degree of association to the known left shoe. Impression Q4 is similar in class characteristics and wear to the known left shoe. Impression Q4 has multiple randomly acquired characteristics that are present on the known left shoe. The known left shoe made impression Q4. Impression Q5 is similar in class characteristics and wear to the known right shoe. Impression Q5 has multiple randomly acquired characteristics that are present on the known right shoe. The known right shoe made impression Q4.
GCJZ2F-5331	The SFR report would state that the potential evidential strength, if submitted to an FSP would be at least Very Strong Support, however we would expect a Conclusive result from the FSP.
GE8C2K-5335	Questions impressions labeled as Q2, Q6, and Q7 have all been excluded as having been produced by the Known shoes in this case due to dissimilar wear and/or placement of randomly acquired characteristics. Questioned impressions labeled as Q1 and Q4 are similar in size, shape, and wear, and there is sufficient quality and quantity randomly acquired characteristics present to identify them as having been produced by the Known Left shoe. Questioned impressions labeled as Q3 and Q5 are similar in size, shape, and wear, and there is sufficient quality and quantity randomly acquired characteristics present to identify them as having been produced by the Known Right shoe.
GGEMWN-5331	Q1 - There is a general size, shape and pattern correspondence between the left shoe and the scene impression. A Randomly Acquired Characteristic (RAC) is also seen within a circular pattern at the middle of the heel which is visible in both the shoe and the scene impression. Conclusion - High Degree of Association. Q2 - A general size and shape correspondence with the right shoe. Some pattern discrepancy which may be attributable to lateral movement at the time the impression was made. No RAC's sighted. Nothing within the impression that would exclude the shoe as having made that impression. Conclusion - Limited Association of Class Characteristics. Q3 - General size, shape and pattern correspondence between the right shoe and the scene impression. A RAC is seen towards the top section of the inside of the forefoot that is seen in the scene impression, the test impression and the right shoe. Conclusion - High Degree of Association. Q4 - General size, shape and pattern match with similar wear features. A RAC is seen at the forefoot on a circular shaped pattern (two outside from the smallest circular shape). A second RAC is also seen at the heel, on the inside and towards the bottom of the two smallest circular shaped patterns. These features are seen at the scene impression, on the test impressions and seen as areas of damage to the left shoe. Conclusion - Identification. Q5 - General size, shape and pattern match with similar wear features. A RAC is seen at the top inside section of the forefoot which is replicated with the test impressions and an area of damage to the right shoe. A second RAC is located across the solid circular pattern at the inside of the forefoot, with a V shape pattern of damage that is replicated within the test impression and as an area of damage seen on the right shoe. Conclusion - Identification. Q6 - A general size and shape match. Some pattern discrepancy is present which may be attributable to possible lateral movement at the time the impression was made. Right shoe. No RAC's present. No features present which could exclude the right shoe as having made the impression. Conclusion - Limited Association of Class Characteristics. Q7 - A general size, shape and pattern match, with similar degrees of wear to the left shoe. No RAC's identified. No features present which could exclude the left shoe as having made the impression. Conclusion- Association of Class Characteristics.
GKUGDL-5331	Items 1C and 1D were prints of questioned footwear impressions Q1 - Q7. The questioned footwear impressions were visually compared to the images of the known Nike shoes and test impressions from the Nike shoes (Items 1A and 1B). All the questioned footwear impressions were similar in general tread design to each other and to the Nike shoes. However, the questioned impressions Q2, Q6, and Q7 were larger in size than the Nike shoes represented in Items 1A and 1B. In the opinion of the examiner,

TABLE 2

WebCode-Test	Conclusions
	questioned impressions Q2, Q6, and Q7 were not produced by the Nike shoes (Exclusion). The questioned impressions Q1 and Q4 corresponded in tread design, size, and wear to the left Nike shoe. In addition, void areas in the questioned impressions corresponded in size, shape, and location to damage on the outsole of the left Nike shoe. In the opinion of the examiner, the left Nike shoe produced questioned footwear impressions Q1 and Q4 (Identification). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. The questioned impressions Q3 and Q5 corresponded in tread design, size, and wear to the right Nike shoe. In addition, void areas in the questioned impressions corresponded in size, shape, and location to damage on the outsole of the right Nike shoe. In the opinion of the examiner, the right Nike shoe produced questioned footwear impressions Q3 and Q5 (Identification). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear.
H78C2J-5335	[No Conclusions Reported.]
HAB8KL-5331	[No Conclusions Reported.]
HFDAPM-5335	Scene Impression Q1 - High Degree of Association with the left outsole from test impression of (**) siezed "NIKE" size US 7.5 shoe. Scene impression Q3 - Identification with the Right outsole from the test impressions of (**) siezed "NIKE" size US 7.5 shoe. Scene Impression Q4 - Identification with the Left outsole from the test impression of (**) siezed "NIKE" size US 7.5 shoe. Scene Impression Q5 - Identification with the Right outsole from the test impression of (**) siezed "NIKE" size US 7.5 shoe. Scene Impressions Q2, Q6 and Q7 - Indications of non-association with the test impressions of (**) siezed "NIKE size US 7.5 shoes.
HNR3ZH-5335	There are similarities in pattern, design, size and individual characteristics when comparing the identified footwear impression fragment Q-1 (Left) with the identified footwear impression K-1. I mention that the area where the impression was made is a porous texture, so the impression is observed interfered with. There are similarities in pattern, design but not in individual characteristics when comparing the footwear impression identified Q-2 (right) with the footwear impression identified K-1. I mention that the area where the impression was made is a porous texture, so the impression is observed interfered with. There are similarities in pattern, design, size and individual characteristics when comparing the identified footwear impression fragment Q-3 (Right) with the identified footwear impression K-1. I mention that the area where the impression was made is a porous texture, so the impression is observed interfered with. There are similarities in pattern, design, size and individual characteristics when comparing the identified footwear impression fragment Q-4 (Left) with the identified footwear impression K-1. There are similarities in pattern, design, size and individual characteristics when comparing the identified footwear impression Q-5 (Right) with the footwear impression identified K-1. There are similarities in pattern, design but not in individual characteristics when comparing the identified footwear impression fragment Q-6 (right) with the identified footwear impression K-1. There are similarities in pattern, design but not in individual characteristics when comparing the identified footwear impression fragment Q-7 (Left) with the identified footwear impression K-1.
HUCDVY-5331	On examination, I found: i. The individual characteristic marks on the questioned imprints Q1 and Q4 to be similar to the individual characteristic marks on the left suspect shoe. ii. The individual characteristic marks on the questioned imprints Q3 and Q5 to be similar to the individual characteristic marks on the right suspect shoe. iii. The individual characteristic marks on the questioned imprints Q2, Q6 and Q7 to be different to the individual characteristic marks on the left and right suspect shoe. Therefore, I am of the opinion that: i. The questioned imprints Q1 and Q4 were made by the left suspect shoe. ii. The questioned imprints Q3 and Q5 were made by the right suspect shoe. iii. The questioned imprints Q2, Q6 and Q7 were not made by the left or right suspect shoe.
HYP4DM-5331	Identification: In my opinion, the right/left shoe in exhibit K1 was the source of, and made, the question impression (Q#). Exclusion: In my opinion, the known footwear in exhibit K1 was not the source of, and did not make, the question impression (Q#).

TABLE 2

WebCode-Test	Conclusions
J4D6VC-5331	<p>The Q1 footwear impression corresponds to the K1 left shoe in outsole design, physical size, wear and 3 randomly acquired characteristics. Therefore, the K1 left shoe was identified as the source of this impression. Impression Q2 corresponds in outsole design to the K1 right shoe. However, this impression does not correspond in specific outsole design, physical size and wear to the K1 right shoe. Therefore, the K1 right shoe was excluded as the source of this impression. The Q3 footwear impression corresponds to the K1 right shoe in outsole design, physical size, wear and 1 randomly acquired characteristic. Therefore, the K1 right shoe was identified as the source of this impression. The Q4 footwear impression corresponds to the K1 left shoe in outsole design, physical size, wear and 5 randomly acquired characteristics. Therefore, the K1 left shoe was identified as the source of this impression. The Q5 footwear impression corresponds to the K1 right shoe in outsole design, physical size, wear and 6 randomly acquired characteristics. Therefore, the K1 right shoe was identified as the source of this impression. Impression Q6 corresponds in outsole design to the K1 right shoe. However, this impression does not correspond in specific outsole design, physical size and wear to the K1 right shoe. Therefore, the K1 right shoe was excluded as the source of this impression. Impression Q7 corresponds in outsole design to the K1 left shoe. However, this impression does not correspond in specific outsole design, physical size and wear to the K1 left shoe. Therefore, the K1 left shoe was excluded as the source of this impression.</p>
JB3KPQ-5331	<p>The test impressions and photographs of the suspect shoes were compared to the photographs of the questioned impressions using the side by side comparison method. The impressions marked Q1, Q4 and Q5 correspond in class characteristics, namely design (arrangement of footwear design elements and pattern/s), wear (extent of erosion to the outsole) and physical size (length, width and relative positions of various design elements in the outsole) and in individual characteristics (random characteristics i.e. nicks, cuts, tears etc. similar in size, shape, orientation and location resulting from random events), therefore it can be stated that the Suspect's shoes were the source of the impressions. The impressions marked Q2, Q6 and Q7 correspond in general design, however, significant differences are noted in wear and accidental damage characteristics, therefore it can be stated that the Suspect's shoes were not the source of the impressions. The impression marked Q3 correspond in class characteristics, namely design (arrangement of footwear design elements and pattern/s), wear (extent of erosion to the outsole) and physical size (length, width and relative positions of various design elements in the outsole) and in individual characteristics (random characteristics i.e. nicks, cuts, tears etc. similar in location resulting from random events), however the characteristics cannot be fully evaluated in regards to specific shape and size and are insufficient in detail for an identification. Other footwear with the same class characteristics observed in the questioned impressions are included in the population of possible sources only if they display the same randomly acquired characteristics observed in the questioned impressions.</p>
JBDKLLK-5331	<p>Q4 was made by the known left shoe. Q5 was made by the known right shoe. Q1 could have been made by the known left shoe or by another shoe with all the same analyzed characteristics. Q1 could not have been made by the known right shoe. Q3 could have been made by the known right shoe or by another shoe with all the same analyzed characteristics. Q3 could not have been made by the known left shoe. Q2, Q6 and Q7 could not have been made by the known shoes.</p>
K2AP3F-5331	<p>The partial, questioned footwear impression, labeled Q1 corresponds in class characteristics, wear and several individual characteristics and was probably made by the known left shoe in Submission K. (High degree of association). The partial, questioned footwear impression, labeled Q3 corresponds in class characteristics, wear and several individual characteristics and was probably made by the known right shoe in Submission K. (High degree of association). The partial, questioned footwear impression, labeled Q4 corresponds in class characteristics, wear and several individual characteristics and was made by the known left shoe in Submission K. (Identification). The partial, questioned footwear impression, labeled Q5 corresponds in class characteristics, wear and several individual characteristics and was made by the known right shoe in Submission K. (Identification). The partial, questioned footwear impressions, labeled Q2, Q6 and Q7 were not made by the known shoes in Submission K. Due to the texture of the surface, a closer association could not be made on Q1 and Q3.</p>

TABLE 2

WebCode-Test	Conclusions
KF3GMF-5331	<p>Three questioned impressions were observed in the image taken of the textured rubber tile behind the bar (Q1-Q3). Four questioned impressions were observed in the image taken of the smoothy vinyl tile in the manager's office (Q4-Q7). All questioned impressions were compared to the submitted known images of the recovered shoes. Q1 and Q4 are partial left shoe impressions that are similar in tread design, relative size, and share at least two randomly acquired characteristics to the known left shoe. It is my opinion these impressions were made by the known left shoe (Category 1). Q5 is a nearly complete right shoe impression that is similar in tread design, relative size, and shares at least two randomly acquired characteristics to the known right shoe. It is my opinion this impression was made by the known right shoe (Category 1). Q3 is a partial right shoe impression that is similar in tread design and relative size to the known right shoe. Additionally there are possible randomly acquired characteristics present in the partial right shoe impression but were unable to be confirmed due to the nature of how the questioned and known impressions were made. It is my opinion this impression was made by the known right shoe or any other right shoe of similar characteristics (Category 2B). Q2 and Q6 are nearly complete right shoe impressions that are similar in tread design but different in relative size to the submitted known right shoe. Q7 is a partial left shoe impression that is similar in tread design but different in relative size to the submitted known left shoe. It is my opinion these impressions were not made by the known shoes (Category 5).</p>
KM82BL-5331	<p>There was a correspondence of pattern, dimensions, wear and randomly acquired characteristics between the left Nike shoe and impressions Q1 and Q4. In my opinion the probability of observing these correspondences if the left Nike shoe made these impressions is very high. Conversely, in my opinion, the probability of observing these correspondences if another shoe made the impressions is so small I consider it negligible. Therefore in my opinion the left Nike shoe made impressions Q1 and Q4. There was a correspondence of pattern, dimensions, wear and randomly acquired characteristics between the right Nike shoe and impression Q5. In my opinion the probability of observing these correspondences if the right Nike shoe made the impression is very high. Conversely, in my opinion, the probability of observing these correspondences if another shoe made the impression is so small I consider it negligible. Therefore in my opinion the right Nike shoe made impression Q5. There was a correspondence of pattern, dimensions and wear between the right Nike shoe and impression Q3. There was also a correspondence of two randomly acquired characteristics however the clarity of these was slightly diminished. In my opinion the probability of observing these correspondences if the right Nike shoe made these impressions is high. Conversely, in my opinion, the probability of observing these correspondences if another shoe made the impression is medium-low. Therefore, in my opinion these findings provide strong support for the proposition that the right Nike shoe made impression Q3. I have chosen the term strong support from the following scale: is neutral, provides slight support, provides moderate support, provides strong support, provides very strong support, provides extremely strong support and is conclusive. There were differences of either size, degree of wear or randomly acquired characteristics between the right Nike shoe and impressions Q2 and Q6. There were also observed differences of wear and randomly acquired characteristics between the left Nike shoe and impression Q7. Therefore in my opinion the Nike shoes can be excluded from having made impressions Q2, Q6 and Q7.</p>
KMLMKM-5335	<p>Per our policy no reports required for proficiency tests.</p>
KQNKVF-5335	<p>Item 1 contained images depicting seven questioned footwear impressions (labeled Q1 through Q7), known shoes and known shoe impressions that were compared. A complete evaluation of a questioned impression and a known shoe includes looking at correspondence in tread design, physical size and shape of design present, wear characteristics, and any distinctive characteristics randomly acquired on the tread of the known shoe that are represented in the questioned impression. The Q1, Q3, Q4 and Q5 questioned impressions corresponded in physical shape, tread design (concentric circles, stars, and hash marks), size of tread, wear, and randomly acquired characteristics to the known shoes. Therefore, the known shoes are the source of the questioned footwear impressions (Type I Association/Identification). The Q2, Q6, and Q7 questioned footwear impressions were similar to the known shoes in general tread design (concentric circles, stars, and hash marks); however, they differed</p>

TABLE 2

WebCode-Test	Conclusions
	<p>in wear and/or physical size and spacing of the design features. Therefore, the questioned impressions were not made by the known shoes (Exclusion). Further comparisons can be done upon the submission of additional known shoes. Item 2 was created by the scientist and will be maintained at the [Laboratory]. Interpretation: The following descriptions are meant to provide context to the opinions reached in this report. Not every type of conclusion may be applicable in every case or for every material type. Type I Association: Identification. Source identification is reached when the discernible class and individual characteristics have corresponding detail and the examiner would not expect to see the same arrangement of details repeated in another source. This includes when two Items fit or realign together in a manner that is not expected to be replicated. Type II Association: Association with distinct characteristics. Items correspond in all measured physical properties, chemical composition and/or microscopic characteristics and share distinctive characteristic(s). Although the examiner would not expect to see these distinctive characteristic(s) repeated in another source, it lacked sufficient characteristics for a source identification. Type III Association: Association with conventional characteristics. Items correspond in all measured physical properties, chemical composition and/or microscopic characteristics. However, it is possible for another sample to be indistinguishable from the submitted evidence; therefore, an individual source cannot be determined. Type IV Association: Association with limitations. An association of decreased evidential value in which items correspond in all measured physical properties, chemical composition and/or microscopic characteristics, but there is a limitation to the exam. Limitations could include items commonly encountered in the relevant population, the inability to perform a complete analysis, or limited information. Inconclusive. No conclusion could be reached regarding an association or an exclusion between the items. Exclusion with Limitations. The item exhibits differences to the comparison sample that suggests that it did not originate from the same source. However, there are limiting factors, such as possible natural or manufactured source variations. Exclusion. The items exhibit differences in physical properties and/or chemical composition to the comparison sample that demonstrate they did not originate from the same source.</p>
KRGGHN-5331	<p>The Q1 left shoe impression on textured rubber tile could have been made by the K1 left shoe. There is a high degree of association between the K1 Nike left shoe and the Q1 impression, based on class characteristics, including size, design, and wear, as well as randomly acquired characteristics. The Q2 right shoe impression on textured rubber tile could not have been made by the K1 right shoe due to differences in class characteristics, including size, design, and wear. The K1 Nike shoes are excluded as the source of the impression. The Q3 right shoe impression on textured rubber tile could have been made by the K1 right shoe. There is a high degree of association between the K1 Nike right shoe and the Q3 impression, based on class characteristics, including size, design, and wear, as well as randomly acquired characteristics. The Q4 left shoe impression on vinyl tile was made by the K1 left shoe. The K1 left Nike shoe was identified as the source of the Q4 left shoe impression based on class characteristics, including size, design, and wear, as well as randomly acquired characteristics. The Q5 right shoe impression on vinyl tile was made by the K1 right shoe. The K1 right Nike shoe was identified as the source of the Q5 right shoe impression based on class characteristics, including size, design, and wear, as well as randomly acquired characteristics. The Q6 right shoe impression on vinyl tile could not have been made by the K1 right shoe due to differences in class characteristics, including size, design, and wear. The K1 Nike shoes are excluded as the source of the impression. The Q7 left shoe impression on vinyl tile could not have been made by the K1 left shoe due to differences in class characteristics, including size, design, and wear. The K1 Nike shoes are excluded as the source of the impression.</p>
L647RE-5331	<p>The photographs in exhibit FIEP were visually examined for questioned footwear impressions. Seven (7) suitable questioned footwear impressions were documented and designated Q1 through Q7. The known left footwear in exhibit FIEP was the source of, and made, the questioned impression designated Q1 in exhibit FIEP. This identification is based on correspondence of class (outsole design, physical size, mold characteristics and general wear) and three (3) randomly acquired characteristics. Another item of footwear being the source of the questioned impression is considered a practical impossibility. The known footwear in exhibit FIEP was not the source of, and did not make, the questioned impression designated Q2 in exhibit FIEP. This exclusion is based on a difference in class characteristics. The known right footwear in exhibit FIEP was the source of, and made, the questioned impression</p>

TABLE 2

WebCode-Test	Conclusions
	<p>designated Q3 in exhibit FIEP. This identification is based on correspondence of class (outsole design, physical size, mold characteristics and general wear) and three (3) randomly acquired characteristics. Another item of footwear being the source of the questioned impression is considered a practical impossibility. The known left footwear in exhibit FIEP was the source of, and made, the questioned impression designated Q4 in exhibit FIEP. This identification is based on correspondence of class (outsole design, physical size, mold characteristics and general wear), specific wear and six (6) randomly acquired characteristics. Another item of footwear being the source of the questioned impression is considered a practical impossibility. The known right footwear in exhibit FIEP was the source of, and made, the questioned impression designated Q5 in exhibit FIEP. This identification is based on correspondence of class (outsole design, physical size, mold characteristics and general wear), specific wear and four (4) randomly acquired characteristics. Another item of footwear being the source of the questioned impression is considered a practical impossibility. The known footwear in exhibit FIEP was not the source of, and did not make, the questioned impression designated Q6 in exhibit FIEP. This exclusion is based on a difference in class characteristics. The known footwear in exhibit FIEP was not the source of, and did not make, the questioned impression designated Q7 in exhibit FIEP. This exclusion is based on a difference in class characteristics. Images of the suitable questioned footwear impressions have been retained in our files. Criminalists other than the undersigned have performed one or more steps in the described analysis. The criminalist's curriculum vitae, proficiency testing summary, applicable corrective action reports, and a copy of the case record are available upon request.</p>
LDDCNG-5335	<p>The left outsole portrayed in image K1a made impressions Q1 and Q4. The right outsole portrayed in image K1a made impressions Q3 and Q5. Neither the right nor the left outsoles portrayed in image K1a made impressions Q2, Q6, or Q7.</p>
LNEV8W-5331	<p>The submitted images and known footwear impressions were examined and compared to the questioned footwear impressions (Q1-Q7). Q1 and Q4 correspond to the known left shoe in tread size, tread design, tread wear and individual characteristics to include scratches and nicks in the tread surface. Thus Q1 and Q4 were made by the submitted known left shoe as represented by the images provided. Q3 and Q5 correspond to the known right shoe in tread size, tread design, tread wear and individual characteristics to include scratches and gouges in the tread surface. Thus Q3 and Q5 were made by the submitted known right shoe as represented by the images provided. Q2 and Q6 corresponds to the submitted right shoe in tread design; however, it is different in tread size and tread wear. Thus, Q2 and Q6 were not made by the submitted right shoe as represented by the images provided. Q7 corresponds to the submitted left shoe in tread design; however, is different in tread size and tread wear. Thus, Q7 was not made by the submitted footwear as represented by the images provided.</p>
LNFREL-5331	<p>Q1, a left shoe imprint, and Q3, a right shoe imprint, exhibit a high degree of association with the corresponding K1 left and right shoes. There is correspondence of class characteristics, in addition to unusual wear and/or one or more randomly acquired characteristics visible in both the imprint and the shoe. However, the textured substrate prohibits an identification. Q2, a right shoe imprint, and Q6, a right shoe imprint, and Q7, a left toe imprint, could not have been made by the corresponding K1 left and right shoes due to differences of class and/or randomly acquired characteristics. The K1 shoes were eliminated as the source of Q2, Q6 and Q7. Q4, a left shoe imprint, and Q5, a right shoe imprint, was made by the corresponding K1 left and right shoe. These identifications are based on sufficient, corresponding random accidental characteristics that are visible in both the imprints and the shoe.</p>
LNX3NT-5335	<p>The left footwear is the source of the Q1 and Q4 imprints which share agreement of class and randomly acquired characteristics of sufficient quality and quantity. The right footwear is the source of the Q3 and Q5 imprints which shares agreement of class and randomly acquired characteristics of sufficient quality and quantity. The Q2, Q6, Q7 imprints and the particular known footweares, exhibit sufficient differences of class and randomly acquired characteristics.</p>
LZB22V-5331	<p>The submitted photographs exhibit seven (7) questioned impressions, of value for comparison, labeled Q1 through Q7. The seven (7) questioned impressions were compared to the submitted known K1 left and right outsoles (Nike brand, US 7.5). The following conclusions were reached and are the opinion of</p>

TABLE 2

WebCode-Test	Conclusions
	<p>this Examiner: Q1 - The Q1 questioned impression corresponds to the submitted known K1 left outsole in physical shape, design, physical size, degree & position of wear and at least three (3) randomly acquired characteristics (individual characteristics). Therefore, the Q1 questioned impression was made by the submitted known K1 left outsole. It is unlikely that another item of footwear would contain the same combination of characteristics observed. The Q1 questioned impression was not made by the submitted known K1 right outsole. Q2 - The Q2 questioned impression exhibits a general design which is similar to that of the submitted known K1 left & right outsoles. However, multiple class characteristic differences were observed. Therefore, the Q2 questioned impression was not made by the submitted known K1 left and right outsoles. Q3 - The Q3 questioned impression was not made by the submitted known K1 left outsole. The Q3 questioned impression corresponds to the submitted known K1 right outsole in physical shape, design, physical size, degree and position of wear and at least five (5) randomly acquired characteristics (individual characteristics). Therefore, the Q3 questioned impression was made by the submitted known K1 right outsole. It is unlikely that another item of footwear would contain the same combination of characteristics observed. Q4 - The Q4 questioned impression corresponds to the submitted known K1 left outsole in physical shape, design, physical size, degree & position of wear and at least five (5) randomly acquired characteristics (individual characteristics). Therefore, the Q4 questioned impression was made by the submitted known K1 left outsole. It is unlikely that another item of footwear would contain the same combination of characteristics observed. The Q4 questioned impression was not made by the submitted known K1 right outsole. Q5 - The Q5 questioned impression was not made by the submitted known K1 left outsole. The Q5 questioned impression corresponds to the submitted known K1 right outsole in physical shape, design, physical size, degree & position of wear and at least eight (8) randomly acquired characteristics (individual characteristics). Therefore, the Q5 questioned impression was made by the submitted known K1 right outsole. It is unlikely that another item of footwear would contain the same combination of characteristics observed. Q6 - The Q6 questioned impression exhibits a general design which is similar to that of the submitted known K1 left & right outsoles. However, multiple class characteristic differences were observed. Therefore, the Q6 questioned impression was not made by the submitted known K1 left and right outsoles. Q7 - The Q7 questioned impression exhibits a general design which is similar to that of the submitted known K1 left and right outsoles. However, multiple class characteristic differences were observed. Therefore, the Q7 questioned impression was not made by the submitted known K1 left and right outsoles.</p>
MWNNUD-5331	[No Conclusions Reported.]
N6DU7B-5335	<p>In the opinion of this examiner, the known RIGHT footwear, is the source of, and made, the questioned impressions Q3-imp1 and Q5-imp1. Another item of footwear being the source of these impressions is considered a practical impossibility. In the opinion of this examiner, the known LEFT footwear, is the source of, and made, the questioned impression Q1-imp1 and Q4-imp1. Another item of footwear being the source of this impression is considered a practical impossibility. In the opinion of this examiner, the known RIGHT and LEFT footwear, is not the source of, and did not make, the questioned impressions Q2-imp1, Q6-imp1 or Q7-imp1.</p>
NQCZTG-5335	<p>The questioned footwear marks, Q1 to Q7, have been compared in detail to the submitted footwear impressions, K1a to K1g. All the marks correspond in pattern design with the known footwear, however, marks Q2, Q6 and Q7 differ in pattern dimensions/size, general degree of wear and randomly acquired characteristics present. For marks Q1, Q3, Q4 & Q5, the pattern dimensions/size, stippling pattern detail and general degree of wear also correspond. Furthermore, features in these marks correspond in position, size, shape and orientation with randomly acquired characteristics on the soles of the shoes. In my opinion, the correspondence of features is of sufficient quality and quantity to state that overall there is conclusive evidence to support the view that these marks were made by the submitted footwear. When addressing the issue of whether or not the questioned marks could have been made by the submitted footwear, given the degree of correspondence observed, in my opinion the findings provide conclusive support for the view that some of the questioned marks were made by the submitted footwear. Other marks (Q2, Q6 & Q7) also recovered from the scene could not have been</p>

TABLE 2

WebCode-Test	Conclusions
	made by the submitted footwear.
NZJXGJ-5331	[No Conclusions Reported.]
P346HR-5331	<p>The questioned impressions depicted in Q1 and Q4 are identified as having been made by the left Nike shoe (item K1). The left Nike shoe and the questioned impressions (Q1 and Q4) share an agreement of class characteristics (tread design and size), wear, and randomly acquired characteristics of a sufficient quality and quantity. Another item of footwear being the source of the impression is considered a practical impossibility. The questioned impressions depicted in Q2, Q6, and Q7 are excluded as having been made by the Nike shoes (item K1). The Nike shoes and the questioned impressions (Q2, Q6, and Q7) have a notable difference in a class characteristic (size), therefore these impressions could not have been made by the Nike shoes. The questioned impression depicted in Q3 and the right Nike shoe (item K1) share a high degree of association. The right Nike shoe and the questioned impression (Q3) share an agreement of class characteristics (tread design and size), wear, and a randomly acquired characteristic. The characteristics observed exhibit strong associations between the questioned impression (Q3) and the right Nike shoe; however, the quality and/or quantity were insufficient for an identification. Other footwear with the same class characteristics observed in the impression are included in the population of possible sources only if they display the same wear and randomly acquired characteristic observed in the questioned impression. The questioned impression depicted in Q5 is identified as having been made by the right Nike shoe (item K1). The right Nike shoe and the questioned impression (Q5) share an agreement of class characteristics (tread design and size), wear, and randomly acquired characteristics of a sufficient quality and quantity. Another item of footwear being the source of the impression is considered a practical impossibility.</p>
PJA7EE-5331	<p>Q1 could have been made by the known left shoe from K1, or from another footwear source exhibiting all the same analyzed characteristics. Q3 could have been made by the known right shoe from K1, or from another footwear source exhibiting all the same analyzed characteristics. Q4 was made by the known left shoe from K1. Q5 was made by the known right shoe from K1. Q2, Q6 and Q7 could not have been made by either of the shoes in K1.</p>
PPEAZ8-5335	<p>Items (Q1 & Q4) are identical with left shoes of suspect. Items (Q3 & Q5) are identical with right shoes of suspect.</p>
PY29QC-5335	<p>The exemplar left and right footwear depicted in Item 1 are excluded as possible sources of the unknown footwear impressions Q2, Q6 and Q7. There is a high degree of association between the exemplar left footwear depicted in Item 1 and the unknown footwear impressions of Q1 and Q4. For another footwear to be considered as a possible source of these unknown impressions, it would have to share the same physical shape, size, tread design and randomly acquired characteristics. There is a high degree of association between the exemplar right footwear depicted in Item 1 and the unknown footwear impression Q3. For another footwear to be considered as a possible source of this unknown impression, it would have to share the same physical shape, size, tread design and randomly acquired characteristics. The exemplar right footwear depicted in Item 1 is the source of the unknown footwear impression Q5.</p>
Q6MFTH-5335	[No Conclusions Reported.]
QD3YCG-5331	<p>Impressions Q1 and Q4 were identified as having been made by the recovered left shoe, K1-left. Impressions Q3 and Q5 were identified as having been made by the recovered right shoe, K1-right. Impressions Q2 and Q6 were identified as having been made by a second right shoe of similar outsole design to the recovered right shoe. Impressions Q2 and Q6 were not made by the recovered right shoe, based on differences in size. Impression Q7 was made by a second left shoe of similar outsole design to the recovered left shoe. Impression Q7 was not made by the recovered left shoe, based on differences in size and general wear.</p>
QJ83XA-5331	<p>The questioned imprints Q3 found behind the bar and Q5 found in the manager's office may have originated from the right side of the suspect's shoe. The questioned imprint Q4 found in the manager's</p>

TABLE 2

WebCode-Test	Conclusions
	office may have originated from the left side of the suspect's shoe. The questioned imprints Q1, Q2, Q6 and Q7 did not originate from the suspect's shoe.
QLW67H-5335	The results indicated that the questioned imprints Q1 and Q4 were made by the recovered left shoe, and the questioned imprint Q5 was made by the recovered right shoe. The questioned imprint Q3 was probably made by the recovered right shoe. The questioned imprints in Q2, Q6 and Q7 were not made by the recovered shoes.
QYKBYD-5335	Both Items Q1 and Q4 had been created by left shoe sole recovered from suspect. Both Items Q3 and Q5 had been created by right shoe sole recovered from suspect. Items Q2, Q6 and Q7 had not been created by shoe soles recovered from suspect, but had been created by shoe soles which have correspondence of design (Association of class characteristics).
R3Y4UC-5331	Container 1 contained nine printed images. Items 1 and 2 represented questioned impressions Q1 - Q7, labeled by the submitting agency. Items 3, 4 and 5 were images depicting the soles of the shoes, with different lighting directions, recovered by the submitting agency. Items 6 - 9 were images of known test impressions of the shoes in Images 3, 4 and 5. The questioned impressions (Q1 - Q7) were visually compared to Items 3 - 9. Q1 and Q4 corresponded in tread design, physical size, wear patterns and randomly acquired characteristics (RACs) to the left shoe of Items 3 - 5 and depicted in Items 6 - 9. In the opinion of the examiner, the left shoe of Items 3 - 5 and depicted in Items 6 - 9 was the source of Impressions Q1 and Q4 (Identification). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. Q3 and Q5 corresponded in tread design, physical size, wear patterns and randomly acquired characteristics (RACs) to the right shoe of Items 3 - 5 and depicted in Items 6 - 9. In the opinion of the examiner, the right shoe of Items 3 - 5 and depicted in Items 6 - 9 was the source of Impressions Q3 and Q5 (Identification). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. Q2, Q6 and Q7 corresponded in general tread design, however, were dissimilar in physical size to the shoes depicted in Items 3 -5 and depicted in Items 6 - 9. In the opinion of the examiner, the shoes in Items 3 - 5 and depicted in Items 6 - 9 (Exclusion).
RE87RE-5331	SUMMARY: Item 001-Q1 and Item 001-Q4 were produced by the recovered left shoe represented in Items 001-K1a through 001-K1g. Item 001-Q5 was produced by the recovered right shoe represented in Items 001-K1a through 001-K1g. Item 001-Q3 has a high degree of association to the recovered right shoe represented in Items 001-K1a through 001-K1g. Item 001-Q2, Item 001-Q6, and Item 001-Q7 were not produced by either of the recovered shoes represented in Items 001-K1a through 001-K1g. EXAMINATION, RESULTS and CONCLUSIONS: I was requested to compare the questioned impressions, Items 001-Q1 through 001-Q7, depicted in two photographs to the photographs of the recovered shoes and the known impressions they produced, Items 001-K1a through 001-K1g. All of the questioned impressions and the known impressions have been produced with a black substance. The examination of the evidence in this request began on April 28, 2021. I scanned the submitted photographs to produce a digital copy that was used to facilitate documentation and the comparison examination. I also produced transparent overlays from the photographs of the known impressions (Items 001-K1d through 001-K1g); these overlays were designated as Item 002-CS1. The questioned impressions were compared to the photographs representing the known recovered shoes. Item 001-Q1 and Item 001-Q4 are each a left shoe impression. When I compared these impressions to the photographs of the recovered left shoe sole and its known impressions, Items 001-K1a through 001-K1g, I observed correspondence in their size, tread design, and general wear pattern. I also observed sufficient correspondence in the quantity and quality of randomly acquired characteristics to conclude that these impressions were produced by the recovered left shoe. Item 001-Q3 depicts the left side of a right shoe impression. When I compared this impression to photographs of the recovered right shoe sole and its known impressions, Items 001-K1a through 001-K1g, I observed correspondence in their size, tread design, and general wear pattern. I also observed features in the questioned impression that corresponded in location and general shape to randomly acquired characteristics on the known right shoe sole and its known impressions; however, the fidelity of these features on the questioned impression was not sufficient for an identification. I also noted that significant portions of left side of the

TABLE 2

WebCode- Test	Conclusions
	<p>impression did not get recorded due to the textured nature of the floor surface it was on. I concluded that Item 001-Q3 has a high degree of association to the recovered right shoe. Item 001-Q5 is a right shoe impression. When I compared this impression to photographs of the recovered right shoe sole and its known impressions, Items 001-K1a through 001-K1g, I observed correspondence in their size, tread design, and general wear pattern. I also observed sufficient correspondence in the quantity and quality of randomly acquired characteristics to conclude it was produced by the recovered right shoe. Item 001-Q2 and Item 001-Q6 are each a right shoe impression, and Item 001-Q7 is a left shoe impression. When I compared these impressions to the photographs of the recovered shoes and their known impressions, Items 001-K1a through 001-K1g, I observed correspondence in their tread design but differences in the spatial relationship of these design features. These three impressions were not produced by the recovered shoes.</p>
RPAADC- 5335	<p>SUMMARY (simplified conclusions): The left and right shoes (soles and test impressions depicted in K1a through K1g) were compared to the impressions from the scene (depicted in Q1 through Q7) with the following conclusions: Impressions on textured rubber tile behind the bar: Q1: The left shoe is identified as the source of Q1. IDENTIFICATION. Q2: Neither the left shoe nor the right shoe made impression Q2. EXCLUSION. Q3: The right shoe is identified as the source of Q3. IDENTIFICATION. Impressions on smooth vinyl tile in manager's office: Q4: The left shoe is identified as the source of Q4. IDENTIFICATION. Q5: The right shoe is identified as the source of Q5. IDENTIFICATION. Q6: Neither the left shoe nor the right shoe made impression Q6. EXCLUSION. Q7: Neither the left nor the right shoe are the source of Q7. EXCLUSION. The left shoe was eliminated as the source of Q3 and Q5. EXCLUSION. The right shoe was eliminated as the source of Q1 and Q4. EXCLUSION.</p>
TBQ2XQ- 5335	<p>The questioned imprint Q4 are associated with the sole of the left shoe. They share agreement of class characteristics and randomly acquired characteristics of sufficient quality and quantity with the recovered left shoesole and the known imprint, which were made with the left shoesole. The recovered left shoe was the source of, and made, the questioned imprint Q4. Another item of footwear being the source of the imprints is considered a practical impossibility. The questioned imprints Q5 are associated with the sole of the right shoe. They share agreement of class characteristics and randomly acquired characteristics of sufficient quality and quantity with the recovered right shoesole and the known imprints, which were made with the right shoesole. The recovered right shoe was the source of, and made, the questioned imprint Q5. Another item of footwear being the source of the imprints is considered a practical impossibility. The questioned imprint Q3 are associated with the sole of the right shoe. They correspond in class characteristics of design, physical size, and general wear and randomly acquired characteristics to the recovered right shoe and the known imprint, which were made with the right shoesole. The quantity of the observed randomly acquired characteristics was sufficient for an identification. Other footwear with the same class characteristics observed in the imprint are included in the population of possible sources only if they display the same wear and randomly acquired characteristics observed in the questioned imprint Q3. The questioned imprint Q1 are associated with the sole of the left shoe. They correspond in class characteristics of design, physical size, and general wear and randomly acquired characteristics to the recovered left shoe and the known imprint, which were made with the left shoesole. The quantity of the observed randomly acquired characteristics was sufficient for an identification. Other footwear with the same class characteristics observed in the imprint are included in the population of possible sources only if they display the same wear and randomly acquired characteristics observed in the questioned imprints Q1. Sufficient differences were noted in the comparison of class characteristics between the questioned imprints Q2, Q6 and Q7 and the known imprints of the recovered shoes. The recovered shoes were not the source of, and did not make the questioned imprints Q2, Q6 and Q7.</p>
TFYPA7- 5331	<p>Impressions Q1 and Q4 and the K1 known left shoe are similar in outsole design, physical size, and randomly acquired characteristics. Consequently, impressions Q1 and Q4 were made by the K1 known left shoe. Impressions Q2 and Q6 and the K1 known right shoe are similar in outsole design; however, the impressions were made by a larger shoe. Consequently, the K1 known right shoe did not make impressions Q2 and Q6. Impressions Q3 and Q5 and the K1 known right shoe are similar in outsole design, physical size, and randomly acquired characteristics. Consequently, impressions Q3 and Q5</p>

TABLE 2

WebCode-Test	Conclusions
THM29C-5335	<p>were made by the K1 known right shoe. Impression Q7 and the K1 known left shoe are similar in outsole design; however, the impression was made by a larger shoe. Consequently, the K1 known left shoe did not make impression Q7.</p> <p>Q1: In my opinion, the characteristics observed exhibit strong associations between the questioned impression and the left known shoe, however, the quality and quantity of the characteristics were not sufficient for an identification. The left known shoe is a possible source of the questioned impression and could have produced the impression. Other left shoes with the same class characteristics are included as possible sources only if they display the same wear and randomly acquired characteristics seen in the questioned impression. (High degree of association - Left known shoe). In my opinion, due to differences seen, namely the orientation of the various shapes and patterns (class), the right known shoe was not the source of and did not make the scene impression. (Exclusion of right known shoe). Q2: In my opinion, due to differences seen, namely the orientation of the various shapes and patterns (class), the left known shoe was not the source of and did not make the scene impression. (Exclusion of left known shoe). In my opinion, due to differences seen, namely the dimensions of the various shapes and patterns (class), the right known shoe was not the source of and did not make the scene impression. (Exclusion of right known shoe). Q3: In my opinion, due to differences seen, namely the orientation of the various shapes and patterns (class), the left known shoe was not the source of and did not make the scene impression. (Exclusion of left known shoe). In my opinion, the characteristics observed exhibit strong associations between the questioned impression and the right known shoe, however, the quality and quantity of the characteristics were not sufficient for an identification. The right known shoe is a possible source of the questioned impression and could have produced the impression. Other right shoes with the same class characteristics are included as possible sources only if they display the same wear and randomly acquired characteristics seen in the questioned impression. (High degree of association - Right known shoe). Q4: In my opinion, the particular left known shoe was the source of and made the questioned impression. The chance of another shoe being the source of the impression is considered negligible. (Identification - left known shoe). Q5: In my opinion, the particular right known shoe was the source of and made the questioned impression. The chance of another shoe being the source of the impression is considered negligible. (Identification - right known shoe). Q6: In my opinion, due to differences seen, namely the orientation of the various shapes and patterns (class), the left known shoe was not the source of and did not make the scene impression. (Exclusion of left known shoe). In my opinion, due to differences seen, namely the dimensions of the various shapes and patterns (class), the right known shoe was not the source of and did not make the scene impression. (Exclusion of right known shoe). Q7: In my opinion, due to differences seen, namely, differences in the locations of observed randomly acquired characteristics, the left known shoe was not the source of and did not make the scene impression. (Exclusion of left known shoe). In my opinion, due to differences seen, namely the orientation of the various shapes and patterns (class), the right known shoe was not the source of and did not make the scene impression. (Exclusion of right known shoe).</p>
TYBCVE-5331	<p>Comparison of Exhibit 2 (Q4 and Q5) with Exhibit 1 resulted in a determination of "Source Identification" (Identification) to the respective the Left and Right Shoes of Exhibit 1. Comparison of Exhibit 2 (Q1 and Q3,) with Exhibit 1 resulted in a determination of "Inclusion based on class and randomly acquired characteristics" (High Degree of Association) to the respective Left and Right Shoes of Exhibit 1. Comparison of Exhibit 2 (Q2, Q6, and Q7) with Exhibit 1 resulted in a determination of "Support for Exclusion" (Indications of non-association) with the shoes of Exhibit 1. These conclusions conform with the relevant Department of Justice policy on Uniform Language for Testimony and Reports available at www.justice.gov.</p>
U2VJWM-5335	<p>The traces Q1 to Q7 are so-called positive traces. They result from the affixing of soles contaminated with a black substance. Information gaps are possible on the tracks depending on the irregularities of contamination of the soles. The traces Q1 to Q3 are affixed on a ground with an irregular surface (ordered alignment of large raised discs). An alteration of the signal is expected, in particular with lack of information or deformations and slight variations in dimensions are also possible. The traces Q4 to Q7 are affixed on a flat and smooth vinyl floor. In the absence of alteration of the surface of the soil itself, it is expected that this type of support does not generate artefacts on the tracks. In view of their</p>

TABLE 2

**WebCode-
Test****Conclusions**

silhouette, the traces Q1, Q4 and Q7 originate from a left sole while the traces Q2, Q3, Q5 and Q6 come from a right sole. No logo or inscription is visible on the tracks. All the traces present similar group characteristics suggesting that they come from the same pair of shoes or from distinct pairs whose soles have the same type of patterns. According to the research carried out, these traces may originate from shoes branded NIKE model Convention, Court Vision, Vandal or Vandalised LX but also brand KAPPA model Volare or brand EVERLAST model Fort. Generally, the stars present on the edge of the plant and the heel are engraved manually in the metal of the mold (stippling). Their position can therefore vary from one mold to another. Discrepancies then observed at this level during the comparison phase can make it possible to establish an exclusion. Conversely, two pairs of shoes from the same mold will have identical small stars. Comparisons between the traces found and the soles of the shoes seized: We observe concordances in terms of group characteristics, dimensions and some characteristics acquired between the Q1 trace and the inking of the left sole. But the trace has an acquired characteristic, at the level of the heel, which is discordant. This is a small signal interruption on one of the concentric circles. This characteristic does not seem to result from an irregularity of the ground. It can come from a small cut in the sole. However, this low value feature may have disappeared from the sole within the 24 hour period between the date of the incident and the seizure of the shoes. Therefore, we very strongly support the hypothesis that the Q1 trace is from the left sole of the seized shoes. We observe significant discrepancies at the level of the dimensions as well as at the level of the characteristics acquired between the trace Q2 and the inking of the right sole. It is excluded that Q2 could come from this pair of shoes. We observe concordances at the level of group characteristics, dimensions and several characteristics acquired between the Q3 trace and the inking of the right sole. When superimposing the trace with the inking of the right sole, we observe a very slight gap between the sole and the heel which can be explained by the irregular surface of the ground. The quantity and the quality of the concordant analytical characteristics and the absence of major discordance allow us to say that the Q3 trace is identified with the right sole of the seized shoes. Comparisons between the traces found and the soles of the shoes seized: We observe concordances in terms of group characteristics, dimensions and some characteristics acquired between the Q1 trace and the inking of the left sole. But the trace has an acquired characteristic, at the level of the heel, which is discordant. This is a small signal interruption on one of the concentric circles. This characteristic does not seem to result from an irregularity of the ground. It can come from a small cut in the sole. However, this low value feature may have disappeared from the sole within the 24 hour period between the date of the incident and the seizure of the shoes. Therefore, we very strongly support the hypothesis that the Q1 trace is from the left sole of the seized shoes. We observe significant discrepancies at the level of the dimensions as well as at the level of the characteristics acquired between the trace Q2 and the inking of the right sole. It is excluded that Q2 could come from this pair of shoes. We observe concordances at the level of group characteristics, dimensions and several characteristics acquired between the Q3 trace and the inking of the right sole. When superimposing the trace with the inking of the right sole, we observe a very slight gap between the sole and the heel which can be explained by the irregular surface of the ground. The quantity and the quality of the concordant analytical characteristics and the absence of major discordance allow us to say that the Q3 trace is identified with the right sole of the seized shoes. We observe concordances in terms of group characteristics, dimensions and several characteristics acquired between the Q4 trace and the inking of the left sole. The quantity and the quality of these concordant analytical characteristics and the absence of discordance allow us to say that the Q4 trace is identified with the left sole of the seized shoes. We observe concordances at the level of group characteristics, dimensions and several complex acquired characteristics between the Q5 trace and the inking of the right sole. The quantity and the quality of these concordant analytical characteristics and the absence of discordance allow us to say that the Q5 trace is identified with the right sole of the seized shoes. We observe significant discrepancies at the level of the dimensions as well as at the level of the characteristics acquired between the Q6 trace and the inking of the right sole. It is excluded that Q6 could come from this pair of shoes. We observe significant discrepancies in terms of dimensions as well as in terms of the characteristics acquired between the Q7 trace and the inking of the left sole. It is excluded that Q7 could come from this pair of shoes.

TABLE 2

WebCode-Test	Conclusions
U799EB-5331	[No Conclusions Reported.]
U7NMN7-5335	<p>1. In item Q1 there is an imprint that differ in size and wear from the shoes that received in the laboratory. It is my opinion that the shoes that were received in the laboratory cannot create this imprint ("Exclusion"). 2. Imprint Q1 is an imprint of a left shoe that correspond in class characteristics (shape, design and wear) and also share some randomly acquired characteristics (RACs) with the left shoe (K1). It is my opinion that there is a High degree of association between the left shoe (K1) and the imprint Q1. 3. In item Q3 there is an imprint that differ in size and wear from the shoes that received in the laboratory. It is my opinion that the shoes that were received in the laboratory cannot create this imprint ("Exclusion"). 4. Imprint Q4 is an imprint of a left shoe that correspond in class characteristics (shape, design and wear) and also share some randomly acquired characteristics (RACs) with the left shoe (K1). It is my opinion that there is a full association between the left shoe (K1) and the imprint Q4 ("Identification"). 5. Imprint Q5 is an imprint of a right shoe that correspond in class characteristics (shape, design and wear) and also share some randomly acquired characteristics (RACs) with the right shoe (K1). It is my opinion that there is a full association between the right shoe (K1) and the imprint Q5 ("Identification"). 6. Imprint Q6 is an imprint of a right shoe that correspond in class characteristics (shape, design and wear) and also share some randomly acquired characteristics (RACs) with the right shoe (K1). It is my opinion that there is a full association between the right shoe (K1) and the imprint Q6 ("Identification"). 7. Imprint Q5 is an imprint of a right shoe that correspond in class characteristics (shape, design and wear) and also share some randomly acquired characteristics (RACs) with the right shoe (K1). It is my opinion that there is a full association between the right shoe (K1) and the imprint Q5 ("Identification").</p>
UGBG2N-5331	<p>It was determined that the impressions, Q-1, Q-3, Q-4, and Q-5 were made by the submitted shoes, K-1. It was determined that the impressions, Q-2, Q-6, and Q-7, were not made by the submitted shoes, K-1.</p>
UKBRXN-5331	<p>The partial outsole impressions labeled #Q1 and #Q4 were identified as having been made by the outsole of the left shoe in Exhibit #K1. The partial outsole impression and outsole impression labeled #Q3 and #Q5 were identified as having been made by the outsole of the right shoe in Exhibit #K1. The outsole impression and partial outsole impressions labeled #Q2, #Q6 and #Q7 were excluded from having been made by the outsole of either shoe in Exhibit #K1 based on class characteristic differences (size).</p>
UR7YA2-5331	<p>From the screening comparison I have concluded agreement in size, pattern and pattern configuration of Q1, Q3, Q4, Q5 to the Nike trainers.</p>
UUUB98-5335	<p>Comparison of the left partial shoe impression labeled Q1, found behind the bar (textured rubber tile), (item 10), to the recovered left shoe revealed an identification. Comparison of the right shoe impression labeled Q2 found behind the bar (textured rubber tile), (item 11), to the recovered right shoe revealed an elimination. Comparison of the right partial shoe impression labeled Q3 found behind the bar (textured rubber tile), (item 12), to the recovered right shoe revealed an identification. Comparison of the left partial shoe impression labeled Q4, found in the manager's office (smooth vinyl tile), (item 13), to the recovered left shoe revealed an identification. Comparison of the right shoe impression labeled Q5, found in the manager's office (smooth vinyl tile), (item 14), to the recovered right shoe revealed an identification. Comparison of the right partial shoe impression labeled Q6, found in the manager's office (smooth vinyl tile), (item 15), to the recovered right shoe revealed an elimination. Comparison of the left partial shoe impression labeled Q7, found in the manager's office (smooth vinyl tile), (item 16), to the recovered left shoe revealed an elimination.</p>
UZLDGD-5331	<p>It is the opinion of the undersigned examiners that the Questioned footwear impression in Item Q-1 corresponds in outsole design, physical size, and physical shape with the Known left shoe in Items K1a through K1g and could have been made by this shoe or another shoe of the same physical size, physical shape and outsole design. Due to the lack of sufficient individual characteristics, a more positive association was not made. It is the opinion of the undersigned examiners that the Questioned footwear impression in Item Q-2 is of a different physical size than the Known right shoe in Items K1a</p>

TABLE 2

WebCode-Test	Conclusions
	<p>through K1g. The footwear impression was not made by the Known right shoe. It is the opinion of the undersigned examiners that the Questioned footwear impression in Item Q-3 corresponds in outsole design, physical size, physical shape, and wear characteristics with the Known right shoe in Items K1a through K1g and could have been made by this shoe or another shoe of the same physical size, physical shape, outsole design and wear characteristics. Due to the lack of sufficient individual characteristics, a more positive association was not made. It is the opinion of the undersigned examiners that the Questioned footwear impression in Item Q-4 corresponds in physical size, physical shape, outsole design, wear characteristics, and individual characteristics with the Known left shoe in Items K1a through K1g, The footwear impression was made by the Known left shoe. It is the opinion of the undersigned examiners that the Questioned footwear impression in Item Q-5 corresponds in physical size, physical shape, outsole design, wear characteristics, and individual characteristics with the Known right shoe in Items K1a through K1g, The footwear impression was made by the Known right shoe. It is the opinion of the undersigned examiners that the Questioned footwear impression in Item Q-6 is of a different physical size than the Known right shoe in Items K1a through K1g. The footwear impression was not made by the Known right shoe. It is the opinion of the undersigned examiners that the Questioned partial footwear impression in Item Q-7 corresponds in physical shape and outsole design with the respective portion of the Known left shoe in Items K1a through K1g and could have been made by this shoe or another shoe of the same physical size, physical shape and outsole design. Due to the limited detail in the Questioned impression (and lack of sufficient identifying characteristics), a more positive association was not made.</p>
V8E73C-5331	<p>1) Impressions Q1 and Q4 were identified as having been made by the submitted left Nike athletic shoe. 2) Impressions Q3 and Q5 were identified as having been made by the submitted right Nike athletic shoe. 3) Impressions Q2 and Q6 were identified as having been made by the same shoe. These impressions were not made by the submitted right Nike athletic shoe based on differences in individual characteristics. These impressions were made by a second shoe of similar design as the submitted Nike athletic shoes. 4) Impression Q7 was not made by the submitted left Nike athletic shoe based on differences in individual characteristics. This impression was made by a second shoe of similar design as the submitted Nike athletic shoes, possibly from the same pair as Q2 and Q6.</p>
VBCQP9-5335	<p>The submitted images of the known sole prints of the suspect shoe (Item K1a, K1b-K1c and K1d-K1g) were examined and compared to visible sole traces found at the scene: Q1, Q2 and Q3 found on the tiled bar and Q4, Q5, Q6 and Q7 found in the office. The following results emerge: An association of class characteristics (Correspondence of design and physical size and possibly general wear between the questioned and known article) was highlighted on the one hand between the trace Q1 and the left sole suspect and on the other hand, between the traces Q2 and Q3 with the suspicious right sole. In addition, a strong degree of association from the point of view of class characteristics (dimensions, patterns) and individual characteristics (walking defect and signs of wear) was highlighted between Q4 and the suspect left sole (items k1d -k1g), Q5 and the suspect right sole Q6 with the heel and part of the sole of the suspect right sole (items k1d-k1g), between Q7 and the sole of the suspected left sole.</p>
VD7VKL-5335	<p>1- S1 and S4 shoe prints found at the crime scene were created with the left shoe(L). 2- The S5 shoe print found at the crime scene was created with the right shoe(R). 3- Shoe traces of S2, S3, S6 and S7 found at the crime scene were not created with suspicious shoes. However, it is similar in terms of class features.</p>
VDP4U6-5331	<p>The findings show conclusively that the marks in Questions 1 and 4 were made by the left submitted shoe and Question 5 made by the right submitted shoe. The findings provide very strong support for the proposition that the mark in Question 3 was made by the right submitted shoe rather than not. The findings show conclusively that the marks in Questions 2, 6 and 7 were not made by the submitted footwear.</p>
VFTYD9-5335	<p>Based upon my experience of undertaking and interpreting the results of footwear comparisons, and the level of correspondence noted in pattern, pattern size, specific designs of wear, manufacturing detail and damage features, in my opinion, the findings show conclusively that the marks Q1, 3, 4, 5 have been made by the training shoes K1.</p>

TABLE 2

WebCode-Test	Conclusions
VLGX7M-5335	<p>The Q1 questioned impression was made by the K1 Left shoe. This identification is based on sufficient agreement of the combination of individual characteristics, specific wear, and all discernible class characteristics. The Q2 questioned impression was not made by the K1 known left shoe. This elimination is based on differences in class characteristics (Q2 is a right shoe impression). The Q2 questioned impression was not made by the K1 known right shoe. This elimination is based on differences in class characteristics (different physical size/shape). The Q3 questioned impression was not made by the K1 known left shoe. This elimination is based on differences in class characteristics (Q3 is a right shoe impression). The Q3 questioned impression could not be identified or eliminated as being made by the K1 Right shoe. This inconclusive result is based on a limited association of class characteristics. Q3 and the known test impressions from the K1 Right shoe share similar tread pattern design. While there appears to be slight differences in general wear and physical size/shape, it could not be determined if the textured surface of the rubber tile substrate or other possible shifting/distortion is causing these apparent differences. While individual characteristics were present, due to the limited detail in the questioned and known impression a more definitive conclusion could not be reached. The Q4 question impression was made by the K1 Left shoe. This identification is based on sufficient agreement of the combination of individual characteristics, specific wear, and all discernible class characteristics. The Q5 question impression was made by the K1 Right shoe. This identification is based on sufficient agreement of the combination of individual characteristics, specific wear, and all discernible class characteristics. The Q6 questioned impression was not made by the K1 known left shoe. This elimination is based on differences in class characteristics (Q6 is a right shoe impression). The Q6 questioned impression was not made by the K1 known right shoe. This elimination is based on differences in class characteristics (different physical size/shape). The Q7 questioned impression was not made by the K1 known right shoe. This elimination is based on differences in class characteristics (Q7 is a left shoe impression). The Q7 questioned impression was not made by the K1 known left shoe. This elimination is based on differences in class characteristics (different physical size/shape).</p>
WDK2LC-5335	<p>We have considered the results for right and left marks and the combined value of acquired features on right and left respectively. Our conclusions would read as follows: The marks Q1, Q3, Q4 and Q5 have shown corresponding features with the soles K1 in terms of: 1. General pattern (lab code M493) and size. 2. General level of wear in multiple locations making specific interactions with the general design. 3. The textures and specific stars patterns allow to state that marks have been made by a pair of shoes produces with the same molds (for right and left respectively) as K1. 4. A number (between 1 and 4 depending on the mark) of acquired features have been observed in correspondence on marks, prints and soles. That includes fine Schallmach features on the marks left by the right and left sole. The other acquired features (cuts) are of medium complexity. Below, we refer to the above as the observations for marks Q1, Q3, Q4 and Q5. If these soles were at the source of the marks, given the elapsed time between the deposition of the marks and the recovery of the shoes (one day according to the circumstances provided), these observations are fully expected. If another unknown pair of shoes is at the source of the marks, it would be extraordinary to make these observations by chance. We have assigned to this possibility a probability well below one in ten million. In verbal terms, we would say that these observations provide extremely strong support for the view that the marks Q1, Q3, Q4 and Q5 have been left by these soles (K1) rather than by another unknown pair of shoes. The marks Q2, Q6 and Q7 cannot have been left by the soles K1 due to differences in terms of textures, stars pattern in the design and wear. Given the alleged circumstances, and the fact that the marks share the pattern type, size and general level of wear, we are of the opinion that these marks (Q2, Q6 and Q7) have probably been left by the same pair of shoes. That pair of shoes was not submitted for examination.</p>
WHD3L7-5331	<p>Impression Q 1 was made by the Item K 1 left shoe. Impression Q 2 was not made by Item K right or left shoe. Impression Q 3 was made by the Item K 1 right shoe. Impression Q 4 was made by the Item K 1 left shoe. Impression Q 5 was made by the Item K 1 right shoe. Impression Q 6 was not made by Item K right or left shoe. Impression Q 7 was not made by Item K right or left shoe.</p>
WNLLN6-5331	<p>The questioned impressions found behind the bar were marked (and will be referenced) as Q1 to Q3. Impression Q1 is similar in tread design, size, shape and wear to the known left shoe. In addition, this impression shares at least one randomly acquired characteristic with the known left shoe. It is my</p>

TABLE 2

WebCode-Test	Conclusions
	<p>opinion that this impression was made by the known left shoe. Impression Q2 is similar in tread design to the known shoes, but dissimilar in size and wear to the known right shoe. It is my opinion that this impression was not made by the known shoes. Impression Q3 is similar in tread design, size, shape and wear to the known right shoe. It is my opinion that this impression could have been made by the known right shoe, or any other shoe with similar tread design, size, and wear. The questioned impressions found in the manager's office were marked (and will be referenced) as Q4 to Q7. Impression Q4 is similar in tread design, size, shape and wear to the known left shoe. In addition, this impression shares at least one randomly acquired characteristic with the known left shoe. It is my opinion that this impression was made by the known left shoe. Impression Q5 is similar in tread design, size, shape and wear to the known right shoe. In addition, this impression shares at least one randomly acquired characteristic with the known right shoe. It is my opinion that this impression was made by the known right shoe. Impression Q6 is similar in tread design to the known shoes, but dissimilar in size and wear to the known right shoe. Impression Q7 is similar in tread design to the known shoes, but dissimilar in size and wear to the known left shoe. It is my opinion that impression Q6 and Q7 were not made by the known shoes.</p>
WPFB9L-5331	[No Conclusions Reported.]
WUPNQK-5335	<p>Based on the correspondence of class characteristics and randomly acquired characteristics of sufficient quality and quantity: (a) the questioned impressions marked 'Q1' and 'Q4' were found to have been made by the left suspect shoe. (b) the questioned impressions marked 'Q3' and 'Q5' were found to have been made by the right suspect shoe. Based on the differences in size and randomly acquired characteristics, the pair of suspect shoes was excluded as a source of the questioned impressions marked 'Q2', 'Q6' and 'Q7'.</p>
WY3D99-5335	[No Conclusions Reported.]
WZBLF8-5331	<p>Q1 and Q4 were made by K1 left. Q3 and Q5 were made by K1 right. Q2, Q6 and Q7 could not have been made by K1 left or K1 right. Q3 and Q5 could not have been made by K1 left. Q1 and Q4 could not have been made by K1 right.</p>
X4R6Z2-5335	<p>The K1 (a-g) left shoe has been identified as being the source of the Q1FW1 impression. Impression Q1FW1 was not made by the K1 (a-g) right shoe. Impression Q2FW1 was not made by the K1 (a-g) right or left shoe. The K1 (a-g) right shoe has been identified as being the source of the Q3FW1 impression. Impression Q3FW1 was not made by the K1 (a-g) left shoe. The K1 (a-g) left shoe has been identified as being the source of the Q4FW1 impression. Impression Q4FW1 was not made by the K1 (a-g) right shoe. The K1 (a-g) right shoe has been identified as being the source of the Q5FW1 impression. Impression Q5FW1 was not made by the K1 (a-g) left shoe. Impression Q6FW1 was not made by the K1 (a-g) right or left shoe. Impression Q7FW1 was not made by the K1 (a-g) right or left shoe.</p>
X9HKK3-5331	<p>It was determined that the impression represented by the Q-4 imprint was made by the K1 left shoe. It was also determined that the impression represented by the Q-5 imprint was made by the K1 right shoe. The impression represented by the Q-3 imprint corresponds in design, physical size and shape, and specific condition of wear with the K1 right shoe. In addition, the correspondence of three random individual characteristics indicate it is highly probable the impression was made by the K1 right shoe.</p>
XB9LRB-5335	<p>The results of the examination strongly support that the imprint Q1 was made with the left shoe K1 (Level +3). The results of the examination extremely strongly support that the imprint Q2 was not made with the shoes K1 (Level -4). The results of the examination strongly support that the imprint Q3 was made with the right shoe K1 (Level +3). The results of the examination extremely strongly support that the imprint Q4 were made with the left shoe K1 (Level +4). The results of the examination extremely strongly support that the imprint Q5 were made with the right shoe K1 (Level +4). The results of the examination extremely strongly support that the imprint Q6 was not made with the shoes K1 (Level -4). The results of the examination extremely strongly support that the imprint Q7 was not made with the</p>

TABLE 2

WebCode-Test	Conclusions
XBTHXJ-5335	<p>shoes K1 (Level -4).</p> <p>The shoeprints, Q1 and Q4, have been produced by the left sole of the Nike brand shoe. The shoeprints, Q3 and Q5, have been produced by the right sole of the Nike brand shoe. The shoeprints, Q2, Q6 and Q7, have been not produced by the soles of the Nike brand shoe.</p>
XKEL6J-5331	<p>Item Q1 is a partial imprint of a left shoe with the outer edge missing. This imprint exhibits the same size, tread pattern, general wear, and individual wear characteristics as those present in the left known shoe of K1. It is the opinion of this examiner that the imprint in Item Q1 can be identified as having been made by the left known shoe in K1. Item Q2 is a complete imprint of a right shoe. This imprint is different in size than the right known shoe in K1. It is the opinion of this examiner that the imprint in Item Q2 was not made by the right known shoe in K1. Item Q3 is a partial imprint of right shoe with the outer edge missing. This imprint exhibits the same size, tread pattern, general wear, and individual wear characteristics as those present in the right known shoe of K1. It is the opinion of this examiner that the imprint in Item Q3 can be identified as having been made by the right known shoe in K1. Item Q4 is a partial imprint of a left shoe with the outer edge missing. This imprint exhibits the same size, tread pattern, general wear, and individual wear characteristics as those present in the left known shoe of K1. It is the opinion of this examiner that the imprint in Item Q4 can be identified as having been made by the left known shoe in K1. Item Q5 is an imprint of a complete right shoe. The toe area in Item Q5 is partially overlapped by the heel of Item Q6. This imprint exhibits the same size, tread pattern, general wear, and individual wear characteristics as those present in the right known shoe of K1. It is the opinion of this examiner that the imprint in Item Q5 can be identified as having been made by the right known shoe in K1. Item Q6 is a partial imprint of a right shoe with the toe area missing. Item Q6 overlaps both Items Q5 and Q7. This imprint is different in size than the right known shoe in K1. It is the opinion of this examiner that the imprint in Item Q6 was not made by the right known shoe in K1. Item Q7 is an imprint of the toe area of a left shoe. Item Q7 overlaps the toe area of Item Q6. This imprint is different in size than the left known shoe in K1. It is the opinion of this examiner that the imprint in Item Q7 was not made by the left known shoe in K1.</p>
XKWHP7-5335	<p>Two of the left shoe impressions (Items Q1 and Q4) and two of the right shoe impressions (Items Q3 and Q5) were made by the shoes in the submitted images (Items K1a - K1c). The two remaining right shoe impressions (Q2 and Q6) were not made by the shoes in the submitted images (Items K1a - K1c). These impressions were made by a single shoe. The remaining left shoe impression (Item Q7) was not made by the shoes in the submitted images (Items K1a - K1c).</p>
XPRCM8-5335	<p>IDENTIFICATION: (This is the highest degree of association expressed by a footwear impression examiner. In the opinion of the examiner, the particular known footwear was the source of, and made, the questioned impression. Another item of footwear or tire being the source of the impression is considered a practical impossibility). The left shoe impression from Item K1 (Nike shoe size 7.5) was identified as having made the questioned impressions in Item Q1 and Item Q4. The right shoe impression from Item K1 (Nike shoe size 7.5) was identified as having made the questioned impressions in Item Q3 and Item Q5. INDICATIONS OF NON-ASSOCIATION: (The questioned impression exhibits dissimilarities when compared to the known footwear. In the opinion of the examiner, dissimilarities between the questioned impression and the known footwear or indicated non-association; however, the details or features were not sufficient to permit and exclusion). The left shoe impression from Item K1 (Nike shoe size 7.5) showed indications of non-association to the questioned impression in Item Q7. EXCLUSION: (This is the highest degree of non-association expressed in footwear impression examinations. Sufficient differences were noted in the comparison of either class or size and randomly acquired characteristics between the questioned impression and the known footwear. In the opinion of the examiner, the particular known footwear was not the source of, and did not make, the impression). The right shoe impression from Item K1 (Nike shoe size 7.5) was excluded as having made the questioned impressions in Item Q2 and Item Q6.</p>
XRVY74-5331	<p>The shoe making the test impressions labeled as the right Nike athletic shoe, size 7.5 is identified as a source of Q3 and Q5. The shoe making the test impressions labeled as the left Nike athletic shoe, size 7.5 is identified as a source of Q1 and Q4. The shoes making the test impressions labeled as the left</p>

TABLE 2

WebCode-Test	Conclusions
	and right Nike athletic shoes, size 7.5 are excluded as sources of Q2, Q6 and Q7.
XW7DN3-5331	On the items Q2, Q6 and Q7 there are shoeprints which don't correspond in size with the shoes of the item K1. The shoeprint of items Q2, Q6 and Q7 are not left by the shoes of the item K1. The shoeprints of the item Q1 and Q3 correspond in pattern, measurable size and some individual characteristics with the shoes of item K1. The shoeprint of the items Q1 and Q3 are high degree of association left by the shoes of the item K1. On the items Q4 and Q5 there are shoeprints which correspond in pattern, measurable size and several individual characteristics with the shoes of item K1. The shoeprints of the items Q4 and Q5 are left by the shoes of item K1.
XWVDR8-5335	I conducted an examination and comparison of the seven shoeprints labelled Q1 to Q7, to the pair of shoes K1a to K1c (and their prints K1d to K1g), with the following results: The left shoe was the source of, and made, the questioned impressions Q1 and Q4. The chance of another shoe being the source of these impressions is considered negligible. The right shoe was the source of, and made, the questioned impressions Q3 and Q5. The chance of another shoe being the source of these impressions is considered negligible. Due to the differences observed, neither the left or right shoe submitted was the source of, and did not make the three other questioned impressions, Q2, Q6 and Q7.
XZUPM8-5331	Having conducted a comparison between the shoes K1 and the impressions Q1 to Q7 I formed the following opinions: The left shoe of K1 was the source of, and made, the questioned impression Q4. The chance of another shoe being the source of the impression is considered negligible. The right shoe K1 was the source of, and made the questioned impression Q5. The chance of another shoe being the source of the impression is considered negligible. The characteristics observed exhibit strong associations between the questioned impression Q1 and Q3 and right known shoe K1; however, the quantity were insufficient for an identification. The known Shoe K1 is a possible source of the questioned impression and could have produced the impression. Other shoes with the same class characteristics are included as possible sources only if they display the same randomly acquired characteristic observed in the questioned impressions. Due to differences observed, namely size, the shoes K1 was not the source of and did not make the Impressions Q2, Q6, Q7 based on size.
YCHB78-5335	The left shoe from K1 had a high degree of association with impression Q1. The pattern, wear, size, and a few randomly acquired characteristics observed in Q1 corresponded with the left shoe from K1. The left shoe from K1, or other footwear with the same pattern, size, wear, and randomly acquired characteristics could be the source of this impression. The right shoe from K1 was identified as the source of impressions Q3 and Q5. Q3 and Q5 shared agreement of size, wear, and class, and had sufficient quality and quantity of randomly acquired characteristics with the right shoe from K1; the right shoe from K1 generated these impressions. The left shoe from K1 was identified as the source of impression Q4. Q4 shared agreement of size, wear, and class, and had sufficient quality and quantity of randomly acquired characteristics with the right shoe from K1; the left shoe from K1 generated this impression. K1 was excluded as being a source of impressions Q2, Q6, and Q7. While the general patterns of Q2 and Q6 resembled the outsole pattern of the right shoe from K1, and the general pattern of Q7 resembled the outsole pattern of the left shoe from K1, the sizes of these impressions were larger than those produced by K1.
YFFRH2-5331	ITEMS OF EVIDENCE: Item 1: (K1a) Photograph of the soles of the recovered shoes, lighted from above. Item 2: (K1b-K1c) Two oblique lighted images of the soles of the recovered shoes, light direction indicated by arrows. Item 3: (K1d-K1g) Known imprints made with the recovered shoes. Item 3.1: Transparencies reprinted from the Item 3 known imprint photographs of K1f-K1g. Item 4: (Q1-Q3) Questioned imprints found behind the bar (textured rubber tile). Item 4.1: Unknown footwear impression represented as Q1. RESULTS: The Item 4.1 impression was made by the Item 1 left shoe. Item 4.2: Unknown footwear impression represented as Q2. RESULTS: The Item 4.2 impression was not made by the Item 1 shoes. Item 4.3: Unknown footwear impression represented as Q3. RESULTS: The Item 4.3 impression was made by the Item 1 right shoe. Item 5 (Q4-Q7): Questioned imprints found in the manager's office (smooth vinyl tile). Item 5.1: Unknown footwear impression represented as Q4. RESULTS: The Item 5.1 impression was made by the Item 1 left shoe. Item 5.2: Unknown footwear impression represented as Q5. RESULTS: The Item 5.2 impression was made by the Item 1 right shoe.

TABLE 2

WebCode-Test	Conclusions
	<p>Item 5.3: Unknown footwear impression represented as Q6. RESULTS: The Item 5.3 impression was not made by the Item 1 shoes. Item 5.4: Unknown footwear impression represented as Q7. RESULTS: The Item 5.4 impression was not made by the Item 1 shoes. Impression evidence in this case was examined utilizing the ACE-V methodology.</p>
YXGJK4-5331	<p>Impression Q1 was made by the Left shoe of K1. Impression Q2 was not made by the Right or Left shoe of K1. Impression Q3 was made by the Right Shoe of K1. Impression Q4 was made by the Left Shoe of K1. Impression Q5 was made by the Right Shoe of K1. Impression Q6 was not made by the Right or Left shoe of K1. Impression Q7 was not made by the Right or Left shoe of K1.</p>
YYTD6A-5335	<p>Image 21-5335_Q1-Q3 was an image of questioned imprints found behind the bar on textured rubber tile. Q1 Impression: This impression was a nearly full-length footwear impression made by a left shoe. The lateral edge of the impression was obscured by the scale. The recovered left shoe was identified as having made the Q1 impression based on the agreement of multiple randomly acquired characteristics and Schallamach pattern. Q2 Impression: This impression was a nearly full-length footwear impression made by a right shoe. The recovered shoes were excluded from having made the Q2 impression due to differences in specific outsole design and individual characteristics. Q3 Impression: This impression was a nearly full-length footwear impression made by a right shoe. The lateral edge of the impression was cut-off in the image. The recovered right shoe was identified as having made the Q3 impression based on the agreement of multiple randomly acquired characteristics and Schallamach pattern. Image 21-5335_Q4-Q7 was an image of questioned imprints found in the manager's office on smooth vinyl tile. Q4 Impression: This impression was a nearly full-length footwear impression made by a left shoe. The lateral edge of the impression was obscured by the scale. The medial edge of the ball area of this impression slightly overlapped the Q5 impression. The recovered left shoe was identified as having made the Q4 impression based on the agreement of multiple randomly acquired characteristics and Schallamach pattern. Q5 Impression: This impression was a nearly full-length footwear impression made by a right shoe. The medial edge of the ball area of this impression slightly overlapped the Q4 impression. The forefoot area of the Q5 impression is also overlapped with the heel area of the Q6 impression. The recovered right shoe was identified as having made the Q5 impression based on the agreement of multiple randomly acquired characteristics and Schallamach pattern. Q6 Impression: This impression is a partial footwear impression made by a right shoe. This impression consisted of the heel area, arch, and part of the ball area of the shoe. The toe area of this impression was cut-off in the image. The heel area of this impression overlapped the ball area of the Q5 impression. The lateral edge of the ball area of the Q6 impression was overlapped with the toe area of the Q7 impression. The recovered shoes were excluded from having made the Q6 impression due to differences in specific outsole design and individual characteristics. Q7 Impression: This impression was a partial footwear impression made by a left shoe. This impression consisted of the forefoot area; the toe area partially overlapped the lateral ball area of the Q6 impression. The recovered shoes were excluded from having made the Q7 impression due to differences in wear and specific outsole design.</p>
Z3BVZZ-5331	<p>The questioned footwear marks, Q3 and Q5 were made by the known right shoe. This opinion is the highest degree of association expressed by a footwear examiner. The questioned mark and the known footwear must share sufficient agreement of observable class and individual characteristics. In the opinion of the examiner the known footwear was the source of and made the questioned mark. The questioned footwear marks, Q1 and Q4 were made by the known left shoe. This opinion is the highest degree of association expressed by a footwear examiner. The questioned mark and the known footwear must share sufficient agreement of observable class and individual characteristics. In the opinion of the examiner the known footwear was the source of and made the questioned mark. Questioned footwear marks, Q2, Q6 and Q7 were not made by the known pair of shoes. This opinion means that there are observable differences in class and/or identifying characteristics between the questioned mark and the known shoe.</p>
Z6EQJ3-5331	<p>Seven nearly full and partial footwear impressions observed, submitted on two printed photographs (Item Q1-Q3 and Item Q4-Q7), with the questioned footwear impressions designated as Q1-Q7. These questioned footwear impressions were visually compared to inked test impressions of a known suspect's shoes (K1d-K1g) and the soles of the known suspect's shoes (K1a-K1c) both contained on</p>

TABLE 2

WebCode-
Test

Conclusions

printed photographs. Q1: Q1 corresponded in tread design, physical size and wear to the known left shoe found on the submitted photographs K1a-K1g. Randomly acquired characteristics present in the known left shoe/impressions were also present in this questioned impression. In the opinion of the examiner, the known left shoe found in K1a-K1g is identified as having made the Q1 questioned impression (Identification; see Association Scale below). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. Q2: In the opinion of the examiner, the known shoe captured in the submitted photographs K1a-K1g did not make the Q2 questioned impression (Exclusion; see Association Scale below). Although the known right shoe and questioned impression shared a similar tread design, there was a difference in physical size. Q3: Q3 corresponded in tread design, physical size and wear to the known right shoe found on the submitted photographs K1a-K1g. Randomly acquired characteristics present in the known right shoe/impressions were also present in this questioned impression. In the opinion of the examiner, the known right shoe found in K1a-K1g is identified as having made the Q3 questioned impression (Identification; see Association Scale below). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. Q4: Q4 corresponded in tread design, physical size and wear to the known left shoe found on the submitted photographs K1a-K1g. Randomly acquired characteristics present in the known left shoe/impressions were also present in this questioned impression. In the opinion of the examiner, the known left shoe found in K1a-K1g is identified as having made the Q4 questioned impression (Identification; see Association Scale below). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. Q5: Q5 corresponded in tread design, physical size and wear to the known right shoe found on the submitted photographs K1a-K1g. Randomly acquired characteristics present in the known right shoe/impressions were also present in this questioned impression. In the opinion of the examiner, the known right shoe found in K1a-K1g is identified as having made the Q5 questioned impression (Identification; see Association Scale below). While this opinion cannot specifically exclude all other sources, the quality and extent of corresponding features would not be expected in other footwear. Q6: In the opinion of the examiner, the known shoe captured in the submitted photographs K1a-K1g did not make the Q6 questioned impression (Exclusion; see Association Scale below). Although the known right shoe and questioned impression shared a similar tread design, there was a difference in physical size. Q7: Although the known left shoe and questioned impression shared a similar tread design, there was a difference in physical size. In the opinion of the examiner, the known shoe captured in the submitted photographs K1a-K1g did not make the Q7 questioned impression (Exclusion; see Association Scale below). Association Scale for Footwear and Tire Impressions: The following descriptions are meant to provide context to the levels of opinions reached in footwear and tire impression comparisons. Each level may not include every variable in every case. Lacks sufficient detail – No comparison was conducted: the examiner determined there were no discernible questioned footwear/tire impressions or features present. Or – A comparison was conducted: the examiner determined that there was insufficient detail in the questioned impression for a meaningful conclusion. This opinion only applies to the known footwear or tire that was examined and does not necessarily preclude future examinations with other known footwear or tires. Exclusion – This is the highest degree of non-association expressed in footwear and tire impression examinations. Sufficient differences were noted in the comparison of class and/or randomly acquired characteristics between the questioned impression and the known footwear or tire. Indications of non-association – The questioned impression exhibits dissimilarities when compared to the known footwear or tire; however, the details or features were not sufficiently clear to permit an exclusion. Limited association of class characteristics – Some similar class characteristics were present; however, there were significant limiting factors in the questioned impression that did not permit a stronger association between the questioned impression and the known footwear or tire. These factors may include but were not limited to: insufficient detail, lack of scale, improper position of scale, improper photographic techniques, distortion or significant lengths of time between the date of the occurrence and when the footwear or tires were recovered that could account for a different degree of general wear. No confirmable differences were observed that could exclude the footwear or tire. Association of class characteristics – The class characteristics of both design and physical size must correspond between the questioned impression and the known footwear or tire. Correspondence of

TABLE 2

WebCode-Test	Conclusions
	<p>general wear may also be present. High degree of association – The questioned impression and known footwear or tire must correspond in the class characteristics of design, physical size, and general wear. For this degree of association there must also exist: (1) wear that, by virtue of its specific location, degree and orientation make it unusual and/or (2) one or more randomly acquired characteristics. Identification – This is the highest degree of association expressed by a footwear and tire impression examiner. The questioned impression and the known footwear or tire share agreement of class and randomly acquired characteristics of sufficient quality and quantity.</p>
Z76PW2-5331	<p>Photograph of questioned imprints found behind the bar (Q1-Q3): Q1 was determined to be a left partial shoe impression which is similar in class characteristics (tread design and size) and wear to the left known shoe (K1). Q1 also shares randomly acquired characteristics to the left known shoe. It is our opinion that Q1 was made by the left known shoe. Q2 was determined to be a right shoe impression which is dissimilar in class characteristics (tread design and size) and wear to the right known shoe (K1). It is our opinion that Q2 was not made by the right known shoe. Q3 was determined to be a right partial shoe impression which is similar in class characteristics (tread design and size) and wear to the right known shoe (K1). Q3 also shares randomly acquired characteristics to the right known shoe. It is our opinion that Q3 was made by the right known shoe. Photograph of questioned imprints found in the manager's office (Q4-Q7): Q4 was determined to be a left partial shoe impression which is similar in class characteristics (tread design and size) and wear to the left known shoe (K1). Q4 also shares randomly acquired characteristics to the left known shoe. It is our opinion that Q4 was made by the left known shoe. Q5 was determined to be a right shoe impression which is similar in class characteristics (tread design and size) and wear to the right known shoe (K1). Q5 also shares randomly acquired characteristics to the right known shoe. It is our opinion that Q5 was made by the right known shoe. Q6 was determined to be a right partial shoe impression which is dissimilar in class characteristics (tread design and size) and wear to the right known shoe (K1). It is our opinion that Q6 was not made by the right known shoe. Q7 was determined to be a partial shoe impression which is dissimilar in class characteristics (tread design and size) and wear to the known shoes (K1). It is our opinion that Q7 was not made by the known shoes. Photographs of known shoes and imprints of known shoes (Item K1a-K1g): This item was used as a comparison standard.</p>
Z7V4JE-5335	<p>If this were live casework, I would group all the Identification marks and the high degree of association mark as one pair of shoes. The damage in the heel in Q1 can also be seen in the same place in Q4. In my opinion, the observed correspondence between the submitted Nike 0719 footwear and the footwear marks Q1, Q3, Q4 and Q5 is of the utmost significance. Given the corresponding damage features, I consider that the likelihood of obtaining the observed degree of correspondence by coincidence, had the mark not been made by this shoe, is so remote that it can be totally discounted.</p>
ZA9KG4-5331	<p>The shoeprint impressions from the restaurant, prints Q1 to Q7, were compared to the Nike shoes, item K1. A correspondence of sole pattern, dimensions, specific wear features and indications of randomly acquired characteristics were present between the left shoe, item K1, and the shoeprint impression Q1. In my opinion, the probability of observing a correspondence of sole pattern, dimensions, wear features and indications of randomly acquired characteristics given this left shoe made this impression, Q1, is very high. Conversely, given the large number of shoe soles with different patterns, sizes and wear, the probability of observing these features given this impression, Q1, was made by another shoe is low. Therefore, in my opinion, this evidence provides a high degree of association between the left shoe, K1, and this impression, Q1. However, another shoe with the same observed features of correspondence such as sole pattern, dimensions, wear and randomly acquired characteristics could have produced this shoe impression. A correspondence of sole pattern, dimensions, general wear features and indications of randomly acquired characteristics were present between the right shoe, item K1, and the shoeprint impression Q3. In my opinion, the probability of observing a correspondence of sole pattern, dimensions, general wear features and indications of randomly acquired characteristics given this right shoe made this impression, Q3, is very high. Conversely, given the large number of shoe soles with different patterns, sizes and wear, the probability of observing these features given this impression, Q3, was made by another shoe is medium-low. Therefore, in my opinion, this evidence provides a high degree of association between the right shoe, K1, and this impression, Q3. However, another shoe with</p>

TABLE 2

WebCode- Test	Conclusions
	<p>the same observed features of correspondence such as sole pattern, dimensions, wear and randomly acquired characteristics could have produced this shoe impression. A correspondence of sole pattern, dimensions, specific wear features and multiple areas of randomly acquired characteristics were present between the left shoe, item K1, and the shoeprint impression Q4. In my opinion, the probability of observing a correspondence of sole pattern, dimensions, specific wear features and multiple areas of randomly acquired characteristics given the left shoe, K1, made this impression, Q4, is very high. Conversely, it is my opinion, that the probability of obtaining a correspondence of sole pattern, dimensions, specific wear features and multiple areas of randomly acquired characteristics given the left shoe, K1, did not make this impression, Q4, is so low that I consider it negligible. Therefore, in my opinion, the left shoe, K1, made this impression, Q4. A correspondence of sole pattern, dimensions, general wear features and multiple areas of randomly acquired characteristics were present between the right shoe, item K1, and the shoeprint impression Q5. In my opinion, the probability of observing a correspondence of sole pattern, dimensions, wear features and multiple areas of randomly acquired characteristics given the right shoe, K1, made this impression, Q5, is very high. Conversely, it is my opinion, that the probability of obtaining a correspondence of sole pattern, dimensions, wear features and multiple areas of randomly acquired characteristics given the right shoe, K1, did not make this impression, Q5, is so low that I consider it negligible. Therefore, in my opinion, the right shoe, K1, made this impression, Q5. Although impressions Q2, Q6 and Q7 did display the same general sole pattern as the shoes, K1, there was no correspondence of dimensions, with each impression appearing larger than the shoes and also displaying different wear features or non-corresponding randomly acquired characteristics. Therefore, the shoes K1 did not make the impressions Q2, Q6 and Q7.</p>
ZNPk83-5331	<p>Q1, Q3, Q4 & Q5: Positive Screen based on correspondence of Pattern, size, wear and one or more random features. Q2, Q6 & Q7: Exclusion.</p>
ZNR73H-5331	<p>In this test we used TrasoScan system, Lucia Forensic 7.40 program and additional transparent foil. The comparisons of the enclosed footwear impressions (Q1-Q7 and K1a-K1g) concerned the physical size and shape of the outsole, the outsole design and random individual identifying characteristics. From the performed comparative analysis we observed that on the surface of the outsoles of shoes, being the comparative material, there were present some individual identifying characteristics. Similar individual characteristics were also found in the evidence material marked Q1, Q4 on the left outsole, Q3 and Q5 on the right outsole. Thus we concluded that Items Q2, Q6 and Q7 are different from the comparative materials.</p>

Additional Comments

TABLE 3

WebCode-Test	Additional Comments
27P9CD-5335	Eliminated Imprint: Q2 and Q6 : Right shoes imprint. Q7 : Left shoe imprint.
28K9GY-5331	The SWGTREAD Range of Conclusions would be added to the report.
2D774Z-5335	The questioned imprints in Q2 in item 1D and Q6 in item 1E were compared against each other and were determined to have been made by the same right shoe.
463YGW-5331	We use the ENSFI scale in our conclusions. Extremely strong support is the highest level on this scale of weak support, moderate support, moderately strong support, strong support, very strong support, extremely strong support. We do not use Identification. Impression Q1 and Q4 matches the toe, mid-sole and heel area of the left runner in pattern, size, wear and acquired features. Impression Q3 and Q5 matches the toe, mid-sole and heel area of the right runner in pattern, size, wear and acquired features. Impressions Q2, Q6 and Q7 do not match the suspects runners.
7XW9LW-5335	Q3 - would have been reported as extremely strong. I have assumed that features are damage features. I have looked at pattern, spacing, texturing (stars and fine texturing on blocks and curved bars), wear, damage features and feathering. In expressing the evidential significance of my findings I have chosen from the following possible conclusions: No evaluation possible, inconclusive (equal support for either proposition), could have, limited, moderate, moderately strong, strong, very strong, extremely strong and conclusive support.
8MEQUP-5331	Q1- 3 x damage features & feathering/Shallamach detail in agreement (9 inner characteristics). Q2- Scene larger in size, displays more wear & has features in disagreement. Q3- 4 x damage features in agreement (plus 2 x indications of damage- poor clarity as of wet origin & subject to movement). Q4- 4 x damage features & feathering/Shallamach detail in agreement (15 inner characteristics). Q5- 7 x damage features in agreement (including gross features). Q6- Scene larger in size, displays more wear & has features in disagreement. Q7- Scene larger in size, displays more wear & has features in disagreement.
8MQLDW-5335	Methods of Analysis: Items analyzed using a combination of visual examination, side-by-side and digital overlay comparisons.
96PZ8V-5331	Questioned imprints Q2 and Q6 are right shoe imprints and share agreement of class and randomly acquired characteristics of sufficient quality and quantity. And These imprints can be shoe prints of the another person who was seen on security camera footage with the former employee.
AJK4PQ-5335	Appendix C: Significance of Conclusions (Only applicable definitions included). IDENTIFICATION is the highest degree of association expressed by a footwear examiner. The questioned impression and the known footwear share agreement of class (i.e. design, physical size, and general wear) and randomly acquired characteristics with no meaningful differences, and the observed corresponding characteristics are sufficient in quality and quantity such that the examiner would not expect to see the same combination of characteristics repeated in a different footwear item. This 'identification' conclusion is the statement of the examiner's opinion that the known footwear was the source of, and made, the questioned impression(s). Another item of footwear being the source of the impression is considered a practical impossibility. EXCLUSION is the highest degree of non-association expressed by a footwear examiner. The known item and the questioned impression have different class characteristics (i.e. design, physical size, and general wear) and/or randomly acquired characteristics. This 'exclusion' conclusion is the statement of the examiner's opinion that the known footwear was not the source of, and did not make, the questioned impression(s).
AW6Jrq-5331	Questioned impressions labelled Q2 were found to be consistent in shape, physical size and individual characteristics with Questioned impressions labelled Q6, both impressions were left with the same right shoe.

TABLE 3

WebCode-Test	Additional Comments
CRQJR6-5331	A high degree of association was observed between the right shoe and the mark Q3. If the shoe had been available this may have moved to conclusive support. A high degree of disassociation was observed between the left shoe and the mark Q7. If the shoe had been available this may have moved to an exclusion.
CW49AT-5331	The footwear marks were located 'behind the bar' and 'the manager's office'. It is stated in the scenario that the suspect is a former employee. Should the suspect claim to account for the positive footwear marks as previous legitimate access, then my comparison/conclusion could be separated for each area accordingly.
EHXU8L-5331	If conclusive results are desired for proficiency testing purposes, it may be beneficial to not use textured tiles unless there is a significant amount of quality identifying features present in the questioned impressions.
ERYE9T-5335	Two items submitted (Items Q1-Q3 and Q4-Q7) were examined for the presence of footwear impressions. Seven (7) footwear impressions were observed on the two items. The seven (7) impressions were compared to the shoes in in Item K1 and the test impressions made from the shoes in Item K1 (Item K1 TESTIMP). Items Q1-Q3, Q4-Q7, K1, K1 TESTIMP were examined visually and all comparisons were performed using ACE-V methodology.
GCJZ2F-5331	Consider giving each item of footwear an individual exhibit number to more accurately reflect a Units processes.
HFDAPM-5335	1) Scene Impression Q1 displayed unusual wear and several Randomly Acquired Characteristics identified on the test impression of the Left outsole of the "NIKE" size US 7.5. In my opinion, it is high likely that this made the impression Q1 located at the scene. 2) Scene Impression Q3 displayed sufficient quality and quantity of Randomly Acquired Characteristics identified on the test impression of the Right outsole of the "NIKE" size US 7.5. In my opinion this shoe made the impression Q3 located at the scene. 3) Scene Impression Q4 displayed sufficient quality and quantity of Randomly Acquired Characteristics identified on the test impression of the Left outsole of the "NIKE" size US 7.5. In my opinion this shoe made the impression Q4 located at the scene. 4) Scene Impression Q5 displayed sufficient quality and quantity of Randomly Acquired Characteristics identified on the test impression of the Right outsole of the "NIKE" size US 7.5. In my opinion this shoe made the impression Q5 located at the scene. 5) Scene Impressions Q2, Q6 and Q7 displayed significant dissimilarities with the known test impressions of the "NIKE" US 7.5 shoes. In my opinion the known shoes did not make the impressions Q2, Q6 and Q7 located at the scene.
HUCDVY-5331	Questioned imprints Q2 and Q6 were made by the same shoe.
JBDKLL-5331	Our laboratory does not use a conclusion scale. When choice B was selected, it should be noted that our report will not contain "High degree of association". However, there will be wording in the results that explain the "Correspondence of class characteristics, in addition to unusual wear and/or one or more randomly acquired characteristics between the questioned and known item."
KF3GMF-5331	The submitted known test impressions did not include test impressions on a rubber like surface. Had this been an actual case, I would have made further test impressions on a similar surface for a more accurate test impression.
LNEV8W-5331	Conclusions and terminology reported are based on [Laboratory] policy.
NQCZTG-5335	Ordinarily, any detailed footwear marks examination would require the submission of the actual items of footwear so that any correspondence or difference, particularly in relation to randomly acquired characteristics, can be directly related to the items of footwear.
PJA7EE-5331	Our laboratory does not use the titles of the various ranges of conclusions listed on the worksheet (i.e. "High degree of association"). For Q1 and Q3, "B" was chosen based on the description listed for that category, not based on the title of the category.

TABLE 3

WebCode-Test	Additional Comments
PPEAZ8-5335	Items (Q2,Q6 and Q7) are identical with each other and imprint by another shoes.
RPAADC-5335	<p>EXAM SECTION has more detail about conclusions. Q1 was a nearly complete left footwear impression with sole pattern elements containing concentric circles, stars, and rectangles. The left shoe contained a similar sole pattern as impression Q1, with corresponding orientation, size, and spacing of the pattern elements. Additionally, there was correspondence in wear and randomly acquired characteristics (RACs), including abrasive wear patterns. The left shoe was identified as the source of Q1. It is unlikely that another shoe made this impression. IDENTIFICATION. The right shoe contained similar sole pattern elements as Q1; however, the orientation and spacing of the elements did not correspond. The right shoe was eliminated as the source of Q1. EXCLUSION. Q2 was a complete right footwear impression with sole pattern elements containing concentric circles, stars, and rectangles. The right shoe contained similar sole pattern elements as Q2, including orientation. There are, however, differences. Impression Q2 is larger and contains a greater degree of wear than the right shoe. The right shoe was eliminated as the source of Q2. EXCLUSION. The left shoe contained similar sole pattern elements as Q2; however, the orientation and spacing of the elements did not correspond. The left shoe was eliminated as the source of Q2. EXCLUSION. Q3 was a nearly complete right footwear impression with sole pattern elements containing concentric circles, stars, and rectangles. The right shoe contained a similar sole pattern as impression Q3, with corresponding orientation, size, and spacing of the pattern elements. Additionally, there was correspondence in wear and RACs, including abrasive wear patterns. The right shoe was identified as the source of Q3. It is unlikely that another shoe made this impression. IDENTIFICATION. The left shoe contained similar sole pattern elements as Q3; however, the orientation and spacing of the elements did not correspond. The left shoe was eliminated as the source of Q3. EXCLUSION. Q4 was a nearly complete left footwear impression with sole pattern elements containing concentric circles, stars, and rectangles. The left shoe contained a similar sole pattern as impression Q4, with corresponding orientation, size, and spacing of the pattern elements. Additionally, there was correspondence in wear and RACs, including abrasive wear patterns. The left shoe was identified as the source of Q4. It is unlikely that another shoe made this impression. IDENTIFICATION. The right shoe contained similar sole pattern elements as Q4; however, the orientation and spacing of the elements did not correspond. The right shoe was eliminated as the source of Q4. EXCLUSION. Q5 was a complete right footwear impression with sole pattern elements containing concentric circles, stars, and rectangles. The right shoe contained a similar sole pattern as impression Q5, with corresponding orientation, size, and spacing of the pattern elements. Additionally, there was correspondence in wear and RACs, including abrasive wear patterns. The right shoe was identified as the source of Q5. It is unlikely that another shoe made this impression. IDENTIFICATION. The left shoe contained similar sole pattern elements as Q5; however, the orientation and spacing of the elements did not correspond. The left shoe was eliminated as the source of Q5. EXCLUSION. Q6 was a nearly complete right footwear impression with sole pattern elements containing concentric circles, stars, and rectangles. The right shoe contained similar sole pattern elements as Q6, including orientation. There are, however, differences. Impression Q6 is larger and contains a greater degree of wear than the right shoe. The right shoe was eliminated as the source of Q6. EXCLUSION. The left shoe contained similar sole pattern elements as Q6; however, the orientation and spacing of the elements did not correspond. The left shoe was eliminated as the source of Q6. EXCLUSION. Q7 was a partial left footwear impression of a ball/Toe with sole pattern elements containing concentric circles, stars, and rectangles. The left shoe contained similar sole pattern elements as Q7, including orientation. There are, however, differences. Impression Q7 is larger and contains a greater degree of wear than the left shoe. The left shoe was eliminated as the source of Q7. EXCLUSION. The right shoe contained similar sole pattern elements as Q7; however, the orientation and spacing of the elements did not correspond. The right shoe was eliminated as the source of Q7. EXCLUSION.</p>
VBCQP9-5335	<p>However, certain constraints have been observed case of Q1, Q2 and Q3 in particular: the type of coating of the bar tile (presence of the raised patterns) which limits the continuity of the patterns of the footings traces and consequently we cannot comment on the strong degree of association (B). In addition, the scale partially hides the traces (Q4 and Q5) and the problem of the superposition between traces Q5, Q6 (incomplete right sole trace) and Q7 (plant of the left sole trace) limited our</p>

TABLE 3

WebCode-Test	Additional Comments
VDP4U6-5331	answer for decide on an identification (A). The positive findings would be taken together, i.e. from the best marks; with a comment that some marks could not have been made by the submitted footwear.
WDK2LC-5335	It is our opinion that the level of complexity of the case is far below the operational cases we carry out. The marks are left with an unknown contaminant (some sort of ink) on pristine surfaces without any perturbing factors (apart from the leveled surface for Q1 to Q3). If CTS wants these tests to gain credibility as an appropriate procedure to demonstrate competence, it will be necessary to construct cases that truly reflect casework.
WZBLF8-5331	In our laboratory, no conclusions would be made without physically having the suspected shoes.
XB9LRB-5335	The appearance of the shoe soles K1 was specific and highly detailed. Though the submitted pictures of the shoe soles (K1a-K1c) were of good quality, having access to the actual shoes would have been valuable and helpful in confirming the observed details.
YFFRH2-5331	During normal casework, the known shoes would be required in order to confirm any random identifying characteristics observed in the unknown impressions.
YYTD6A-5335	Having the recovered shoes would be beneficial to make additional test-impressions if needed.
Z7V4JE-5335	The fact that the stippling is seen to correspond in the exact same way would indicate to me that the shoes were made in the same mould. If this were live casework, I would take further test marks to investigate the difference in the feature observed in Q1 and take further test marks to get a clearer view of the damage present in the target on the right shoe main sole. This is so defining in terms of its characteristics that this alone would be significant. I would also investigate the potential feathering on mark Q5 with further photography and test marks.

**-End of Report-
(Appendix may follow)**

Test No. 21-5331: Footwear Imprint Evidence

DATA MUST BE SUBMITTED BY **June 7, 2021, 11:59 p.m.** TO BE INCLUDED IN THE REPORT

Participant Code: U1234A

WebCode: KQ8639

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:

Police are investigating a break-in at a local restaurant in which liquor and cash were stolen. Two individuals were seen on security camera footage, one of whom was identified as a former employee. A pair of shoes were recovered from the former employee's possession one day after the incident; they appear to have been washed. Investigators are asking you to compare the imprints recovered at the scene with photographs of the shoe soles and known imprints made with the shoes. The recovered shoes are manufactured by Nike, and the shoe tag reads: US 7.5, UK 5, EUR 38.5, CM 24.5, BR37, CN 245 (2.5); 01NVKJAA2H8FJ; CZ9352-100; 1/22/20 6/4/20; UPC 00194496193268

Shoes and known imprints have been labeled with 'L' and 'R' to indicate 'Left' and 'Right' shoes. The inked imprints in images K1d and K1e were made by rolling the toe and heel areas separately onto paper. The inked imprints in images K1f and K1g were made by having the owner wear the shoe and step down onto paper placed on top of a semi-soft surface (per ASB standards).

****CTS has been approached by researchers from CSAFE (Center for Statistics and Applications in Forensic Evidence) regarding a data collection project to study the variability in the marking of randomly acquired characteristics (RACs) on footwear images. CTS supports this research and encourages participants in our 21-5331/5 Footwear Imprint Evidence test to take part in this project. In order to facilitate this collaboration and allow participants to contribute, contact information for the primary researcher is included here. If you are interested in participating or would like more information on this project, please email Naomi Kaplan-Damary (nkapland@uci.edu).****

Items Submitted (Sample Pack FIEP - Photographs):

Item K1a: Photograph of the soles of the recovered shoes, lighted from above.

Items K1b-K1c: Two oblique lighted images of the soles of the recovered shoes, light direction indicated by arrows.

Items K1d-K1g: Known imprints made with the recovered shoes.

Items Q1-Q3: Questioned imprints found behind the bar (textured rubber tile).

Items Q4-Q7: Questioned imprints found in the manager's office (smooth vinyl tile).

Instructions:

Select from the following list of conclusions and insert the appropriate letter in the spaces provided. If the wording below differs from the normal wording of your conclusions, adapt these conclusions as best you can and use your preferred wording in your written conclusions. These conclusions are adapted from the SWGTREAD Range of Conclusions standard.

- A. Identification** - Questioned and known items share agreement of class and randomly acquired characteristics of sufficient quality and quantity. Highest degree of association.
- B. High degree of association** - Correspondence of class characteristics, in addition to unusual wear and/or one or more randomly acquired characteristics between the questioned and known item.
- C. Association of class characteristics** - Correspondence of design and physical size and possibly general wear between the questioned and known item.
- D. Limited association of class characteristics** - Some similar class characteristics between the questioned and known item with significant limiting factors.
- E. Inconclusive*** - Questioned item lacks sufficient detail for a meaningful conclusion in comparison to the known item. (adapted from SWGTREAD "Lacks sufficient detail" conclusion).
- F. Indications of non-association** - Questioned item exhibits dissimilarities in comparison to the known item.
- G. Exclusion** - Questioned and known items exhibit sufficient differences of class and/or randomly acquired characteristics. Highest degree of non-association.

*Should the response "E" be used, please document the reason in the Additional Comments section of this data sheet.

1.) Indicate the results of your comparisons of the recovered shoes with the questioned imprints by writing the letter of your conclusion next to each questioned imprint in the table.

If an identification or positive association is made (A-D), indicate whether the imprint is associated with the right or left suspect shoe. If a non-association or inconclusive finding is reported (E-G), do NOT indicate a right or left shoe.

Bar Tile		
<u>Imprint</u>		<u>L/R</u>
Q1:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
Q2:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
Q3:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>

Office Tile		
<u>Imprint</u>		<u>L/R</u>
Q4:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
Q5:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
Q6:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
Q7:	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>

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

Please note: Any additional formatting applied in the free form spaces below will not transfer to the Summary Report and may cause your information to be illegible. This includes additional spacing and returns that present your responses in lists and tabular formats.

3.) Additional Comments

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 ASCLD/LAB, ANAB, and/or A2LA. Please select one of the following statements to ensure your data is handled appropriately.

- This participant's data is intended for submission to ASCLD/LAB, ANAB, and/or A2LA. (Accreditation Release section below must be completed.)
- This participant's data is **not** intended for submission to ASCLD/LAB, 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.

Step 1: Provide the applicable Accreditation Certificate Number(s) for your laboratory.

ANAB Certificate No.
(Include ASCLD/LAB Certificate here)

A2LA Certificate No.

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

Authorized Contact Person and Title

Laboratory Name

Location (City/State)