



Footwear Imprint Evidence Test No. 18-5331/2/5 Summary Report

Each sample pack contained either digitally produced photographs (18-5331), a DVD with digital images (18-5332), or directly downloadable digital images (18-5335) of nine 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 186 participants: 129 for 18-5331, 37 for 18-5332, and 20 for 18-5335 and are compiled into the following tables:

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

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

Manufacturer's Information

Each sample pack consists of ten 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. Three photographs contain images of the nine questioned imprints, Q1-Q3 in the first photograph, Q4-Q6 in the second photograph, and Q7-Q9 in the third 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 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 walk across paper targets.

QUESTIONED IMPRINTS (Q1-Q9): Questioned imprints Q1-Q9 were created by coating the sole of each shoe (see table below) with fingerprint ink and having the wearer of each pair of shoes walk across the substrates.

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." Each DVD was checked to ensure all images were accessible. Digital download media were provided in a zipped file uploaded to the CTS portal.

VERIFICATION -

Laboratories that conducted the predistribution examination of the images associated imprints Q1, Q6, and Q9 with the suspect's left shoe and associated imprints Q3 and Q8 with the suspect's right shoe. They eliminated imprints Q2, Q4, Q5, and Q7.

Imprints	Shoe Type	Manufacturer	Left/Right	Size (U.S.)
Q1, Q6, Q9	Slip-on loafer shoe (Suspect shoe K1)	Crocs	Left	11
Q3, Q8	Slip-on loafer shoe (Suspect shoe K1)	Crocs	Right	11
Q2, Q4	Slip-on loafer shoe (Images not provided)	Crocs	Right	12
Q5, Q7	Slip-on loafer shoe (Images not provided)	Crocs	Left	12

Summary Comments

This test was designed to allow participants to assess their proficiency with footwear imprint examination and comparison. Test materials consisted of three photographs containing nine questioned footwear imprints (Q1-Q9), 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 these imprints (Q3, Q8) were made by the suspect right shoe; three imprints (Q1, Q6, Q9) were made by the suspect left shoe. The remaining four imprints were made by two other shoes (Refer to the Manufacturer's Information for preparation details).

Of the 186 responding participants, 179 (96.2%) reported the associations and non-associations consistent with the consensus and expected results. For those imprints that were associated with the known shoes (K1), all responses of association (A-D) were tallied together. For those imprints that were not associated with the known shoes, all responses of non-association (F-G) were tallied together. All but one participant reported the left or right identifier of the known shoe as expected per the consensus. Overall, most participants were confident to report an Identification (A) or Exclusion (G) for all questioned items. Item Q9 had the lowest reported percentage of Identifications (76.3%), with 19.9% reporting only a High Degree of Association (B) and another 3.3% reporting either Association (C) or Limited Association (D).

Of those seven participants found to be outliers, there were several causes for this categorization. Two participants reported an Exclusion (G) for one or more prints that were associated with the known shoes. Four participants reported an Identification (A), Association (C) or Limited Association (D) between a known shoe and a questioned print that was not associated. Two of these four participants also reported an Exclusion for one or more prints that were associated with the known shoes. Finally, one participant gave a response of Inconclusive (E) for questioned prints Q6 and Q8.

Examination Results

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

TABLE 1a (Store Entry)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		L/R
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
268VJX- 5331	A	L	G	R	A	R	
28ZYJD- 5331	A	L	G		A	R	
2EJX2R- 5331	A	L	G		A	R	
2N7JWW- 5332	A	L	G		A	R	
2V6GXY- 5331	A	L	G	R	A	R	
2XPVBT- 5331	B	L	G		B	R	
2XRM7F- 5331	A	L	G		B	R	
3C7H9C- 5332	A	L	G		A	R	
3KHCB- 5331	A	L	G		A	R	
3LUL9Y- 5335	A	L	G		B	R	
3PCXV8- 5331	A	L	G		A	R	
3QACTE- 5331	A	L	G		A	R	
3TQDGT- 5332	A	L	G		A	R	
48BDQR- 5332	A	L	G		A	R	
4D2M3B- 5331	A	L	G	R	A	R	
4J4RUV- 5332	A	L	G	R	A	R	

TABLE 1a (Store Entry)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
4NFPPW- 5331	A	L	G		A	R	
4X6DBY- 5331	A	L	G		B	R	
4XNCD4- 5331	A	L	G		A	R	
688626- 5332	A	L	G		A	R	
6AE87N- 5332	A	L	G		A	R	
6C2CVU- 5331	A	L	G		B	R	
6EPDNG- 5331	A	L	G		A	R	
6NQ46H- 5331	A	L	G		A	R	
6W8MHP- 5332	A	L	G		B	R	
78H8LH- 5331	A	L	G		A	R	
7EHPZV- 5331	A	L	G	R	A	R	
7NPB6N- 5335	A	L	G	R	B	R	
7QFR34- 5332	A	L	G	R	A	R	
7ZN4HL- 5335	A	L	G		A	R	
84HHK2- 5331	A	L	G		A	R	
8FA6PW- 5331	A	L	G		A	R	
8FUR4K- 5331	A	L	G		A	R	
98WFP4- 5331	A	L	G		A	R	

TABLE 1a (Store Entry)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
9GGQVN- 5331	A	L	G		A	R	
9GZRJC- 5331	A	L	G		A	R	
9J6DBH- 5331	A	L	G		A	R	
9LD7QQ- 5331	A	L	G		A	R	
9TEKCR- 5332	A	L	G		A	R	
9WXAKQ- 5331	A	L	G		A	R	
A9M2TE- 5331	A	L	G		A	R	
AJ6HN7- 5332	A	L	G		B	R	
ANHQX4- 5335	A	L	G		A	R	
ANVHQK- 5331	A	L	G		B	R	
APAE87- 5331	A	L	G		C	R	
APVRWJ- 5331	A	L	G		A	R	
B2FJLH- 5335	A	L	G		C	R	
B9JT6R- 5332	A	L	G	R	A	R	
BCHC3J- 5331	A	L	G		A	R	
BNCVR4- 5332	A	L	G		A	R	
BP3NFE- 5332	A	L	G		A	R	
BVUUDP- 5331	A	L	G		A	R	

TABLE 1a (Store Entry)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
CUHEJN- 5335	A	L	G	R	B	R	
CWNACL- 5331	A	L	G		A	R	
CXE6NE- 5331	A	L	G		A	R	
DNMHJG- 5332	A	L	G		B	R	
DTDJAG- 5331	A	L	G	R	C	R	
DY3YZ9- 5331	A	L	G		A	R	
DYPYUL- 5331	A	L	G		A	R	
E24J6K- 5331	A	L	G		A	R	
E7XHGU- 5331	A	L	G		A	R	
E9PE44- 5331	A	L	G		A	R	
EYJETG- 5331	A	L	G		A	R	
EYWBUE- 5331	A	L	C	R	B	R	
F62A3J- 5331	A	L	G		A	R	
F66MUL- 5331	A	L	G		A	R	
FB83WE- 5335	A	L	G		A	R	
FJ6WME- 5331	A	L	G	R	B	R	
FP8K8M- 5331	A	L	G		A	R	
FZ93Q3- 5335	A	L	G		A	R	

TABLE 1a (Store Entry)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
G7YVFB- 5331	A	L	F	R	A	R	
GDT86C- 5332	A	L	G		B	R	
GGEM2Y- 5331	A	L	G		A	R	
GKDZM4- 5331	A	L	G		A	R	
GT9Z4G- 5331	A	L	G		B	R	
GU3TWE- 5331	A	L	G		A	R	
GUH6EK- 5331	A	L	G		A	R	
HADRJR- 5331	A	L	G		A	R	
HH3FEU- 5331	A	L	G		A	R	
HUDB9J- 5331	A	L	G		A	R	
HXTBE4- 5331	A	L	G		A	R	
HXTM4E- 5331	A	L	G		A	R	
J68DYB- 5331	A	L	G	R	A	R	
J6CVZV- 5331	A	L	G		A	R	
J8GV83- 5331	A	L	G		A	R	
JCBP9A- 5331	A	L	G		A	R	
JD899Q- 5331	A	L	G		A	R	
JK6ZEY- 5331	A	L	G		A	R	

TABLE 1a (Store Entry)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
JPYW36- 5331	A	L	G		A	R	
JR8EAT- 5335	A	L	G		A	R	
K2AN66- 5332	A	L	G		A	R	
KC6XRD- 5331	A	L	G	R	A	R	
KCQBE6- 5332	A	L	G		A	R	
KFMM3V- 5332	A	L	G		A	R	
KGJBW8- 5331	A	L	G	R	A	R	
KUMYMF- 5332	A	L	G	R	A	R	
KV7HU9- 5331	A	L	G		A	R	
L2P73J- 5331	A	L	G		A	R	
L7XQQF- 5331	A	L	G		A	R	
LJKXMG- 5331	A	L	G		A	R	
LXMWK8- 5331	A	L	G		A	R	
LYY4WV- 5331	B	L	G		B	R	
M9XRBQ- 5335	A	L	G		A	R	
MKU3YK- 5331	A	L	F		B	R	
MT4WP7- 5331	A	L	G		A	R	
N6XBN3- 5331	A	L	F		B	R	

TABLE 1a (Store Entry)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
N6ZZVK- 5331	A	L	G		A	R	
NBLKP8- 5331	A	L	G		B	R	
NCVXK9- 5331	A	L	G		A	R	
NF2XPT- 5331	A	L	G		B	R	
NRQUQQ- 5331	A	L	G		A	R	
NRRGV6- 5331	A	L	G		A	R	
PFPFV7- 5331	A	L	G		A	R	
PKL3QF- 5331	A	L	G		A	R	
PLGKQV- 5335	A	L	G		B	R	
PN6WP2- 5332	A	L	G		B	R	
PTEFNU- 5331	A	L	G		A	R	
Q2N7K6- 5331	A	L	G		A	R	
Q4WC6K- 5331	A	L	G		A	R	
QAM2XN- 5331	A	L	G		A	R	
QC6TU7- 5335	A	L	G	R	A	R	
QFRXHN- 5331	A	L	G		A	R	
QGJLP6- 5331	A	L	G		A	R	
QHG647- 5331	A	L	G		A	R	

TABLE 1a (Store Entry)

Questioned Imprints						
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>	
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R
QK2QG9- 5331	A	L	G		A	R
QLXYVK- 5332	A	L	G		B	R
QQ9ALT- 5331	A	L	G		A	R
QWXMP3- 5331	A	L	G		D	R
QX66LC- 5331	A	L	G		A	R
R3ZTR6- 5335	A	L	A	R	G	
R4B3TV- 5331	A	L	G		A	R
RKFXDV- 5332	A	L	G		A	R
RVCHK9- 5331	A	L	D	R	A	R
T2XUY2- 5331	A	L	G		A	R
T9WF64- 5331	A	L	G		A	R
TABCLM- 5332	A	L	G		A	R
TAVPWZ- 5332	B	L	G		B	R
TCYBTD- 5331	A	L	G		A	R
TF2EFT- 5331	A	L	G		A	R
TJGENY- 5335	A	L	G		A	R
TKC3HB- 5331	A	L	G		A	R
TQGBE6- 5331	A	L	G		A	R

TABLE 1a (Store Entry)

Questioned Imprints						
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>	
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R
TUERRY- 5332	A	L	G		A	R
U4Z7E3- 5331	A	L	G		A	R
UD9HV7- 5331	A	L	G		G	
UEZLFZ- 5332	A	L	G		B	R
UHMTTM- 5331	A	L	G		A	R
UJEHL2- 5331	A	L	G		A	R
UJVZX3- 5335	A	L	G		B	R
UT3CXX- 5332	A	L	F		A	R
UWNRUK- 5331	A	L	G		A	R
V77ZM8- 5332	A	L	G		A	R
VA74LL- 5335	A	L	G	R	B	R
VBYMAK- 5331	A	L	G		A	R
VKMQUJ- 5331	A	L	G		A	R
VQTGYD- 5332	A	L	G	R	B	R
W28Y8A- 5331	A	L	G		A	R
W9PUYJ- 5331	A	L	G		B	R
WALDXY- 5331	A	L	G		A	R
WCPDCX- 5331	A	L	G		B	R

TABLE 1a (Store Entry)

Questioned Imprints						
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>	
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R
WGKYQ2- 5331	A	L	G		A	R
WJ9Q66- 5335	A	L	G		A	R
WLWDLY- 5332	A	L	G	R	A	R
WQ6K34- 5332	B	L	G		B	R
WWBGL4- 5331	A	L	G	L	C	R
WX8QZE- 5331	A	L	G		A	R
XDUMDU- 5335	A	L	G		A	R
XF8WTL- 5331	A	L	G		C	R
XGFAAM- 5331	A	L	G		A	R
XML7UM- 5331	A	L	G		A	R
XQHPVL- 5331	A	L	G	R	A	R
XRFXFX- 5331	A	L	G		A	R
XWTKZV- 5331	A	L	G		A	R
Y2XY7- 5331	A	L	G		A	R
Y94D4V- 5332	A	L	G		A	R
YB938P- 5332	A	L	G		A	R
YFEYRP- 5335	A	L	G		A	R
YFYF8R- 5331	A	L	G		A	R

TABLE 1a (Store Entry)

Questioned Imprints							
WebCode- Test	<u>Q1</u>		<u>Q2</u>		<u>Q3</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
YJZJWU- 5332	A	L	G		A	R	
YPL26G- 5331	A	L	G		A	R	
YQGJ6W- 5332	A	L	G		A	R	
YQLEZJ- 5331	A	L	G		A	R	
ZHLCDX- 5331	A	L	G		C	R	
ZJE67V- 5331	A	L	G		A	R	
ZVRXPG- 5332	A	L	G		A	R	
ZW3AER- 5335	A	L	G		A	R	

Response Summary						Participants: 186	
	<u>Q1 Conc.</u>	<u>L/R</u>	<u>Q2 Conc.</u>	<u>L/R</u>	<u>Q3 Conc.</u>	<u>L/R</u>	
Identification (A)	182 (97.8%)	L 186 (100.0%)	(A) 1 (0.5%)	N/A for non-assoc.	(A) 146 (78.5%)	R 184 (98.9%)	
High Degree of Ass'n. (B)	4 (2.2%)		(B) 0 (0.0%)		(B) 31 (16.7%)		
Association (C)	0 (0.0%)		(C) 1 (0.5%)		(C) 6 (3.2%)		
Limited Ass'n. (D)	0 (0.0%)		(D) 1 (0.5%)		(D) 1 (0.5%)		
Inconclusive (E)	0 (0.0%)		(E) 0 (0.0%)		(E) 0 (0.0%)		
Non-Ass'n. (F)	0 (0.0%)		(F) 4 (2.2%)		(F) 0 (0.0%)		
Exclusion (G)	0 (0.0%)		(G) 179 (96.2%)		(G) 2 (1.1%)		

Examination Results

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

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
268VJX- 5331	G	R	G	L	A	L	
28ZYJD- 5331	G		G		A	L	
2EJX2R- 5331	G		G		A	L	
2N7JWV- 5332	G		G		A	L	
2V6GXY- 5331	G	R	G	L	B	L	
2XPVBT- 5331	G		G		A	L	
2XRM7F- 5331	G		G		A	L	
3C7H9C- 5332	G		G		A	L	
3KHCBD- 5331	G		G		A	L	
3LUL9Y- 5335	G		G		A	L	
3PCXV8- 5331	G		G		A	L	
3QACTE- 5331	G		G		A	L	
3TQDGT- 5332	G		G		A	L	
48BDQR- 5332	G		G		A	L	
4D2M3B- 5331	G	R	G	L	A	L	
4J4RUV- 5332	G	R	G	L	A	L	

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
4NFPPW- 5331	G		G		A	L	
4X6DBY- 5331	G		G		A	L	
4XNCD4- 5331	G		G		B	L	
688626- 5332	G		G		A	L	
6AE87N- 5332	G		G		A	L	
6C2CVU- 5331	G		G		A	L	
6EPDNG- 5331	G		G		A	L	
6NQ46H- 5331	G		G		A	L	
6W8MHP- 5332	G		G		A	L	
78H8LH- 5331	G		G		A	L	
7EHPZV- 5331	G	R	G	L	A	L	
7NPB6N- 5335	G	R	G	L	A	L	
7QFR34- 5332	G	R	G	L	A	L	
7ZN4HL- 5335	G		G		A	L	
84HHK2- 5331	G		G		A	L	
8FA6PW- 5331	G		G		A	L	
8FUR4K- 5331	G		G		A	L	
98WFP4- 5331	G		G		A	L	

TABLE 1b (Newspaper)

Questioned Imprints						
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>	
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R
9GGQVN- 5331	G		G		A	L
9GZRJC- 5331	G		G		A	L
9J6DBH- 5331	G		G		A	L
9LD7QQ- 5331	G		G		A	L
9TEKCR- 5332	G		G		A	L
9WXAKQ- 5331	G		G		A	L
A9M2TE- 5331	G		G		A	L
AJ6HN7- 5332	G		G		A	L
ANHQX4- 5335	G		G		A	L
ANVHQB- 5331	G		G		B	L
APAE87- 5331	G		G		A	L
APVRWJ- 5331	G		G		A	L
B2FJLH- 5335	G		G		A	L
B9JT6R- 5332	G	R	G	L	A	L
BCHC3J- 5331	G		G		A	L
BNCVR4- 5332	G		G		A	L
BP3NFE- 5332	G		G		A	L
BVUUDP- 5331	G		G		B	L

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
CUHEJN- 5335	G	R	G	L	B	L	
CWNACL- 5331	G		G		A	L	
CXE6NE- 5331	G		G		A	L	
DNMHJG- 5332	G		G		A	L	
DTDJAG- 5331	G	R	G	L	A	L	
DY3YZ9- 5331	G		G		A	L	
DYPYUL- 5331	G		G		A	L	
E24J6K- 5331	G		G		A	L	
E7XHGU- 5331	G		G		A	L	
E9PE44- 5331	G		G		A	L	
EYJETG- 5331	G		G		A	L	
EYWBUE- 5331	D	R	F	L	B	L	
F62A3J- 5331	G		G		A	L	
F66MUL- 5331	G		G		A	L	
FB83WE- 5335	G		G		A	L	
FJ6WME- 5331	G	R	G	L	A	L	
FP8K8M- 5331	G		G		A	L	
FZ93Q3- 5335	G		G		A	L	

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
G7YVFB- 5331	F	R	F	L	E	L	
GDT86C- 5332	G		G		A	L	
GGEM2Y- 5331	G		G		A	L	
GKDZM4- 5331	G		G		A	L	
GT9Z4G- 5331	G		G		A	L	
GU3TWE- 5331	G		G		A	L	
GUH6EK- 5331	G		G		A	L	
HADRJR- 5331	G		G		A	L	
HH3FEU- 5331	G		G		A	L	
HUDB9J- 5331	G		G		A	L	
HXTBE4- 5331	G		G		A	L	
HXTM4E- 5331	G		G		A	L	
J68DYB- 5331	G	R	G	L	A	L	
J6CVZV- 5331	G		G		A	L	
J8GV83- 5331	G		G		A	L	
JCBP9A- 5331	G		G		A	L	
JD899Q- 5331	G		G		A	L	
JK6ZEY- 5331	G		G		A	L	

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
JPYW36- 5331	G		G		A	L	
JR8EAT- 5335	G		G		A	L	
K2AN66- 5332	G		G		A	L	
KC6XRD- 5331	G	R	G	L	A	L	
KCQBE6- 5332	G		G		A	L	
KFMM3V- 5332	G		G		A	L	
KGJBW8- 5331	G	R	G	L	A	L	
KUMYMF- 5332	G	R	G	L	A	L	
KV7HU9- 5331	G		G		A	L	
L2P73J- 5331	G		G		A	L	
L7XQQF- 5331	G		G		A	L	
LJKXMG- 5331	G		G		B	L	
LXMWK8- 5331	G		G		A	L	
LYY4WV- 5331	G		G		B	L	
M9XRBQ- 5335	G		G		A	L	
MKU3YK- 5331	F		F		A	L	
MT4WP7- 5331	G		G		A	L	
N6XBN3- 5331	F		F		A	L	

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
N6ZZVK- 5331	G		G		A	L	
NBLKP8- 5331	G		G		A	L	
NCVXK9- 5331	G		G		A	L	
NF2XPT- 5331	G		G		A	L	
NRQUQQ- 5331	G		G		A	L	
NRRGV6- 5331	G		G		A	L	
PFPFV7- 5331	G		G		A	L	
PKL3QF- 5331	G		G		A	L	
PLGKQV- 5335	G		G		A	L	
PN6WP2- 5332	G		G		A	L	
PTEFNU- 5331	G		G		A	L	
Q2N7K6- 5331	G		G		A	L	
Q4WC6K- 5331	G		G		A	L	
QAM2XN- 5331	G		G		A	L	
QC6TU7- 5335	G	R	G	L	A	L	
QFRXHN- 5331	G		G		A	L	
QGJLP6- 5331	G		G		A	L	
QHG647- 5331	G		G		A	L	

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
QK2QG9- 5331	G		G		A	L	
QLXYVK- 5332	G		G		A	L	
QQ9ALT- 5331	G		G		A	L	
QWXMP3- 5331	G		G		A	L	
QX66LC- 5331	G		G		A	L	
R3ZTR6- 5335	G		G		B	L	
R4B3TV- 5331	G		G		A	L	
RKFXDV- 5332	G		G		A	L	
RVCHK9- 5331	D	R	D	L	A	L	
T2XUY2- 5331	G		G		A	L	
T9WF64- 5331	G		G		A	L	
TABCLM- 5332	G		G		A	L	
TAVPWZ- 5332	G		G		B	L	
TCYBTD- 5331	G		G		A	L	
TF2EFT- 5331	G		G		A	L	
TJGENY- 5335	G		G		A	L	
TKC3HB- 5331	G		G		A	L	
TQGBE6- 5331	G		G		A	L	

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
TUERRY- 5332	G		G		B	L	
U4Z7E3- 5331	G		G		A	L	
UD9HV7- 5331	G		G		G		
UEZLFZ- 5332	G		G		A	L	
UHMTTM- 5331	G		G		B	L	
UJEHL2- 5331	G		G		A	L	
UJVZX3- 5335	G		G		A	L	
UT3CXX- 5332	F		F		A	L	
UWNRUK- 5331	G		G		A	L	
V77ZM8- 5332	G		G		A	L	
VA74LL- 5335	G	R	G	L	B	L	
VBYMAK- 5331	G		G		A	L	
VKMQUL- 5331	G		G		A	L	
VQTGYD- 5332	G	R	G	L	A	L	
W28Y8A- 5331	G		G		A	L	
W9PUYJ- 5331	G		G		A	L	
WALDXY- 5331	G		G		A	L	
WCPDCX- 5331	G		G		A	L	

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	<u>Q4</u>		<u>Q5</u>		<u>Q6</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
WGKYQ2- 5331	G		G		A	L	
WJ9Q66- 5335	G		G		A	L	
WLWDLY- 5332	G	R	G	L	A	L	
WQ6K34- 5332	G		G		B	L	
WWBGL4- 5331	D	R	F		B	L	
WX8QZE- 5331	G		G		A	L	
XDUMDU- 5335	G		G		A	L	
XF8WTL- 5331	G		G		A	L	
XGFAAM- 5331	G		G		A	L	
XML7UM- 5331	G		G		A	L	
XQHPVL- 5331	G	R	G	L	A	L	
XRFXFX- 5331	G		G		A	L	
XWTKZV- 5331	G		G		A	L	
Y2XY7- 5331	G		G		A	L	
Y94D4V- 5332	G		G		A	L	
YB938P- 5332	G		G		A	L	
YFEYRP- 5335	G		G		A	L	
YFYF8R- 5331	G		G		A	L	

TABLE 1b (Newspaper)

Questioned Imprints							
WebCode- Test	Q4		Q5		Q6		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
YJZJWU- 5332	G		G		A	L	
YPL26G- 5331	G		G		A	L	
YQGJ6W- 5332	G		G		A	L	
YQLEZJ- 5331	G		G		A	L	
ZHLCDX- 5331	G		G		B	L	
ZJE67V- 5331	G		G		A	L	
ZVRXPG- 5332	G		G		A	L	
ZW3AER- 5335	G		G		A	L	

Response Summary				Participants: 186				
	Q4 Conc.	L/R		Q5 Conc.	L/R		Q6 Conc.	L/R
Identification (A)	0 (0.0%)	N/A for non-assoc.	(A)	0 (0.0%)	N/A for non-assoc.	(A)	168 (90.3%)	L 185 (99.5%)
High Degree of Ass'n. (B)	0 (0.0%)		(B)	0 (0.0%)		(B)	16 (8.6%)	
Association (C)	0 (0.0%)		(C)	0 (0.0%)		(C)	0 (0.0%)	
Limited Ass'n. (D)	3 (1.6%)		(D)	1 (0.5%)		(D)	0 (0.0%)	
Inconclusive (E)	0 (0.0%)		(E)	0 (0.0%)		(E)	1 (0.5%)	
Non-Ass'n. (F)	4 (2.2%)		(F)	6 (3.2%)		(F)	0 (0.0%)	
Exclusion (G)	179 (96.2%)		(G)	179 (96.2%)		(G)	1 (0.5%)	

Examination Results

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

TABLE 1c (By Cash Register)

Questioned Imprints									
WebCode- Test	<u>Q7</u>			<u>Q8</u>			<u>Q9</u>		
	Conclusion	L/R		Conclusion	L/R		Conclusion	L/R	
268VJX- 5331	G	L		A	R		B	L	
28ZYJD- 5331	G			A	R		A	L	
2EJX2R- 5331	G			A	R		C	L	
2N7JWV- 5332	G			A	R		A	L	
2V6GXY- 5331	G	L		A	R		B	L	
2XPVBT- 5331	G			A	R		B	L	
2XRM7F- 5331	G			B	R		B	L	
3C7H9C- 5332	G			A	R		A	L	
3KHCBD- 5331	G			A	R		A	L	
3LUL9Y- 5335	G			A	R		A	L	
3PCXV8- 5331	G			A	R		A	L	
3QACTE- 5331	G			A	R		A	L	
3TQDGT- 5332	G			A	R		A	L	
48BDQR- 5332	G			A	R		A	L	
4D2M3B- 5331	G	L		A	R		A	L	
4J4RUV- 5332	G	L		A	R		A	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
4NFPFW- 5331	G		A	R	A	L	
4X6DBY- 5331	G		A	R	A	L	
4XNCD4- 5331	G		B	R	C	L	
688626- 5332	G		A	R	B	L	
6AE87N- 5332	G		A	R	A	L	
6C2CVU- 5331	G		A	R	A	L	
6EPDNG- 5331	G		A	R	A	L	
6NQ46H- 5331	G		A	R	A	L	
6W8MHP- 5332	G		B	R	B	L	
78H8LH- 5331	G		A	R	A	L	
7EHPZV- 5331	G	L	A	R	A	L	
7NPB6N- 5335	G	L	B	R	B	L	
7QFR34- 5332	G	L	A	R	A	L	
7ZN4HL- 5335	G		A	R	A	L	
84HHK2- 5331	G		A	R	A	L	
8FA6PW- 5331	G		A	R	A	L	
8FUR4K- 5331	G		A	R	A	L	
98WFP4- 5331	G		A	R	A	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
9GGQVN- 5331	G		A	R	A	L	
9GZRJC- 5331	G		A	R	A	L	
9J6DBH- 5331	G		A	R	A	L	
9LD7QQ- 5331	G		A	R	A	L	
9TEKCR- 5332	G		A	R	A	L	
9WXAKQ- 5331	G		A	R	B	L	
A9M2TE- 5331	G		A	R	A	L	
AJ6HN7- 5332	G		A	R	A	L	
ANHQX4- 5335	G		A	R	A	L	
ANVHQB- 5331	G		B	R	B	L	
APAE87- 5331	G		B	R	B	L	
APVRWJ- 5331	G		A	R	A	L	
B2FJLH- 5335	G		A	R	B	L	
B9JT6R- 5332	G	L	A	R	A	L	
BCHC3J- 5331	G		A	R	A	L	
BNCVR4- 5332	G		A	R	A	L	
BP3NFE- 5332	G		A	R	A	L	
BVUUDP- 5331	G		G		D	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
CUHEJN- 5335	G	L	B	R	B	L	
CWNACL- 5331	G		A	R	A	L	
CXE6NE- 5331	G		A	R	A	L	
DNMHJG- 5332	G		A	R	B	L	
DTDJAG- 5331	G	L	B	R	B	L	
DY3YZ9- 5331	G		A	R	A	L	
DYPYUL- 5331	G		A	R	A	L	
E24J6K- 5331	G		A	R	A	L	
E7XHGU- 5331	G		B	R	A	L	
E9PE44- 5331	G		A	R	A	L	
EYJETG- 5331	G		A	R	A	L	
EYWBUE- 5331	G	L	B	R	D	L	
F62A3J- 5331	G		A	R	A	L	
F66MUL- 5331	G		A	R	A	L	
FB83WE- 5335	G		A	R	A	L	
FJ6WME- 5331	G	L	A	R	B	L	
FP8K8M- 5331	G		A	R	A	L	
FZ93Q3- 5335	G		A	R	A	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
G7YVFB- 5331	F	L	E	R	A	L	
GDT86C- 5332	G		B	R	A	L	
GGEM2Y- 5331	G		A	R	A	L	
GKDZM4- 5331	G		A	R	A	L	
GT9Z4G- 5331	G		A	R	A	L	
GU3TWE- 5331	G		A	R	A	L	
GUH6EK- 5331	G		A	R	A	L	
HADRJR- 5331	G		A	R	A	L	
HH3FEU- 5331	G		A	R	A	L	
HUDB9J- 5331	G		A	R	A	L	
HXTBE4- 5331	G		A	R	A	L	
HXTM4E- 5331	G		A	R	A	L	
J68DYB- 5331	G	L	A	R	A	L	
J6CVZV- 5331	G		A	R	A	L	
J8GV83- 5331	G		A	R	A	L	
JCBP9A- 5331	G		A	R	B	L	
JD899Q- 5331	G		A	R	A	L	
JK6ZEY- 5331	G		A	R	B	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
JPYW36- 5331	G		A	R	A	L	
JR8EAT- 5335	G		A	R	A	L	
K2AN66- 5332	G		A	R	A	L	
KC6XRD- 5331	G	L	A	R	A	L	
KCQBE6- 5332	G		A	R	A	L	
KFMM3V- 5332	G		A	R	A	L	
KGJBW8- 5331	G	L	A	R	A	L	
KUMYMF- 5332	G	L	A	R	A	L	
KV7HU9- 5331	G		A	R	B	L	
L2P73J- 5331	G		A	R	A	L	
L7XQQF- 5331	G		A	R	A	L	
LJKXMG- 5331	G		A	R	A	L	
LXMWK8- 5331	G		A	R	A	L	
LYY4WV- 5331	G		B	R	B	L	
M9XRBQ- 5335	G		A	R	A	L	
MKU3YK- 5331	F		B	R	B	L	
MT4WP7- 5331	G		A	R	A	L	
N6XBN3- 5331	F		B	R	B	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
N6ZZVK- 5331	G		A	R	B	L	
NBLKP8- 5331	G		A	R	B	L	
NCVXK9- 5331	G		A	R	A	L	
NF2XPT- 5331	G		A	R	A	L	
NRQUQQ- 5331	G		A	R	A	L	
NRRGV6- 5331	G		A	R	A	L	
PFPFV7- 5331	G		A	R	A	L	
PKL3QF- 5331	G		A	R	A	L	
PLGKQV- 5335	G		B	R	B	L	
PN6WP2- 5332	G		A	R	A	L	
PTEFNU- 5331	G		A	R	A	L	
Q2N7K6- 5331	G		A	R	C	L	
Q4WC6K- 5331	G		A	R	A	L	
QAM2XN- 5331	G		A	R	A	L	
QC6TU7- 5335	G	L	A	R	A	L	
QFRXHN- 5331	G		A	R	A	L	
QGJLP6- 5331	G		A	R	A	L	
QHG647- 5331	G		A	R	A	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
QK2QG9- 5331	G		A	R	A	L	
QLXYVK- 5332	G		A	R	A	L	
QQ9ALT- 5331	G		A	R	A	L	
QWXMP3- 5331	G		B	R	A	L	
QX66LC- 5331	G		A	R	A	L	
R3ZTR6- 5335	G		C	R	G		
R4B3TV- 5331	G		A	R	A	L	
RKFXDV- 5332	G		A	R	A	L	
RVCHK9- 5331	D	L	A	R	A	L	
T2XUY2- 5331	G		A	R	A	L	
T9WF64- 5331	G		A	R	A	L	
TABCLM- 5332	G		A	R	A	L	
TAVPWZ- 5332	G		B	R	B	L	
TCYBTD- 5331	G		A	R	A	L	
TF2EFT- 5331	G		A	R	A	L	
TJGENY- 5335	G		A	R	A	L	
TKC3HB- 5331	G		A	R	A	L	
TQGBE6- 5331	G		A	R	A	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
TUERRY- 5332	G		A	R	B	L	
U4Z7E3- 5331	G		A	R	A	L	
UD9HV7- 5331	G		A	R	A	L	
UEZLFZ- 5332	G		A	R	B	L	
UHMTTM- 5331	G		B	R	B	L	
UJEHL2- 5331	G		A	R	A	L	
UJVZX3- 5335	G		B	R	B	L	
UT3CXX- 5332	F		A	R	A	L	
UWNRUK- 5331	G		A	R	A	L	
V77ZM8- 5332	G		A	R	A	L	
VA74LL- 5335	G	L	B	R	B	L	
VBYMAK- 5331	G		A	R	A	L	
VKMQUL- 5331	G		A	R	A	L	
VQTGYD- 5332	G	L	B	R	B	L	
W28Y8A- 5331	G		A	R	A	L	
W9PUYJ- 5331	G		A	R	B	L	
WALDXY- 5331	G		B	R	A	L	
WCPDCX- 5331	G		A	R	A	L	

TABLE 1c (By Cash Register)

Questioned Imprints							
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>		
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R	
WGKYQ2- 5331	G		A	R	A	L	
WJ9Q66- 5335	G		A	R	A	L	
WLWDLY- 5332	G	L	A	R	B	L	
WQ6K34- 5332	G		B	R	B	L	
WWBGL4- 5331	C	R	G	L	C	L	
WX8QZE- 5331	G		A	R	A	L	
XDUMDU- 5335	G		A	R	A	L	
XF8WTL- 5331	G		A	R	A	L	
XGFAAM- 5331	G		A	R	A	L	
XML7UM- 5331	G		A	R	A	L	
XQHPVL- 5331	G	L	A	R	A	L	
XRFXFX- 5331	G		A	R	A	L	
XWTKZV- 5331	G		A	R	A	L	
Y2XYY7- 5331	G		A	R	A	L	
Y94D4V- 5332	G		A	R	A	L	
YB938P- 5332	G		B	R	B	L	
YFEYRP- 5335	G		A	R	B	L	
YFYF8R- 5331	G		A	R	A	L	

TABLE 1c (By Cash Register)

Questioned Imprints						
WebCode- Test	<u>Q7</u>		<u>Q8</u>		<u>Q9</u>	
	Conclusion	L/R	Conclusion	L/R	Conclusion	L/R
YJZJWU- 5332	G		A	R	A	L
YPL26G- 5331	G		A	R	A	L
YQGJ6W- 5332	G		A	R	A	L
YQLEZJ- 5331	G		A	R	A	L
ZHLCDX- 5331	G		A	R	B	L
ZJE67V- 5331	G		A	R	A	L
ZVRXPG- 5332	G		A	R	A	L
ZW3AER- 5335	G		A	R	A	L

Response Summary				Participants: 186		
	<u>Q7 Conc.</u>	<u>L/R</u>	<u>Q8 Conc.</u>	<u>L/R</u>	<u>Q9 Conc.</u>	<u>L/R</u>
Identification (A)	0 (0.0%)	N/A for non-assoc.	(A) 158 (84.9%)	R 184 (98.9%)	(A) 142 (76.3%)	L 185 (99.5%)
High Degree of Ass'n. (B)	0 (0.0%)		(B) 24 (12.9%)	L 1 (0.5%)	(B) 37 (19.9%)	
Association (C)	1 (0.5%)		(C) 1 (0.5%)		(C) 4 (2.2%)	
Limited Ass'n. (D)	1 (0.5%)		(D) 0 (0.0%)		(D) 2 (1.1%)	
Inconclusive (E)	0 (0.0%)		(E) 1 (0.5%)		(E) 0 (0.0%)	
Non-Ass'n. (F)	4 (2.2%)		(F) 0 (0.0%)		(F) 0 (0.0%)	
Exclusion (G)	180 (96.8%)		(G) 2 (1.1%)		(G) 1 (0.5%)	

Conclusions

TABLE 2

WebCode-Test	Conclusions
268VJX-5331	[No Conclusions Reported.]
28ZYJD-5331	<p>4, 5, 6 v 1, 2, 3: The outsoles of the known shoes submitted to the Laboratory in the form of photographs of the outsole, Items 1 and 2, as well as, inked exemplars of the outsoles in Item 3 were compared to the questioned outsole impressions reflected in three (3) color photographs, Items 4, 5, and 6, marked Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, and Q9. Q1 – outsole impression made by the LEFT shoe in Items 1, 2, & 3. Q2 – outsole impression not made by the shoes in Items 1, 2, & 3. Q3 – outsole impression made by the RIGHT shoe in Items 1, 2, & 3. Q4 – outsole impression not made by the shoes in Items 1, 2, & 3. Q5 – outsole impression not made by the shoes in Items 1, 2, & 3. Q6 – outsole impression made by the LEFT shoe in Items 1, 2, & 3. Q7 – outsole impression not made by the shoes in Items 1, 2, & 3. Q8 – outsole impression made by the RIGHT shoe in Items 1, 2, & 3. Q9 – outsole impression made by the LEFT shoe in Items 1, 2, & 3</p>
2EJX2R-5331	<p>Items K1a-K1g: These items were used for comparison purposes. Items Q1-Q3: This photograph depicts a total of three questioned footwear impressions. One of the questioned impressions (Q2) is a partial right footwear impression and is similar in tread design, but different in size from the suspect's right shoe (01-01). It is my opinion that this impression was not made by the suspect's right shoe (Category 5/Conclusion G). The second questioned impression (Q1) is a partial left footwear impression and is similar in size, shape, and tread design to a portion of the suspect's left shoe (01-01). In addition, there are three randomly acquired characteristics visible in the questioned impression and on the outsole of this shoe. It is my opinion that this questioned impression was made by the suspect's left shoe (Category 1). The remaining questioned impression (Q3) is a partial right footwear impression and is similar in size, shape, and tread design to a portion of the suspect's right shoe (01-01). In addition, there are two randomly acquired characteristics visible in the questioned impression and on the outsole of this shoe. It is my opinion that this questioned impression was made by the suspect's right shoe (Category 1/Conclusion A). Items Q4-Q6: This photograph depicts a total of three questioned footwear impressions. Two of the questioned impressions are partial right (Q4) or left (Q5) footwear impressions and are similar in tread design, but different in size from the suspect's right and left shoes (01-01). It is my opinion that these impressions were not made by either of the suspect's shoes (Category 5/Conclusion G). The remaining questioned impression (Q6) is a nearly complete left footwear impression and is similar in size, shape, and tread design to the suspect's left shoe (01-01). In addition, there are two randomly acquired characteristics visible in the questioned impression and on the outsole of this shoe. It is my opinion that this questioned impression was made by the suspect's left shoe (Category 1/Conclusion A). Items Q7-Q9: This photograph depicts a total of three questioned footwear impressions. One of the questioned impressions (Q7) is a nearly complete left footwear impression and is similar in tread design, but different in size from the suspect's left shoe (01-01). It is my opinion that this impression was not made by the suspect's left shoe (Category 5/Conclusion G). The second questioned impression (Q9) is a partial left footwear impression and is similar in size, shape, and tread design to a portion of the suspect's left shoe (01-01). It is my opinion that this questioned impression was made by the suspect's left shoe or any other shoe with similar characteristics (Category 2B/Conclusion C). The remaining questioned impression (Q8) is a nearly right footwear impression and is similar in size, shape, and tread design to a portion of the suspect's right shoe (01-01). In addition, there is one randomly acquired characteristic visible in the questioned impression and on the outsole of this shoe. It is my opinion that this questioned impression was made by the suspect's right shoe (Category 1/Conclusion A).</p>
2N7JWV-5332	<p>1: Questioned Impression 1 was made by the known Crocs left shoe. 2: Questioned Impression 2 was not made by the known Crocs shoes. 3: Questioned Impression 3 was made by the known Crocs right shoe. 4: Questioned Impression 4 was not made by the known Crocs shoes. 5: Questioned Impression 5 was not made by the known Crocs shoes. 6: Questioned Impression 6 was made by the known left Crocs shoe. 7: Questioned Impression 7 was not made by the known Crocs shoes. 8: Questioned Impression 8 was made by the known Crocs right shoe. 9: Questioned Impression 9 was</p>

TABLE 2

WebCode-Test	Conclusions
2V6GXY-5331	made by the known Crocs left shoe.
2XPVBT-5331	<p>In my opinion the findings, taken collectively, show conclusively that some of the footwear impression detail recovered from the scene of the assault and robbery at the convenience store was made by the footwear taken from the suspect. There are also footwear impressions present amongst those recovered from the convenience store that could not have been made by the footwear taken from the suspect.</p>
2XRM7F-5331	<p>Among the items received for examination were photographs of 9 scene impressions labelled Q1-Q9. I was asked to compare these with the photographs and inked impressions from a pair of size 11 "Crocs" brand shoes K1a-K1g to determine whether or not the shoes could have made any of the scene impressions. 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. If some or all of this damage can also be seen in a scene impression, it can be reasonably concluded that the impression was made by that particular footwear and no other. However, due to the quality of the scene impression or the small portion that may be present, areas of damage or wear on the footwear may not be visible on the scene impression. In determining the strength of any correspondences I have considered: the likelihood of finding the shoe impression evidence if the shoe made the impression, and the likelihood 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 and Q9: Q1 and Q9 were impressions of the left heel and arch area on textured vinyl. Q3 was an impression of the right heel and arch area on textured vinyl. A correspondence in the sole design, degree of wear and features of damage were observed with all of these scene impressions and the corresponding areas on the submitted shoes. In my opinion these correspondences provide extremely strong support for the proposition that the questioned shoes K1 made these scene impressions. Q6 and Q8: Q6 was an almost complete impression of a left shoe on newspaper. Q8 was an almost complete impression of a right shoe on textured vinyl. There was very strong correspondence in the sole design, degree of wear and several features of randomly acquired damage throughout the entirety of both impressions with the questioned shoes. In my opinion this is conclusive evidence that the questioned shoes K1 made the scene impressions Q6 and Q8. Q2, Q4, Q5 and Q7: Although these impressions expressed the same sole design as the questioned shoes obvious differences were observed in the wear and damage patterns. The spacing between the tread elements was also different. I have therefore concluded that the questioned shoes are excluded from making these four scene impressions.</p>
2XRM7F-5331	<p>Nine footwear imprints, identified as Q1 through Q9, were recovered from the front area and behind the cash register at a convenience store. Q1, a left heel imprint, was made by the K1 left shoe. This identification is based on sufficient, corresponding random accidental characteristics that are visible in both the imprint and the shoe. Q3, a right heel imprint, could have been made by the K1 right shoe or by another right shoe with similar class characteristics of design, physical size and wear in the area visible. In addition, parallel marks are present across at least three rows of tread in the heel area of the K1 right shoe that appear to correspond with marks visible in the imprint. Due to the textured vinyl floor, the marks cannot be verified. Q6, a left shoe imprint, was made by the K1 left shoe. This identification is based on sufficient, corresponding random accidental characteristics that are visible in both the imprint and the shoe. Q8, a right shoe imprint, could have been made by the K1 right shoe or by another right shoe with similar class characteristics of design, physical size, and wear. In addition, two areas of possible random accidental characteristics are visible in both the shoe and the imprint. However, one area cannot be distinguished from a mold feature due to the blurry photographs of the shoes' outsole and the second area contains apparent parallel lines across several rows of tread which cannot be distinguished from the textured features of the vinyl substrate. These two factors in combination, prohibit a stronger association. Q9, a left heel imprint, could have been made by the K1 left shoe or by another shoe with similar class characteristics of design, physical size and</p>

TABLE 2

WebCode-Test	Conclusions
	wear in the area visible. There are some possible random accidental characteristics in the shoe that may correspond with marks visible in the imprint, however, the textured substrate of the vinyl floor also contributes similar marks which cannot be distinguished. As a result, the possible substrate effects prohibit a stronger association. Q2, a right toe imprint, Q4, a right shoe imprint, Q5, a left shoe imprint, and Q7, a left shoe imprint, could not have been made by the K1 shoes due to class character differences of physical size and general wear.
3C7H9C-5332	K1 and test impressions of K1 were compared to each of the impressions Q1-Q9. The impressions Q1, Q3, Q6, Q8 and Q9 have the same class characteristics (outsole design, physical size, and general wear), and some corresponding randomly acquired characteristics as the suspect shoes K1. Based on these examinations, it was determined that these impressions were made by the suspect shoes. The impressions Q2, Q4, Q5 and Q7 have differences in physical size and degree of wear from the suspect shoes K1 and therefore could not have been made by those shoes.
3KHCB-5331	Footwear impressions Q3 and Q8 were made by the impounded right shoe. Footwear impressions Q1, Q6, and Q9 were made by the impounded left shoe. Footwear impressions Q2 and Q4 were made by a second right shoe based on differences in class and individual characteristics. Footwear impressions Q5 and Q7 were made by a second left shoe based on differences in class and individual characteristics. Suspect footwear includes Croc brand shoes.
3LUL9Y-5335	Impressions on vinyl tile in the front of the store Q1: The left shoe was identified as the source of Q1. IDENTIFICATION; Q2: Neither the left, nor the right shoe are the source of Q2. EXCLUSION; Q3: The right shoe could be the source Q3. HIGH DEGREE OF ASSOCIATION; Another shoe with a similar sole pattern, size, degree of wear, and randomly acquired characteristics may have made the impression. Impressions on newspaper in the front of the store Q4: Neither the left, nor the right shoe are the source of Q4. EXCLUSION; Q5: Neither the left, nor the right shoe are the source of Q5. EXCLUSION; Q6: The left shoe was identified as the source of Q6. IDENTIFICATION; Impressions on vinyl tile behind the cash register Q7: Neither the left, nor the right shoe are the source of Q7. EXCLUSION; Q8: The right shoe was identified as the source of Q8. IDENTIFICATION; Q9: The left shoe was identified as the source of Q9. IDENTIFICATION
3PCXV8-5331	Questioned impressions Q1 - Q9 were compared to the known left and right shoes K1L/K1R, as well as test impressions generated by K1L/K1R with the following results: i. Q2, Q4, Q5, & Q7 and K1L/K1R are different with respect to size. ii. Q1 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q1 and K1L exhibit 3 corresponding individual characteristics. iii. Q3 and K1R are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q3 and K1R exhibit 7 corresponding individual characteristics. iv. Q6 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q6 and K1L exhibit 5 corresponding individual characteristics. v. Q8 and K1R are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, and tread design. In addition, Q8 and K1R exhibit 5 corresponding individual characteristics. vi. Q9 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, and tread design. In addition, Q9 and K1L exhibit 2 corresponding individual characteristics.
3QACTE-5331	Q1, Q6, and Q9 are similar in design pattern, shape, and sizing to the known left shoe. Sufficient quality and quantity of randomly acquired characteristics are present for an identification. The questioned impressions were made by the known left shoe. Q3 and Q8 are similar in design pattern, shape, and sizing to the known right shoe. Sufficient quality and quantity of randomly acquired characteristics are present for an identification. The questioned impressions were made by the known right shoe. Q2, Q4, Q5, and Q7 are similar in design pattern to the known shoes. Differences in sizing and/or randomly acquired characteristics are visible between the questioned impressions and the known shoes. The known shoes are excluded as a possible source of the questioned impressions.
3TQDGT-5332	The known footwear (Crocs, Santa Cruz 2 Luxe Men's size 11) was not the source of, and did not make, impressions Q2, Q4, Q5 and Q7. The known footwear (Crocs, Santa Cruz 2 Luxe Men's size

TABLE 2

WebCode-Test	Conclusions
48BDQR-5332	<p>11) was the source of, and made, questioned impressions Q1, Q3, Q6, Q8 and Q9.</p> <p>Examination and comparison of the known pair of shoes represented by (K1a-K1g) to the questioned impressions (Q1-Q9) revealed the following: Q1, Q6, and Q9 were similar in outsole design, physical size, general wear, and shared several randomly acquired characteristics with the left shoe depicted in K1a-K1g. In the opinion of this examiner, the left shoe was the source of, and made, the questioned impressions. Another item of footwear being the source of the impressions is considered a practical impossibility. Q3 and Q8 were similar in outsole design, physical size, general wear, and shared several randomly acquired characteristics with the right shoe depicted in K1a-K1g. In the opinion of this examiner, the right shoe was the source of, and made, the questioned impressions. Another item of footwear being the source of the impressions is considered a practical impossibility. Q5 and Q7 (left shoes); and Q2 and Q4 (right shoes) were made by shoes of similar outsole design as the known pair of shoes. However, these impressions were different in physical size and general wear to the known shoes. Both shoes were eliminated as possible sources of these impressions.</p>
4D2M3B-5331	<p>EXAMINATIONS: Determine whether any footwear marks present in Exhibits Q1 thru Q9 can be associated with the known pair of shoes. FINDINGS: The questioned footwear marks Q1, Q6 and Q9 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. The questioned footwear mark, Q3 and Q8 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. Questioned footwear marks Q2, Q4, Q5 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>
4J4RUV-5332	Q4=Q2; Q7=Q5
4NFPFW-5331	<p>Q1, Q3, Q6, Q8, Q9 - Partial footwear marks. Marks correspond with the submitted footwear in terms of pattern, size and pattern configuration and degree and distribution of wear. Further more there are numerous features in the marks which correspond with characteristic random damage on the soles of the suspects footwear.</p>
4X6DBY-5331	<p>"The footwear recovered consists of a pair of shoes coded as CROCS 0002 (exhibit ref K1). These shoes were compared in detail to the footwear marks recorded at PT 18-5331 (Exhibits Q1 - Q9). The marks (Q1, Q3, Q6, Q8 & Q9) correspond with the submitted footwear in terms of pattern, configuration, size, general degree of wear, position of wear & identifying features taking the limited area available for comparison and substrate texture into consideration."</p>
4XNCD4-5331	<p>Q1: agreement in pattern, size, wear and damage with the sole of the submitted left shoe. In our opinion the left shoe is responsible for the mark. Q2, Q4, Q5 and Q7 - while shows agreement in pattern, different in size and wear. In our opinion neither submitted shoe made these marks. Q3: agreement in pattern, size, wear and damage with the sole of the submitted right shoe. In our opinion the right shoe is responsible for the mark. Q6: agreement in pattern, size, wear and limited damage with the sole of the submitted left shoe. In our opinion it is probable that the left shoe made the mark. For another shoe to have made the mark it would have to show agreement in these characteristics. Q8: agreement in pattern, size, wear and limited detail with the sole of the submitted right shoe. In our opinion it is probable that the right shoe made the mark. For another shoe to have made the mark it would have to show agreement in these characteristics. Q9: agreement in pattern and size with the corresponding area of the sole of the submitted left shoe. In our opinion the left shoe could have made the mark. Any other shoe showing agreement in pattern and size could also have made this mark.</p>

TABLE 2

WebCode-Test	Conclusions
688626-5332	<p>Item #2 / #2.1: Digital Image; One partial questioned footwear impression (Q1); Same tread size, tread design, wear characteristics, and matching randomly acquired characteristics as the known left shoe (Item #1); This questioned impression was made exclusively by this known shoe. One partial questioned footwear impression (Q2); Same tread design as the known right shoe (Item #1); but different with respect to tread size and wear characteristics; Exclusion. One partial questioned footwear impression (Q3); Same tread size, tread design, wear characteristics, and matching randomly acquired characteristics as the known right shoe (Item #1); This questioned impression was made exclusively by this known shoe. Item #3 / #3.1: Digital Image; One partial questioned footwear impression (Q4); Same tread design as the known right shoe (Item #1); but different with respect to tread size and wear characteristics; Exclusion. One partial questioned footwear impression (Q5); Same tread design as the known left shoe (Item #1); but different with respect to tread size and wear characteristics; Exclusion. One partial questioned footwear impression (Q6); Same tread size, tread design, wear characteristics, and matching randomly acquired characteristics as the known left shoe (Item #1); This questioned impression was made exclusively by this known shoe. Item #4 / #4.1: Digital Image; One partial questioned footwear impression (Q7); Same tread design as the known left shoe (Item #1); but different with respect to tread size and wear characteristics; Exclusion. One partial questioned footwear impression (Q8); Same tread size, tread design, wear characteristics, and matching randomly acquired characteristics as the known right shoe (Item #1); This questioned impression was made exclusively by this known shoe. One partial questioned footwear impression (Q9); Same tread size, tread design, wear characteristics, and matching randomly acquired characteristics as the known left shoe (Item #1) - insufficient for identification. Could have been made by this shoe. Although it could not be conclusively identified to the known shoe, this questioned impression was found to exhibit unusual matching characteristics that would not be expected to be found in the population of this evidence type.</p>
6AE87N-5332	<p>After examining the shoe soles, items Q1, Q3, Q6, Q8 and Q9 have providing positive results. The items have been identified. Remaining items, Q2, Q4, Q5 and Q7 have been generated by different shoes.</p>
6C2CVU-5331	<p>The questioned impressions (Items Q1 - Q9) were scanned, digitally processed, printed, and visually compared to the known impressions and images of the recovered shoes (Item K1). The footwear impressions Q1, Q6, and Q9 corresponded in tread design, tread size, wear characteristics, and randomly acquired characteristics with the recovered left shoe. The recovered left shoe produced questioned impressions Q1, Q6, and Q9 (Identification). The footwear impression Q8 corresponded in tread design, tread size, wear characteristics, and randomly acquired characteristics with the recovered right shoe. The recovered right shoe produced questioned impression Q8 (Identification). The footwear impression Q3 corresponded in tread design, tread size, wear characteristics, and possible randomly acquired characteristics with the recovered right shoe. The possible randomly acquired characteristics lacked clarity. The recovered right shoe or a shoe with similar characteristics produced questioned impression Q3 (High degree of association). The footwear impressions Q2, Q4, Q5, and Q7 did not correspond in tread design alignment, wear characteristics, or randomly acquired characteristics with the recovered shoes. The recovered shoes did not produce questioned impressions Q2, Q4, Q5, or Q7 (Exclusion).</p>
6EPDNG-5331	<p>The submitted known footwear images were examined and compared to the impressions visible in Q1-Q9. The question impressions in Q1, Q6 and Q9 correspond to the known left shoe in tread design, tread size, tread wear and individual characteristics including scratches, gouges and damage to the corner of a square element. Thus, Q1, Q6 and Q9 were made by the known left shoe. Q3 and Q8 correspond to the known right shoe in tread design, tread size, tread wear and individual characteristics including scratches and tread damage (on Q8). Thus Q3 and Q8 were made by the known right shoe. The question impressions in Q2, Q4, Q5 and Q7 correspond to the known footwear in tread design and Q2 also generally corresponds to the known footwear (toe area) in tread size. Q2, Q4, Q5 and Q7 are different from the known footwear in tread wear and visible individual characteristics. Q4, Q5 and Q7 are also different from the known footwear in tread size. Thus, Q2, Q4, Q5 and Q7 could not have been made by the known footwear as represented in the submitted</p>

TABLE 2

WebCode-Test	Conclusions
6NQ46H-5331	<p>images.</p> <p>Q1 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q2 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q3 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q4 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q5 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q6 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q7 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q8 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q9 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe.</p>
6W8MHP-5332	<p>The questioned footwear marks, Q1 to Q9, have been compared in detail to the submitted footwear impressions, K1a to K1g. The questioned impressions Q1, 3, 6, 8 and 9 correspond in pattern design, pattern element size and spacing with the respective area of the outsoles of the test impressions taken from the recovered footwear. Furthermore the overall dimensions of the marks are also consistent. Furthermore, all of these marks correspond in general degree and distribution of wear, with number of randomly acquired damage features agreeing in size, shape position and orientation with corresponding features apparent on the outsoles of the test impressions of the recovered footwear. Further marks submitted for comparison, Q2, 4, 5 and 7 can be excluded from having been made by the submitted footwear on the basis of the observed differences noted in size, wear and damage features.</p>
78H8LH-5331	<p>K1a - K1c - Photographs of the soles of the recovered shoes. K1d - K1g - Known imprints made with the recovered shoes. Q1 - Q3 - Questioned imprints found in front of the store (textured vinyl tile). Q4 - Q6 - Questioned imprints found on a newspaper in the front of the store. Q7 - Q9 - Questioned imprints found behind the cash register (textured vinyl tile). Analysis Result: Agreements of class and sufficient agreements of individual characteristics confirmed the Q1, Q6, and Q9 impressions were made by the left shoe. Agreements of class and sufficient agreements of individual characteristics confirmed the Q3 and Q8 impressions were made by the right shoe. Disagreements of class and individual characteristics confirmed the Q2, Q4, Q5, and Q7 impressions were not made by either of the shoes.</p>

TABLE 2

WebCode-Test	Conclusions
7EHPZV-5331	Impressions Q1, Q6, Q9 were made by left shoe from recovered pair of the shoes , (marked K1 - Crocs , Santa Cruz Luxe Leather, Men's size 11 (US), 45-46 (EUR), 10 (UK)). Impression Q3, Q8 were made by right shoe from recovered pair of the shoes (marked K1 - Crocs , Santa Cruz Luxe Leather, Men's size 11 (US), 45-46 (EUR), 10 (UK)). Impressions Q2, Q4, Q5, Q7 were not made by recovered pair of the shoes (marked K1). There were made by shoes with similar shoe design but different size and different wear features.
7NPB6N-5335	1. The two questioned left shoe imprints "Q1" and "Q6" and the known left shoe imprints on "K1d" to "K1g" share agreement of class and randomly acquired characteristics of sufficient quality and quantity. "Q1" and "Q6" were therefore made by the suspect's left shoe. 2. The questioned left shoe imprint "Q9" corresponds in class characteristics, unusual wear and randomly acquired characteristics to the known left shoe imprints on "K1d" to "K1g", supporting a high degree of association between "Q9" and the suspect's left shoe. 3. The two questioned right shoe imprints "Q3" and "Q8" correspond in class characteristics, unusual wear pattern and randomly acquired characteristics to the known right shoe imprints on "K1d" to "K1g", supporting a high degree of association between "Q3" and "Q8", and the suspect's right shoe. 4. In view of the differences in the randomly acquired characteristics between the two questioned right shoe imprints "Q2" and "Q4" and the known right shoe imprints on "K1d" to "K1g", "Q2" and "Q4" were not made by the suspect's right shoe. 5. In view of the differences in the randomly acquired characteristics between the two questioned left shoe imprints "Q5" and "Q7" and the known left shoe imprints on "K1d" to "K1g", "Q5" and "Q7" were not made by the suspect's left shoe.
7QFR34-5332	K1a-g images were used in the comparison to Q1-Q9. Q1, Q6 & Q9 are partial left shoe imprints. The imprints appear similar in physical size, tread design, wear, and individual 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, Q6 & Q9. Another item of footwear being the source of the imprints is considered a practical impossibility. Q2 & Q4 are partial right 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. Q5 & Q7 are partial left shoe imprints. The imprints are similar in design to the left shoe in K1, but were not similar in size and wear characteristics; therefore the imprints were not made by the left shoe in K1. Q3 & Q8 are partial right shoe imprints. The imprints appear similar in physical size, tread design, wear, and individual 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 & Q8. Another item of footwear being the source of the imprints is considered a practical impossibility.
7ZN4HL-5335	Based on these comparisons, it is the opinion of this examiner that the following conclusions could be rendered: Q1-IMP1: Item K, the left shoe, is identified as the source of the impression. Q2-IMP1: Item K, left and right shoes, are excluded as the source of the impression. Q3-IMP1: Item K, the right shoe, is identified as the source of the impression. Q4-IMP1: Item K, left and right shoes, are excluded as the source of the impression. Q5-IMP1: Item K, left and right shoes, are excluded as the source of the impression. Q6-IMP1: Item K, the left shoe, is identified as the source of the impression. Q7-IMP1: Item K, left and right shoes, are excluded as the source of the impression. Q8-IMP1: Item K, the right shoe, is identified as the source of the impression. Q9-IMP1: Item K, the left shoe, is identified as the source of the impression.
84HHK2-5331	Item Q1: This impression was identified as being made by Item K1 Left Shoe. Item Q2: This impression was not made by Item K1 Left or Right Shoe. Item Q3: This impression was identified as being made by Item K1 Right Shoe. Item Q4: This impression was not made by Item K1 Left or Right Shoe. Item Q5: This Impression was not made by Item K1 Left or Right Shoe. Item Q6: This impression was identified as being made by Item K1 Left Shoe. Item Q7: This impression was not made by Item K1 Left or Right Shoe. Item Q8: This impression was identified as being made by Item K1 Right Shoe. Item Q9: This impression was identified as being made Item K1 Left Shoe.
8FA6PW-5331	The right shoe from Item #K1 is identified as having made the questioned impressions Q3 and Q8 based on a correspondence of observed class characteristics (specific tread design and size), general

TABLE 2

WebCode-Test	Conclusions
	wear, and randomly acquired characteristics of sufficient quality and quantity. The left shoe from Item #K1 is identified as having made the questioned impressions Q1, Q6, and Q9 based on a correspondence of observed class characteristics (specific tread design and size), general wear, and randomly acquired characteristics of sufficient quality and quantity. The shoes from Item #K1 are excluded as having made the questioned impressions Q2, Q4, Q5, and Q7 based on observed differences in class characteristics (extreme wear and size).
8FUR4K-5331	Imprints labeled Q1, Q6, Q9 have been made by the suspects submitted Left shoe. Imprints labeled Q3 and Q8 have been made by the suspects submitted Right shoe. I can exclude the suspects footwear from having made imprints labeled Q2, Q4, Q5 and Q7.
98WFP4-5331	2. COMPARISON: a. Questioned impressions Q1-Q9 were compared to the known right/left shoes, (K1L, K1R), as well as test impressions generated by (K1L/K1R) with the following results: i. Q1 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q1 and K1L exhibit five (5) corresponding individual characteristics. ii. Q2 and K1L/K1R are different with respect to their size, tread design and wear pattern. iii. Q3 and K1R are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q3 and K1R exhibit four (4) corresponding individual characteristics. iv. Q4 and K1L/K1R are different with respect to their size, tread design and wear pattern. v. Q5 and K1L/K1R are different with respect to their size, tread design and wear pattern. vi. Q6 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q6 and K1L exhibit seven (7) corresponding individual characteristics. vii. Q7 and K1L/K1R are different with respect to their size, tread design and wear pattern. viii. Q8 and K1R are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q8 and K1R exhibit five (5) corresponding individual characteristics. ix. Q9 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q9 and K1L exhibit four (4) corresponding individual characteristics. 3. INTERPRETATION OF RESULTS: a.It is the opinion of the undersigned that questioned footwear impressions Q1, Q6, Q9 were made by the known left shoe (K1L). b.It is the opinion of the undersigned that questioned footwear impressions Q3, Q8 were made by the known right shoe (K1R). c.It is the opinion of the undersigned that questioned footwear impressions Q2, Q4-Q5 and Q7 could not have been made by the known shoe (K1L/K1R).
9GGQVN-5331	[No Conclusions Reported.]
9GZRJC-5331	The submitted photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q1. The question impression corresponds to the known footwear in tread pattern, tread size, tread wear and individual characteristics including nicks in the second square tread from the top located on the medial side of the shoe. Thus, Q1 was made by known (k1a-k1c). The submitted photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q2. Q2 and the photographs correspond in tread pattern but are different in tread wear and tread size. Q2 also lacks an individual characteristic present on the tread in the photographs (k1a-k1c), surface nick located in the square tread of the known as well as on the 5th horizontal tread from the bottom of the toe region . Thus, Q2 could not have been made by (k1a-k1c). The submitted photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q3. Q3 corresponds to the known footwear in tread pattern, tread size, tread wear and individual characteristics such as vertical striations running across the horizontal tread pattern of the of the heel region. Thus, Q3 was made by (k1a-k1c). The submitted photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q4 . Q4 and the photographs correspond in tread pattern but are different in tread wear and tread size. Q4 and the photographs are different as Q4 lacks individual characteristics such as the nick in the square tread pattern at the base of the toe region of the known and a nick on the 5th horizontal tread from the bottom of the toe region not present on the tread in the photographs (k1a-k1c). Thus, Q4 could not have been made by (k1a-k1c). The submitted

TABLE 2

WebCode-Test	Conclusions
9J6DBH-5331	<p>photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q5. Q5 and the photographs correspond in tread pattern but are different in tread wear and tread size. Q5 and the photographs are different as Q5 lacks an individual characteristic such as the nick in the toe region on the 5th horizontal tread in the left bottom corner on the lateral side of the shoe. Q5 also contains a nick in the heel region, lateral side, second square tread from the top that is not present on the tread in the photographs (k1a-k1c). Thus, Q5 could not have been made by (k1a-k1c). The submitted photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q6. The question impression corresponds to the known footwear in tread pattern, tread size, tread wear and individual characteristics including a nick in the heel region, medial side of the shoe, on the bottom left corner of the square tread. A nick in the toe region is also present on the 5th horizontal tread from the bottom on the lateral side of the shoe on the bottom left corner. Thus, Q6 was made by (k1a-k1c). The submitted photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q7. Q7 corresponds to the known photographs in tread pattern. Q7 does not correspond to the known photographs in tread wear, tread size or in individual characteristics. Q7 lacks the individual characteristic of a nick present on the left bottom corner of the square tread of the heel region and a nick in the bottom left corner of the 5th horizontal tread, lateral side of shoe, of the toe region in the known photographs (k1a-k1c). Q7 also has a nick in the heel region, 2nd tread from top, lateral side that is not present on the known photographs. Thus, Q7 could not have been made by (k1a-k1c). The submitted photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q8. The question impression corresponds to the known footwear in tread pattern, tread size, tread wear and individual characteristics including a surface nick at the base of the toe region, in the square tread pattern. Thus, Q8 was made by (k1a-k1c). The submitted photographs of the soles of the recovered shoes (k1a-k1c) were examined and compared to the impression visible in Q9. The question impression corresponds to the known footwear in tread pattern, tread size, tread wear and individual characteristics including a nick in the heel region, medial side of the shoe. The nick is in the bottom left corner of the square tread. Thus, Q9 was made by (k1a-k1c).</p> <p>Q1 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q2 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q3 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q4 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q5 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q6 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q7 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q8 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression</p>

TABLE 2

WebCode-Test	Conclusions
9LD7QQ-5331	<p>was made by the known right shoe. Q9 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe.</p> <p>Q1 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q2 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q3 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q4 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q5 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q6 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q7 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q8 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q9 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe.</p>
9TEKCR-5332	<p>Items Q1, Q3, Q6, Q8 and Q9 were produced by recovered shoes. It is based on class and randomly acquired characteristics both questioned and known items share. Items Q2, Q4, Q5 and Q7 were not produced by recovered shoes. It is based on differences from class and randomly acquired characteristics.</p>
9WXAKQ-5331	<p>The questioned footwear impressions photographed in Items Qa through Qc were labeled Q1 through Q9, and consisted of full length and partial impressions. Impressions Q1 through Q9 were visually compared to the recovered shoes as documented in Items K1a through K1g. Impressions Q1 and Q6 corresponded in tread design, size of tread, and wear characteristics to the recovered left Crocs shoe. Randomly acquired characteristics present in these questioned impressions were also present in the known impressions and on the outsole of the recovered left shoe. In the opinion of the examiner, the recovered left Crocs shoe is identified as having made impressions Q1 and Q6 (Identification). Impressions Q3 and Q8 corresponded in tread design, size of tread, and wear characteristics to the recovered right Crocs shoe. Randomly acquired characteristics present in these questioned impressions were also present in the known impressions and on the outsole of the recovered right shoe. In the opinion of the examiner, the recovered right Crocs shoe is identified as having made impressions Q3 and Q8 (Identification). Impression Q9 corresponded in tread design,</p>

TABLE 2

WebCode-Test	Conclusions
A9M2TE-5331	<p>size of tread, and wear characteristics to the arch and heel of the recovered left Crocs shoe. At least one randomly acquired characteristics present in this questioned impression was also present in the known impressions and on the outsole of the recovered left shoe. In the opinion of the examiner, impression Q9 could have been made by the recovered left Crocs shoe (High degree of association). Other shoes with the same tread design, size of tread, and wear characteristics, and randomly acquired characteristic in the same location on the heel are also included in the population of possible sources. The remaining questioned footwear impressions (Q2, Q4, Q5, and Q7) corresponded in tread design to the submitted Crocs shoes. These impressions were dissimilar in size of tread to the known shoes; therefore, the submitted Crocs shoes did not make questioned impressions Q2, Q4, Q6, or Q7 (Exclusion).</p> <p>Q1 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q2 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q3 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q4 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q5 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q6 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q7 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q8 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q9 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe.</p>
AJ6HN7-5332	<p>1. Imprint Q1 is a partial 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 Q1 ("Identification"). 2. Imprint Q2 is a partial imprint of a right shoe that correspond in shape and design, but differs in size and wear and some RACs from the right shoe (K1). It is my opinion that there are sufficient differences between the right shoe (K1) and the imprint Q2 ("Exclusion"). 3. Imprint Q3 is a partial 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 high degree of association between the right shoe (K1) and the imprint Q3, but not sufficient for a full identification. 4. Imprint Q4 is an imprint of a right shoe that correspond in shape and design, but differs in size and wear and some RACs from the right shoe (K1). It is my opinion that there are sufficient differences between the right shoe (K1) and the imprint Q4 ("Exclusion"). 5. Imprint</p>

TABLE 2

WebCode-Test	Conclusions
	<p>Q5 is an imprint of a left shoe that correspond in shape and design, but differs in size and wear and some RACs from the left shoe (K1). It is my opinion that there are sufficient differences between the left shoe (K1) and the imprint Q5 ("Exclusion"). 6. Imprint Q6 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 Q6 ("Identification"). 7. Imprint Q7 is a partial imprint of a left shoe that correspond in shape and design, but differs in size and wear and some RACs from the left shoe (K1). It is my opinion that there are sufficient differences between the left shoe (K1) and the imprint Q7 ("Exclusion"). 8. Imprint Q8 is a partial 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 Q8 ("Identification"). 9. Imprint Q9 is a partial 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 Q9 ("Identification").</p>
ANHQX4-5335	<p>Three photographs were examined for footwear impressions. Nine footwear impressions (Impressions Q1-Q9) suitable for comparison were observed on the three photographs. The nine footwear impressions, labeled Q1-Q9, from the three photographs were compared to the suspect's shoes (Item K1a-K1g). Four footwear impressions, labeled Q2, Q4, Q5, and Q7, were similar in shape and tread design to the suspect's shoes (Item K1a-K1g); however, there were sufficient quality and quantity of individualizing characteristics in disagreement; therefore, Impressions Q2, Q4, Q5, and Q7 were eliminated as having been made by the suspect's shoes (Item K1a-K1g). Three footwear impressions, labeled Q1, Q6, and Q9, was similar in size, shape, and tread design to the suspect's left shoe (Item K1a-K1g). There was sufficient quality and quantity of individualizing characteristics in agreement between Impression Q1, Q6, and Q9 and the suspect's left shoe (K1a-K1g); therefore, Impressions Q1, Q6, and Q9 was identified as having been made by the suspect's left shoe in Item K1a-K1g. Two footwear impressions, labeled Q3 and Q8, were similar in size, shape and tread design to the suspect's right shoe (Item K1a-K1g). There was sufficient quality and quantity of individualizing characteristics in agreement between Impressions Q3 and Q8 and the suspect's right shoe (K1a-K1g); therefore, Impressions Q3 and Q8 were identified as having been made by the suspect's right shoe in Item K1a-K1g.</p>
ANVHQB-5331	<p>There was a correspondence of pattern, dimensions, wear and randomly acquired characteristics between the left Crocs shoe and impression Q1. In my opinion this is conclusive evidence that the left shoe made impression Q1. There was a corespondence of pattern, dimensions, wear and randomly acquired characteristics between the left Crocs shoe and impressions Q6 and Q9. in my opinion these findings provide very strong support for the proposition that the left shoe made these two impressions. However, another shoe with the same pattern, dimensions, degree of wear and observed randomly acquired characteristics could also have made these impressions. There was a correspondence of pattern, dimensions, wear and randomly acquired characteristics between the right Crocs shoe and impressions Q3 and Q8. In my opinion this provides very strong support for the proposition that the right shoe made these impressions. However, another shoe with the same pattern, dimensions, degree of wear and observed randomly acquired characteristics could also have made these impressions. There were differences in either pattern, dimensions, wear or randomly acquired characteristics between both the left and right Crocs shoes and impressions Q2, Q4, Q5 and Q7 therefore in my opinion these shoes could not have made these impressions.</p>
APAE87-5331	<p>COMPARISONS: Compared the partial, questioned footwear impressions of value, Q-1 through Q-9, with the photographs of the known shoes, test impressions, and transparencies, respectively submitted in Submissions 001 and 001A. RESULTS: The partial, questioned footwear impressions of value, marked Q-1 and Q-6, were each made by the known left shoe in Submission 001, based on the agreement of both class and randomly acquired characteristics. The partial, questioned footwear impressions of value, marked Q-2, Q-4, Q-5, and Q-7, have significantly more wear and exhibit a size difference with the known shoes in Submission 001 and were not made by those shoes. The</p>

TABLE 2

WebCode-Test	Conclusions
	<p>partial, questioned footwear impression of value, marked Q-3, corresponds with the outsole design and general condition of wear with the known right shoe in Submission 001 and could have been made by that shoe or another with another shoe with the same characteristics. Due to the lack of randomly acquired characteristics, a closer association could not be made. The partial, questioned footwear impression of value, Q-3, was not made by the known left shoe in Submission 001. The partial, questioned footwear impression of value, marked Q-8, exhibits a high degree of association with the known right shoe in Submission 001; including one (1) randomly acquired characteristic – a tear/missing area in one of the lower elements in the ball area. This impression was probably made by the known right shoe in Submission 001. However, due to the lack of more randomly acquired characteristics and the textured substrate, a closer association could not be made. The partial, questioned footwear impression of value, Q-8, was not made by the known left shoe in Submission 001. The partial, questioned footwear impression of value, marked Q-9, exhibits a high degree of association with the known right shoe in Submission 001; including one (1) randomly acquired characteristic – a chunk removed of one element in the heel area. This impression was probably made by the known left shoe in Submission 001. However, due to the lack of more randomly acquired characteristics and the textured substrate, a closer association could not be made. The partial, questioned footwear impression of value, Q-9, was not made by the known right shoe in Submission 001.</p>
APVRWJ-5331	<p>The left outsole is identified as the source for impressions Q1, Q6, and Q9. The right outsole is excluded as a possible source for these impressions. The left outsole is identified as the source for impressions Q3 and Q8. The right outsole is excluded as a possible source for these impressions. Both the left and right outsoles are excluded as a possible source for impressions Q2, Q4, Q5, and Q7.</p>
B2FJLH-5335	<p>The questioned imprints Q1, Q6 and Q9 were made by the left shoe, but not the right shoe of the recovered shoes. The questioned imprint Q8 was made by the right shoe, but not the left shoe of the recovered shoes. The questioned imprint Q3 was probably made by the right shoe, but not the left shoe of the recovered shoes. The questioned imprints Q2, Q4, Q5 and Q7 were not made by the pair of recovered shoes.</p>
B9JT6R-5332	<p>THE UNKNOWN SHOE PRINTS LABELED AS Q1, Q6 and Q9 WERE TRANSFERRED BY THE SOLE OF THE LEFT FOOT BRAND CROCS SEIZED TO THE ARRESTED MAN. THE UNKNOWN SHOE PRINTS LABELED AS Q3 and Q8 WERE TRANSFERRED BY THE SOLE OF THE RIGHT FOOT BRAND CROCS SEIZED TO THE ARRESTED MAN. THE UNKNOWN SHOE PRINTS LABELED AS Q2, Q4, Q5 and Q7 WERE NOT TRANSFERRED BY NONE OF THE SOLES.</p>
BCHC3J-5331	<p>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 created from the Item 3 photographs of the test impressions. Item: 4 Q1-Q3: Questioned imprints found in the front of the store (textured vinyl tile). Item: 4.1 Questioned footwear impression represented as Q1 found on textured vinyl tile. RESULTS: The Item 4.1 impression was made by the Item 1 left shoe. Item: 4.2 Questioned footwear impression represented as Q2 found on textured vinyl tile. RESULTS: The Item 4.2 impression was not made by the Item 1 shoes. Item: 4.3 Questioned footwear impression represented as Q3 found on textured vinyl tile. RESULTS: The Item 4.3 impression was made by the Item 1 right shoe. Item: 5 Q4-Q6: Questioned imprints found on a newspaper in the front of the store. Item: 5.1 Questioned footwear impression represented as Q4 found on newspaper. RESULTS: The Item 5.1 impression was not made by the Item 1 shoes. Item: 5.2 Questioned footwear impression represented as Q5 found on newspaper. RESULTS: The Item 5.2 impression was not made by the Item 1 shoes. Item: 5.3 Questioned footwear impression represented as Q6 found on newspaper. RESULTS: The Item 5.3 impression was made by the Item 1 left shoe. Item: 6 Q7-Q9: Questioned imprints found behind the cash register (textured vinyl tile). Item: 6.1 Questioned footwear impression represented as Q7 found on textured vinyl tile. RESULTS: The Item 6.1 impression was not made by the Item 1 shoes. Item: 6.2 Questioned footwear impression represented as Q8 found on textured vinyl tile. RESULTS: The Item 6.2 impression was made by the</p>

TABLE 2

WebCode-Test	Conclusions
BNCVR4-5332	<p>Item 1 right shoe. Item: 6.3 Questioned footwear impression represented as Q9 found on textured vinyl tile. RESULTS: The Item 6.3 impression was made by the Item 1 left shoe. Impression evidence in this case was examined utilizing the ACE-V methodology.</p> <p>Visual analysis of the disk (item 1) revealed three digital images (items 1A, 1B, and 1C) with multiple footwear impressions suitable for comparison. The remaining images (items 1D and 1E) are images of the known shoes. Visual examination and comparison reveals the following: Three of the questioned impressions from the digital images (items 1A/Q1, 1B/Q6 and 1C/Q9) were made by the known left shoe as depicted in the digital image (item 1D). The known left shoe revealed similar class characteristics in tread design, physical size, wear, and randomly acquired characteristics to determine that these questioned impressions were made by this known left shoe. These questioned impressions were made by a left shoe; therefore, the right shoe was not compared. Two of the questioned impressions from the digital images (items 1A/Q3 and 1C/Q8) were made by the known right shoe as depicted in the digital image (item 1D). The known right shoe revealed similar class characteristics in tread design, physical size, wear, and randomly acquired characteristics to determine that these questioned impressions were made by this known right shoe. These questioned impressions were made by a right shoe; therefore, the left shoe was not compared. Two of the questioned impressions from the digital images (items 1B/Q5 and 1C/Q7) were not made by the known left shoe as depicted in the digital image (item 1D). The known left shoe revealed a significant difference in physical size and wear to determine that these questioned impressions were not made by this known left shoe. These questioned impressions were made by a left shoe; therefore, the right shoe was not compared. Two of the questioned impressions from the digital images (items 1A/Q2 and 1B/Q4) were not made by the known right shoe as depicted in the digital image (item 1D). The known right shoe revealed a significant difference in physical size and wear to determine that these questioned impressions were not made by this known right shoe. These questioned impressions were made by a right shoe; therefore, the left shoe was not compared.</p>
BP3NFE-5332	<p>Q1, Q6, and Q9 were made by the K1 left shoe. Q3 and Q8 were made by the K1 right shoe. The identification of an impression is established through the agreement of overall physical size, outsole design, wear, and corresponding randomly acquired characteristics of sufficient number and significance to conclude the impression was made by the known shoe and establishing that there are no differences that cannot be accounted for. Q2, Q4, Q5, and Q7 were not made by either known, K1, shoe. Exclusion is established when there are sufficient features in disagreement to conclude that the unknown impression could not have been made by the known footwear.</p>
BVUUDP-5331	<p>The impression represented by Q1 was made by the left shoe K1. The impression represented by Q3 was made by the right shoe K1. The impression represented by Q6 has a high degree of association to the left shoe K1. The impression represented by Q9 has a limited association of class characteristics to the left shoe K1. The impressions represented by Q2, Q4, Q5, Q7, and Q8 were not made by the left or right shoe K1.</p>
CUHEJN-5335	<p>In my opinion the recovered shoes made some of the impressions recovered from the shop (conclusive)</p>
CWNACL-5331	<p>Questioned impressions Q1 - Q9 were visually compared to photographs and test impressions from the suspect's shoes. Based on the correspondence observed in tread design, physical size, wear characteristics and randomly acquired characteristics questioned impressions Q1, Q6 and Q9 were identified as being made by the left Croc shoe (Identification). Based on the correspondence observed in tread design, physical size, wear characteristics and randomly acquired characteristics questioned impressions Q3 and Q8 were identified as being made by the right Croc shoe (Identification). Based on differences observed in physical size and general wear the right Croc shoe is excluded as having produced questioned impressions Q2 and Q4 (Exclusion). Based on differences observed in physical size and general wear the left Croc shoe is excluded as having produced questioned impressions Q5 and Q7 (Exclusion).</p>
CXE6NE-5331	<p>The footwear making the known imprints labeled as "L" has been identified as the source of the questioned imprints labeled as "Q1", "Q6" and "Q9". The footwear making the known imprints labeled</p>

TABLE 2

WebCode-Test	Conclusions
DNMHJG-5332	<p>as "R" has been identified as the source of the questioned imprints labeled as "Q3" and "Q8". The footwear making the known imprints labeled as "R" and "L" are excluded as the source of the questioned imprints labeled as "Q2", "Q4", "Q5" and "Q7".</p> <p>The results of the examination extremely strongly support that the imprint Q1 and Q6 were made with the left shoe (K1) (Level +4). The results of the examination extremely strongly support that the imprint Q8 were made with the right shoe (K1) (Level +4). The results of the examination strongly support that the imprint Q3 were made with the right shoe (K1) (Level +3). The results of the examination strongly support that the imprint Q9 were made with the left shoe (K1) (Level +3). The results of the examination extremely strongly support that the imprint Q2, Q4, Q5 and Q7 were not made with the shoes (K1) (Level -4)</p>
DTDJAG-5331	<p>Physical comparison of Q1 and Q6 with the left shoe represented in K1 revealed them to be consistent with respect to size, shape, tread design, general wear, and individual characteristics. Therefore, these two shoe impressions from the front of the store were made by the left shoe represented in K1. Physical comparison of Q8 with the right shoe represented in K1 revealed them to be consistent with respect to size, shape, tread design, general wear, and at least one individual characteristic. However, this is not sufficient for an identification. Therefore, this shoe impression was made by the right shoe represented in K1 or other shoes with these same unusual characteristics. Physical comparison of Q9 with the left shoe represented in K1 revealed them to be consistent with respect to size, shape, tread design, general wear, and at least one individual characteristic. However, this is not sufficient for an identification. Therefore, this shoe impression was made by the left shoe represented in K1 or other shoes with these same unusual characteristics. Physical comparison of Q3 with the right shoe represented in K1 revealed them to be consistent with respect to size, shape, tread design, and general wear. Therefore, this shoe impression could have been made by the right shoe represented in K1. However, the lack of individual characteristics precludes a more conclusive comparison. Physical comparison of Q2 and Q4 with the right shoe represented in K1 revealed them to be inconsistent with respect to wear. Therefore, these two shoe impressions from the store were not made by the right shoe represented in K1. Physical comparison of Q5 and Q7 with the left shoe represented in K1 revealed them to be inconsistent with respect to wear. Therefore, these two shoe impressions from the store were not made by the left shoe represented in K1.</p>
DY3YZ9-5331	<p>The known left footwear depicted in the photographs marked K1a, K1b and K1c, in exhibit FIEP, was the source of, and made, the questioned footwear impressions marked Q1, Q6 and Q9. Another item of footwear being the source of the impressions is considered a practical impossibility. The known right footwear depicted in the photographs marked K1a, K1b and K1c, in exhibit FIEP, was the source of, and made, the questioned footwear impressions marked Q3 and Q8. Another item of footwear being the source of the impressions is considered a practical impossibility. The known footwear depicted in the photographs marked K1a, K1b and K1c, in exhibit FIEP, were not the source of, and did not make, the questioned footwear impressions Q2, Q4, Q5 and Q7. Images of the unidentified questioned footwear impressions in exhibit FIEP have been retained in our files in the event that future comparisons are requested.</p>
DYPYUL-5331	<p>The printed images of the recovered shoes (K1a -K1g) were visually compared to the printed images of questioned impressions (Q1-Q9). The heel of the recovered left shoe corresponded in tread design, physical size, wear and randomly acquired characteristics with Impression Q1. The heel of the recovered left shoe made Impression Q1 (Identification). The heel of the recovered right shoe corresponded in tread design, physical size, wear and randomly acquired characteristics with Impression Q3. The heel of the recovered right shoe made Impression Q3 (Identification). The left recovered shoe corresponded in tread design, physical size, wear and randomly acquired characteristics with Impression Q6. The left recovered shoe made Impression Q6 (Identification). The forefoot and heel of the right recovered shoe corresponded in tread design, physical size, wear and randomly acquired characteristics with Impression Q8. The forefoot and heel of the right recovered shoe made Impression Q8 (Identification). The heel of the recovered left shoe corresponded in tread design, physical size, wear and randomly acquired characteristics with Impression Q9. The heel of the recovered left shoe made Impression Q9 (Identification). The recovered shoes were eliminated as</p>

TABLE 2

WebCode-Test	Conclusions
	having made Impressions Q2, Q4, Q5 and Q7 based upon physical size, wear and RAC absence (Exclusion).
E24J6K-5331	Q1, Q6 and Q9 were all identified to the left shoe in K1. Q3 and Q8 were both identified to the right shoe in K1. Q2, Q4, Q5 and Q7 were all excluded as having been made by either of the shoes in K1. Q2 and Q4 were both noted as sharing a common source. Q5 and Q7 were both noted as sharing a common source.
E7XHGU-5331	Q1 - Identified to Known Left shoe - class and several RAC's located in heel. Q2 - Excluded. Q3 - Identified to Known Right shoe - class and several RAC's located in heel. Q4 - Excluded. Q5 - Excluded. Q6 - Identified to Known Left shoe - class and several RAC's located in forefoot. Q7 - Excluded. Q8 - High degree of association - class and RAC located in forefoot. Q9 - Identified to Known Left shoe - class and several RACs located in heel.
E9PE44-5331	Q1 through Q9 (questioned imprints) were compared to photographs of suspect shoes (K1a-K1g). K1 is a pair of men's Crocs Santa Cruz 2 Leather shoes, size 11 (US), 45-46 (EUR) and 10 (UK). Q1 is an imprint of the midsole and heel area of a left shoe. Q1 and K1 (left) share the agreement of class and randomly acquired characteristics of sufficient quality and quantity. In the opinion of this examiner, K1 (left shoe) has been identified as having produced imprint Q1. Q2 is an imprint of the toe area of a right shoe. Q2 and K1 (right) have similar overall gross design elements; however, the physical size, randomly acquired characteristics, and wear are not the same. In the opinion of this examiner, K1 (right shoe) is excluded as having produced imprint Q2. Q3 is an imprint of the midsole and heel area of a right shoe. Q3 and K1 (right) share the agreement of class and randomly acquired characteristics of sufficient quality and quantity. In the opinion of this examiner, K1 (right shoe) has been identified as having produced imprint Q3. Q4 is an imprint of almost a complete right shoe. Q4 and K1 (right) have similar overall gross design elements; however, the physical size, randomly acquired characteristics, and wear are not the same. In the opinion of this examiner, K1 (right shoe) is excluded as having produced imprint Q4. Q5 is an imprint of almost a complete a left shoe. Q5 and K1 (left) have similar overall gross design elements; however, the physical size, randomly acquired characteristics, and wear are not the same. In the opinion of this examiner, K1 (left shoe) is excluded as having produced imprint Q5. Q6 is an imprint of almost a complete a left shoe. Q6 and K1 (left) share the agreement of class and randomly acquired characteristics of sufficient quality and quantity. In the opinion of this examiner, K1 (left shoe) has been identified as having produced imprint Q6. Q7 is an imprint of a partial left shoe missing the inside from the toe to the heel. The toe area of Q7 overlaps the toe area of Q8. Q7 and K1 (left) have similar overall gross design elements; however, the physical size, randomly acquired characteristics, and wear are not the same. In the opinion of this examiner, K1 (left shoe) is excluded as having produced imprint Q7. Q8 is an imprint of a partial right shoe missing the inside from the toe to the heel. The toe area of Q8 overlaps the toe area of Q7. Q8 and K1 (right) share the agreement of class and randomly acquired characteristics of sufficient quality and quantity. In the opinion of this examiner, K1 (right shoe) has been identified as having produced imprint Q8. Q9 is an imprint of the heel area of a left shoe. Q9 and K1 (left) share the agreement of class and randomly acquired characteristics of sufficient quality and quantity. In the opinion of this examiner, K1 (left shoe) has been identified as having produced imprint Q9.
EYJETG-5331	The Item Q1 through Q9 questioned footwear impressions were analyzed, compared and evaluated with the Item K-1 right and left Croc, Men's size US 11 shoes. The Item Q1 questioned footwear impression corresponds in tread design, physical size, specific wear and identifying characteristics with the Item K1 left shoe. The Item Q2 questioned footwear impression shares a similar tread design with the Item K1 right shoe. However, the Item Q2 questioned footwear impression does not correspond in physical size or specific wear with the K1 right shoe. The Item Q3 questioned footwear impression corresponds in tread design, physical size, specific wear and identifying characteristics with the Item K1 right shoe. The Item Q4 questioned footwear impression shares a similar tread design with the Item K1 right shoe. However, the Item Q4 questioned footwear impression does not correspond in physical size or specific wear with the K1 right shoe. The Item Q5 questioned footwear impression shares a similar tread design with the Item K1 left shoe. However, the Item Q5 questioned footwear impression does not correspond in physical size or specific wear with the K1 left shoe. The Item Q6 questioned

TABLE 2

WebCode-Test	Conclusions
EYWBUE-5331	<p>footwear impression corresponds in tread design, physical size, specific wear and identifying characteristics with the Item K1 left shoe. The Item Q7 questioned footwear impression shares a similar tread design with the Item K1 left shoe. However, the Item Q7 questioned footwear impression does not correspond in physical size or specific wear with the K1 left shoe. The Item Q8 questioned footwear impression corresponds in tread design, physical size, specific wear and identifying characteristics with the Item K1 right shoe. The Item Q9 questioned footwear impression corresponds in tread design, physical size, specific wear and identifying characteristics with the Item K1 left shoe. Based upon the above factors, it is the opinion of this examiner that: The Items Q1, Q6 and Q9 questioned footwear impressions were made by the Item K1 left shoe. The Items Q3 and Q8 questioned footwear impressions were made by the Item K1 right shoe. The Items Q2, Q4, Q5 and Q7 questioned footwear impressions were not made by the Item K1 right or left shoes.</p> <p>1. Questioned impression Q1 and the Known impressions of the left article of suspect footwear share agreement of class and randomly acquired characteristics of sufficient quality and quantity to identify the (known) left article of suspect footwear as haven made this impression. 2. Questioned Impressions Q3 and Q8 and the Known impressions of the right article of suspect footwear correspond in class characteristics of design, physical size and general wear. Based upon this, it is the opinion of this examiner that there is a "high degree of association" between Questioned Impressions Q3 and Q8 and the Known impressions of the right article of suspect footwear. 3. Questioned Impression Q6 and the Known impressions of the right article of footwear correspond in class characteristics of design, physical size and general wear. Based upon this, it is the opinion of this examiner that there is a "high degree of association" between Questioned Impression Q6 and the Known impressions of the right article of footwear. 4. Some similar class characteristics were observed to be present in both the Questioned Impression Q4 and the Know impressions of the right article of suspect footwear. It can thus be concluded that there is limited association of class characteristics between Questioned Impression Q4 and the Known impressions of the right article of suspect footwear. 5. Some similar class characteristics were observed to be present in both the Questioned Impression Q9 and the Know impressions of the left article of suspect footwear. It can thus be concluded that there is limited association of class characteristics between Questioned Impression Q9 and the Known impressions of the left article of suspect footwear. 6. Questioned Impression Q2 and the Known impressions of the right article of suspect footwear share class characteristics and design and physical. It can thus be stated that Questioned Impression Q2 and the Known impressions of the right article of suspect footwear share association of class characteristics. 7. Questioned Impression Q7 was produced by a left article of footwear. Sufficient differences were noted between Questioned Impression Q7 and the Known impressions of the left article of suspect footwear to exclude the Known impressions of the article of suspect footwear as having produced Questioned Impressions Q7. 8. Questioned Impression Q5 was produced by a left article of footwear. Questioned Impression Q5 displays dissimilarities when compared to the Known impressions of the left article of suspect footwear. Thus there are indications of non-association between Questions Impression Q5 and the Known impressions of the left article of suspect footwear.</p>
F62A3J-5331	<p>The footwear impressions labeled Q1, Q6, and Q9 correspond in outsole design, physical size, wear, and share RACs with the outsole of the K1 left shoe. Therefore, the K1 left shoe was identified as the source of these impressions. The footwear impressions labeled Q3 and Q8 correspond in outsole design, physical size, wear, and share RACs with the outsole of the K1 right shoe. Therefor, the K1 right shoe was identified as the source of these impressions. The footwear impressions labeled Q2 and Q4 share similar design features and orient with the K1 right shoe. However, differences in physical size/spacing and wear were observed between the aforementioned impressions and corresponding areas on the outsole of the right shoe. Therefore, the K1 right shoe was eliminated as the source of these impressions. The footwear impressions labeled Q5 and Q7 share similar design features and orient with the K1 left shoe. However, differences in physical size/spacing and wear were observed between the aforementioned impressions and corresponding areas on the outsole of the left shoe. Therefore, the K1 left shoe was eliminated as the source of these impressions.</p>

TABLE 2

WebCode-Test	Conclusions
F66MUL-5331	[No Conclusions Reported.]
FB83WE-5335	The known left shoe from Item K1 was identified as having made the shoe impression in Item Q1. The known shoes from Item K1 were excluded as having made the shoe impression in Item Q2. The known right shoe from Item K1 was identified as having made the shoe impression in Item Q3. The known shoes from Item K1 were excluded as having made the shoe impression in Item Q4. The known shoes from Item K1 were excluded as having made the shoe impression in Item Q5. The known left shoe from Item K1 was identified as having made the shoe impression in Item Q6. The known shoes from Item K1 were excluded as having made the shoe impression in Item Q7. The known right shoe from Item K1 was identified as having made the shoe impression in Item Q8. The known left shoe from Item K1 was identified as having made the shoe impression in Item Q9.
FJ6WME-5331	An excellent correspondence of pattern, wear and multiple areas of random damage was found between test prints made using the left shoe and two of the shoeprints (Q1 and Q6). An excellent correspondence of pattern, wear and multiple areas of random damage was found between test prints made using the right shoe and one of the shoeprints (Q8). In my opinion, this correspondence means that the submitted pair of shoes made three of the shoeprints (Q1, Q6 and Q8). An excellent correspondence of pattern, wear and one area of random damage was found between test prints made using the right shoe and one of the shoeprints (Q3). An excellent correspondence of pattern, wear and one area of random damage was found between test prints made using the left shoe and one of the shoeprints (Q9). In my opinion, this correspondence means that there is a high degree of association between the submitted pair of shoes and two of the shoeprints (Q3 and Q9). Shoeprints Q2, Q4, Q5 and Q7 were different to the test prints made using the pair of shoes and therefore these four shoeprints were not made by the pair of shoes.
FP8K8M-5331	Impressions Q1, Q6, and Q9 were made by the left shoe of K1. Impressions Q3 and Q8 were made by the right shoe of K1. Impressions Q2, Q4, Q5, and Q7 were not made by K1.
FZ93Q3-5335	The analysis of footwear impressions rated Q1 to Q9 and their comparison with the photographs and the known imprints recovers shoes show correspondence of dimensions and consistent wear that can be concluded that : Q1, Q6 and Q9 identify with the sole of left shoe; Q3 and Q8 identify with the sole of right shoe; Total discordance between the acquired characteristics of the known items and those of the questioned items Q2, Q4, Q5 and Q7.
G7YVFB-5331	Based on my examination, I found that: (a) The questioned imprints found in the front of the store (textured vinyl tile) marked as "Q1" and "Q3"; and the questioned imprints found behind the cash register (textured vinyl tile) marked as "Q9" are similar to the known imprints made with the recovered shoes. (b) The questioned imprints found on a newspaper in the front of the store marked as "Q6" and the questioned imprints found behind the cash register (textured vinyl tile) marked as "Q8" are dissimilar to the known imprints made with the recovered shoes. (c) The questioned imprints found in the front of the store (textured vinyl tile) marked as "Q2", The questioned imprints found on a newspaper in the front of the store marked as "Q4" and "Q5"; and the questioned imprints found behind the cash register (textured vinyl tile) marked as "Q7" to be inconclusive due to lacks sufficient detail for a meaningful conclusion in comparison to the known imprints made with the recovered shoes.
GDT86C-5332	Q1: Identification: (A) The physical size and outsole design in the left shoe correspond with the pattern in the impression. General wear in the outsole correspond with areas in the impression. Randomly acquired characteristics correspond with three distinct and two little less clear details in the impression. No significant differences could be detected. The results provide extremely strong support that the impression has been made by the left shoe. Q2, Q4, Q5, Q7: Exclusion (G):The outsole design in the shoes are similar to the pattern in the impressions but there are some differences in the physical size. Also the general wear seems to be of a much higher degree in the impression and what looks like details in the impression is not visible in the outsole. It's been one day between the impressions were made and the shoes were seized and the impressions are clear with little disturbance. The results provide extremely strong support that the impressions have not been made by the shoes. Q3: High

TABLE 2

WebCode-Test	Conclusions
	<p>degree of association (B): The physical size and outsole design in the right shoe correspond with the pattern in the impression. General wear in the outsole correspond with areas in the impression. Two randomly acquired characteristics correspond with details in the impression. No significant differences could be detected. The results provide strong support that the impression has been made by the right shoe. Q6: Identification (A): The physical size and outsole design in the left shoe correspond with the pattern in the impression. General wear in the outsole correspond with areas in the impression. Randomly acquired characteristics correspond with three distinct and one little less clear detail in the impression. No significant differences could be detected. The results provide extremely strong support that the impression has been made by the left shoe. Q8: High degree of association (B): The physical size and outsole design in the right shoe correspond with the pattern in the impression. General wear in the shoe correspond with areas in the impression. One randomly acquired characteristics correspond with a distinct detail in the impression. A scratch in the outsole correspond with details in the impression although its clarity is disturbed by the floor structure. No significant differences could be detected. The results provide strong support that the impression has been made by the right shoe. Q9: Identification (A): The physical size and outsole design in the left shoe correspond with the pattern in the impression. General wear correspond with areas in the impression. Randomly acquired characteristics correspond with three distinct and one less clear detail in the impression. No significant differences could be detected. The results provide extremely strong support that the impression has been made by the left shoe.</p>
GGEM2Y-5331	<p>Impressions Q3 and Q8 were made by the K1 known right shoe. Impressions Q1, Q6, and Q9 were made by the K1 known left shoe. Impressions Q2 and Q4 have an outsole design similar to the K1 known right shoe. However, the impressions do not correspond in physical size and general wear to the K1 known right shoe and therefore, were not made by the K1 know right shoe. Impressions Q5 and Q7 have an outsole design similar to the K1 known left shoe. However, the impressions do not correspond in physical size and general wear to the K1 known left shoe and therefore, were not made by the K1 known left shoe.</p>
GKDZM4-5331	<p>In this test we used TrasoScan system and Lucia Forensic 7 40 program. The comparisons of the enclosed footwear impressions (Q1-Q9 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, Q6 and Q9 on the left outsole, Q3 and Q8 on the right outsole. Thus we concluded that Items Q2, Q4, Q5 and Q7 are different from the comparative materials.</p>
GT9Z4G-5331	<p>The imprints Q1, Q6, Q9 were made by the left suspect shoe. The imprint Q8 was made by the right suspect shoe. The imprint Q3 was probably made by the right suspect shoe. The imprints Q2, Q4, Q5, Q7 were not made by the suspect shoes.</p>
GU3TWE-5331	<p>Questioned impressions Q1 through Q9 were analyzed, compared and evaluated with the Item K1 known shoes. Questioned impression Q1 corresponds in tread design, physical size, specific wear and accidental characteristics with the K1 left shoe. Questioned impression Q3 corresponds in tread design, physical size, specific wear and accidental characteristics with the K1 right shoe. Questioned impression Q6 corresponds in tread design, physical size, specific wear and accidental characteristics with the K1 left shoe. Questioned impression Q8 corresponds in tread design, physical size, specific wear and accidental characteristics with the K1 right shoe. Questioned impression Q9 corresponds in tread design, physical size, specific wear and accidental characteristics with the K1 left shoe. Questioned impressions Q2 and Q4 are right footwear impressions but do not correspond in physical size or wear characteristics with the K1 shoes. Questioned impressions Q5 and Q7 are left footwear impressions but do not correspond in physical size or wear characteristics with the K1 shoes. Based upon the above factors it is the opinion of this examiner that: The K1 shoes can excluded as a source of the Item Q2, Q4, Q5 and Q7 questioned footwear impressions. The Item K1 left shoe is the source of and made the Item Q1, Q6 and Q9 questioned footwear impressions. The Item K1 right shoe is the source of and made the Item Q3 and Q8 questioned footwear impressions. Another item of</p>

TABLE 2

WebCode-Test	Conclusions
GUH6EK-5331	<p>footwear being the source of the impressions based upon the combination of characteristics observed is considered a practical impossibility. All conclusions listed herein have been verified by a second qualified latent print examiner.</p> <p>Item 8: 8.1 One partial left shoe impression labeled "Q1, found in the front of the store". Examined visually and with 1 to 1 photographic overlays. Comparison of item 8.1, the partial left shoe impression labeled "Q1, found in the front of the store", to the recovered left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level 1 association. 8.2 One partial right shoe impression labeled "Q2, found in the front of the store". Examined visually and with 1 to 1 photographic overlays. Comparison of item 8.2, the partial right shoe impression labeled "Q2, found in the front of the store", to the recovered right shoe did not reveal similar class characteristics or corresponding individualizing characteristics. The recovered right shoe is eliminated as the source for item 8.2. 8.3 One partial right shoe impression labeled "Q3, found in the front of the store". Examined visually and with 1 to 1 photographic overlays. Comparison of item 8.3, the partial right shoe impression labeled "Q3, found in the front of the store", to the recovered right shoe revealed similar class characteristics and corresponding individualizing characteristics. Level 1 association. Item 9: 9.1 One right shoe impression labeled "Q4, found on a newspaper in the front of the store". Examined visually and with 1 to 1 photographic overlays. Comparison of item 9.1, the right shoe impression labeled "Q4, found on a newspaper in the front of the store", to the recovered right shoe did not reveal similar class characteristics or corresponding individualizing characteristics. The recovered right shoe is eliminated as the source for item 9.1. 9.2 One left shoe impression labeled "Q5, found on a newspaper in the front of the store". Examined visually and with 1 to 1 photographic overlays. Comparison of item 9.2, the left shoe impression labeled "Q5, found on a newspaper in the front of the store", to the recovered left shoe did not reveal similar class characteristics or corresponding individualizing characteristics. The recovered left shoe is eliminated as the source for item 9.2. 9.3 One left shoe impression labeled "Q6, found on a newspaper in the front of the store". Examined visually and with 1 to 1 photographic overlays. Comparison of item 9.3, the left shoe impression labeled "Q6, found on a newspaper in the front of the store", to the recovered left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level 1 association. Item 10: 10.1 One left shoe impression labeled "Q7, found behind the cash register". Examined visually and with 1 to 1 photographic overlays. Comparison of item 10.1, the left shoe impression labeled "Q7, found behind the cash register", to the recovered left shoe did not reveal similar class characteristics or corresponding individualizing characteristics. The recovered left shoe is eliminated as the source for item 10.1. 10.2 One partial right shoe impression labeled "Q8, found behind the cash register". Examined visually and with 1 to 1 photographic overlays. Comparison of item 10.2, the partial right shoe impression labeled "Q8, found behind the cash register", to the recovered right shoe revealed similar class characteristics and corresponding individualizing characteristics. Level 1 association. 10.3 One partial left shoe impression labeled "Q9, found behind the cash register". Examined visually and with 1 to 1 photographic overlays. Comparison of item 10.3, the partial left shoe impression labeled "Q9, found behind the cash register", to the recovered left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level 1 association.</p>
HADRJR-5331	<p>Q1 was made by the Left Shoe of Item K. Q2 was not made by the Right or Left Shoe of Item K. Q3 was made by the Right Shoe of Item K. Q4 was not made by the Right or Left Shoe of Item K. Q5 was not made by the Right or Left Shoe of Item K. Q6 was made by the Left Shoe of Item K. Q7 was not made by the Right or Left Shoe of Item K. Q8 was made by the Right Shoe of Item K. Q9 was made by the Left Shoe of Item K.</p>
HH3FEU-5331	<p>2. Comparison: a. Questioned impressions Q1 through Q9 were compared to the known left and right shoes K1L and K1R, as well as test impressions generated by K1L and K1R with the following results: i. Q1 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q1 and K1L exhibit 4 corresponding individual characteristics. ii. Q3 and K1R are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In</p>

TABLE 2

WebCode-Test	Conclusions
	<p>addition, Q3 and K1R exhibit 4 corresponding individual characteristics. iii. Q6 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q6 and K1L exhibit 4 corresponding individual characteristics. iv. Q8 and K1R are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q8 and K1R exhibit 4 corresponding individual characteristics. v. Q9 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q9 and K1L exhibit 3 corresponding individual characteristics. vi. Q2, Q4, Q5, Q7 and K1L, K1R are different with respect to their size, shape, tread design and wear pattern (class characteristics). E) INTERPRETATION OF RESULTS: 1. It is the opinion of the undersigned that questioned footwear impressions Q1, Q6 and Q9 were made by the known shoe K1L. 2. It is the opinion of the undersigned that questioned footwear impressions Q3 and Q8 were made by the known shoe K1R. 3. It is the opinion of the undersigned that questioned footwear impressions Q2, Q4, Q5 and Q7 could not have been made by the known shoes K1L and K1R.</p>
HUIB9J-5331	<p>Examined visually and with 1 to 1 photographic overlays. Comparison of the shoe impression labeled "Q1, found in the front of the store on textured vinyl tile", to the recovered left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association. Comparison of the partial shoe impression labeled "Q2, found in the front of the store on textured vinyl tile", to the recovered right shoe and the recovered left shoe did not reveal similar wear patterns or corresponding individualizing characteristics. Elimination. Examined visually and with 1 to 1 photographic overlays. Comparison of the partial shoe impression labeled "Q3, found in the front of the store on textured vinyl tile", to the recovered right shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association. Examined visually and with 1 to 1 photographic overlays. Comparison of the partial shoe impression labeled "Q4, found on a newspaper in the front of the store", to the recovered right shoe and the recovered left shoe did not reveal similar wear patterns or corresponding individualizing characteristics. Elimination. Examined visually and with 1 to 1 photographic overlay. Comparison of the shoe impression labeled "Q5, found on a newspaper in the front of the store", to the recovered right shoe and the recovered left shoe did not reveal similar wear patterns or corresponding individualizing characteristics. Elimination. Examined visually and with 1 to 1 photographic overlays. Comparison of the shoe impression labeled "Q6, found on a newspaper in the front of the store", to the recovered left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association. Examined visually and with 1 to 1 photographic overlays. Comparison of the shoe impression labeled "Q7, found behind the cash register on textured vinyl tile", to the recovered right shoe and the recovered left shoe did not reveal similar wear patterns or corresponding individualizing characteristics. Elimination. Examined visually and with 1 to 1 photographic overlays. Comparison of the partial shoe impression labeled "Q8, found behind the cash register on textured vinyl tile", to the recovered right shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association. Examined visually and with 1 to 1 photographic overlays. Comparison of the partial shoe impression labeled "Q9, found behind the cash register on textured vinyl tile", to the recovered left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association.</p>
HXTBE4-5331	<p>Q1: Identification, The suspect impressions and the known shoes were examined and compared to have the same class characteristics and a sufficient quantity and quality of unique characteristics and wear to conclude identification of the left shoe. Q2: Exclusion, The suspect impression and the known shoes were examined and found to have a variety of different class, wear and RAC's to exclude the shoe. Q3: Identification of the right shoe. (justification as per Q1). Q4&5: Exclusion (justification as per Q2). Q6: Identification of the left shoe. (justification as per Q1). Q7: Exclusion (justification as per Q2). Q8: Identification of the right shoe (justification as per Q1). Q9: Identification of the left shoe (justification as per Q1)</p>
HXTM4E-5331	<p>[No Conclusions Reported.]</p>

TABLE 2

WebCode-Test	Conclusions
J68DYB-5331	<p>Shoeprints Q1 to Q9 were compared to the suspect shoes in order to determine whether or not the shoes could have made any of these shoeprints. By comparing the soles of the shoes to shoeprints it is often possible to determine whether or not a particular shoe made a print. Factors considered are the dimensions, sole pattern, any wear features and random damage seen in the sole of the shoe. These are compared to any features present in the shoeprint to establish whether or not there is any correspondence. The conclusions that may be reached are chosen from the following scale: neutral, slight support, moderate support, strong support, very strong support, extremely strong support, and conclusive. In determining the strength of this correspondence I have considered: the likelihood of finding the shoeprint evidence if the shoe made the print, and the likelihood of finding the shoeprint evidence if the shoe did not make the print. Shoeprints Q1, Q6 and Q9 all displayed a correspondence of sole pattern, dimensions and areas of damage with the left suspect shoe. In my opinion, this shoe, and only this shoe, could have made these shoeprints. These are conclusive comparison results. Shoeprints Q3 and Q8 displayed a correspondence of sole pattern, dimensions and areas of damage with the right suspect shoe. In my opinion, this shoe, and only this shoe, could have made these shoeprints. This is a conclusive comparison result. Shoeprints Q5 and Q7 displayed a similar pattern to the sole of the left suspect shoe. However, there were significant differences in dimensions of the tread elements; it appeared that the suspect shoe was smaller than the shoeprint. In my opinion, the left suspect shoe is excluded from having made the these shoeprints. Shoeprints Q2 and Q4 displayed similar patterns to the sole of the right suspect shoe. However, there were significant differences in dimensions of the tread elements; it appeared that the suspect shoe was smaller than the shoeprints. In my opinion, the right suspect shoe is excluded from having made these shoeprints.</p>
J6CVZV-5331	<p>The impressions marked Q1, Q3, Q6, Q8 and Q9 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, Q4, Q5 and Q7 correspond in general design, however, significant differences are noted in wear, therefore it can be stated that the Suspect's shoes were not the source of the impressions.</p>
J8GV83-5331	<p>Q1, Q6 and Q9 were made by the known left shoe. Q3 and Q8 were made by the known right shoe. Q2, Q4, Q5 and Q7 could not have been made by the known shoes.</p>
JCBP9A-5331	<p>Questioned imprints of Q1-Q9 were compared with known imprint made with the recovered shoes. Questioned imprints of Q3, Q8 were found to be consistent in shape, physical size, and individual characteristics with the imprint of the recovered right shoe. Questioned imprints of Q1, Q6 were found to be consistent in shape, physical size, and individual characteristics with the imprint of the suspect left shoe. Questioned imprints of Q9 were found to be consistent in shape, physical size with the imprint of the suspect left shoe, but it's individual characteristics don't have enough detail. Questioned imprints of Q2, Q4, Q5, Q7 were eliminated as having been made by the recovered shoe.</p>
JD899Q-5331	<p>Examination of Lab Items #8, #9 and #10 revealed nine questioned footwear impressions of value for comparison. Comparison of the questioned footwear impressions with the known footwear and test impressions of Lab Items #1 through #7 revealed the following: The known left shoe of K1a-g (Lab Items #1-7) was the source of the questioned impressions labeled Q1, Q6 and Q9. The known right shoe of K1a-g (Lab Items #1-7) was the source of the questioned impressions Q3 and Q8. The known shoes of K1a-g (Lab Items #1-7) are not the source of the questioned impressions Q2, Q4, Q5, and Q7.</p>
JK6ZEY-5331	<p>1. The questioned impressions Q2, Q4, Q5 and Q7 were examined and found not to have been made by the Suspect's pair of shoes. 2. The questioned impressions Q1 and Q6 were examined and found to have been made by the Suspect's left shoe. 3. The questioned impressions Q3 and Q8 were examined and found to have been made by the Suspect's right shoe. 4. The questioned impression Q9 was examined and was found very likely to have been made by the Suspect's left shoe. However,</p>

TABLE 2

WebCode-Test	Conclusions
JPYW36-5331	<p>other footwear with the same class characteristics and displaying the same wear and random characteristics as observed in the impression could also have made it.</p> <p>Q1 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q2 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q3 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q4 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q5 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q6 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q7 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q8 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q9 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe.</p>
JR8EAT-5335	Q1, Q6, and Q9 were identified to the left shoe from item K. Q3 and Q8 were identified to the right shoe from item K. Q2, Q4, Q5, and Q7 were excluded from the shoes from item K.
K2AN66-5332	The unknown impressions marked as Q1, Q6, and Q9 were made by the left shoe of item K1. There is agreement between the class, wear, and accidental characteristics of the impressions and the shoe in sufficient quantity to identify. The unknown impressions marked as Q3 and Q8 made by the right shoe of item K1. There is agreement between the class, wear, and accidental characteristics of the impressions and the shoe in sufficient quantity to identify. The unknown impressions marked Q2, Q4, Q5, and Q7 were not made by the footwear in item K1. There was sufficient disagreement between the class, wear, and/or accidental characteristics of the impressions and the footwear to exclude.
KC6XRD-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 shoes K1f and K1g on transparent films and superimposed them over the photographs of questioned impressions Q1 to Q9, and the result as below : 1.Questioned impressions labelled Q1, Q6 and Q9 were found to be consistent in shape, physical size and individual characteristics with the suspect's left shoe. 2.Questioned impressions labelled Q3 and Q8 were found to be consistent in shape, physical size and individual characteristics with the suspect's right shoe. 3.Questioned impressions labelled Q2, Q4, 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, Q4, Q5 and Q7 can be eliminated.

TABLE 2

WebCode-Test	Conclusions
KCQBE6-5332	<p>Q1, Q6 and Q9 were made by K1 left, shoe. Q3 and Q8 were made by K1, right shoe. These identifications were established by having agreement of physical size, design, wear characteristics and sufficient accidental characteristics to individualize. Q2 and Q4 were excluded from K1. Although there is agreement of design and approximate physical size to the K1 right shoe, there is sufficient differences in wear and accidental characteristics to eliminate. Q5 and Q7 were excluded from K1. Although there is agreement of design to the K1 left shoe, there is sufficient differences in physical size, wear and accidental characteristics to eliminate.</p>
KFMM3V-5332	<p>Footwear impressions suitable for comparison were noted in Exhibits Q1 - Q9. Three (3) footwear impressions noted in Exhibits Q1, Q6 and Q9 were made by the left shoe in Exhibits K1a - K1g based on design, physical size, shape, wear and randomly acquired characteristics. Two (2) footwear impressions noted in Exhibits Q3 and Q8 were made by the right shoe in Exhibits K1a - K1g based on design, physical size, shape, wear and randomly acquired characteristics. Four (4) footwear impressions noted in Exhibits Q2, Q4, Q5 and Q7 were not made by the shoes in Exhibits K1a - K1g based on differences in physical size and wear.</p>
KGJBW8-5331	<p>The questioned imprints Q1 and Q3 found in the front of the store were made by the left and right suspect shoe respectively. Questioned imprint Q2 was not made by the suspect shoe. Questioned imprint Q6 found on the newspaper was made by the left suspect shoe. Questioned imprints Q4 and Q5 were not made by the suspect shoe. Questioned imprints Q8 and Q9 found behind the cash register were made by the right and left suspect shoes respectively. Questioned imprint Q7 was not made by the suspect shoe.</p>
KUMYMF-5332	<p>In Q1, Q3, Q6, Q8 and Q9, I can find individual characteristics that identify the impressions with K1 (a-g). In Q2, Q4, Q5 and Q7, do not present the same individual characteristics present in K1 (a-g).</p>
KV7HU9-5331	<p>In my opinion, my findings show conclusively that the submitted footwear made two of the marks in the front of the store, one of the marks on a newspaper and two of the marks behind the cash register. In my opinion, my findings show conclusively that the submitted footwear did not make one of the marks in the front of the store, two of the marks on a newspaper and one of the marks behind the cash register. The evaluation of the evidence is assessed on a verbal scale of: No support for either proposition, no evaluation possible, limited, moderate, moderately strong, strong, very strong, extremely strong and conclusive.</p>
L2P73J-5331	<p>Sufficient agreements of class and individual characteristics confirmed the Q1, Q6, and Q9 impressions were made by the known left shoe. Sufficient agreements of class and individual characteristics confirmed the Q3 and Q8 impressions were made by the known right shoe. Disagreements of class characteristics confirmed the Q2, Q4, Q5, and Q7 impressions were not made by the known right or left shoes.</p>
L7XQQF-5331	<p>Comparison of the partial shoe imprint labeled "found in the front of the store (textured vinyl tile), Q1", (item 8.1), to the recovered "Crocs" left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association. Comparison of the partial shoe imprint labeled "found in the front of the store (textured vinyl tile), Q2", (item 8.2), to the recovered "Crocs" right and left shoes did not reveal corresponding individualizing characteristics. Elimination. Comparison of the partial shoe imprint labeled "found in the front of the store (textured vinyl tile), Q3", (item 8.3), to the recovered "Crocs" right shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association. Comparison of the partial shoe imprint labeled "found on a newspaper in the front of the store, Q4", (item 9.1), to the recovered "Crocs" right and left shoes did not reveal corresponding individualizing characteristics. Elimination. Comparison of the partial shoe imprint labeled "found on a newspaper in the front of the store, Q5", (item 9.2), to the recovered "Crocs" right and left shoes did not reveal corresponding individualizing characteristics. Elimination. Comparison of the partial shoe imprint labeled "found on a newspaper in the front of the store, Q6", (item 9.3), to the recovered "Crocs" left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association. Comparison of the partial shoe imprint labeled "found behind the cash register (textured vinyl tile), Q7", (item 10.1), to the recovered "Crocs" right and left shoes did not reveal corresponding individualizing</p>

TABLE 2

WebCode-Test	Conclusions
	characteristics. Elimination. Comparison of the partial shoe imprint labeled "found behind the cash register (textured vinyl tile), Q8", (item 10.2), to the recovered "Crocs" right shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association. Comparison of the partial shoe imprint labeled "found behind the cash register (textured vinyl tile), Q9", (item 10.3), to the recovered "Crocs" left shoe revealed similar class characteristics and corresponding individualizing characteristics. Level I association.
LJKXMG-5331	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 prints were given a closer look, with the result, that the following items could be excluded (as possibly been made by printmaker K1): Q4, Q5, Q7 same pattern as K1 but different shoe size and wear. Therefore G: EXCLUSION. CONCLUSION: Q1, Q3, Q6, Q8, Q9 = There is high degree of association or evidence beyond doubt (Identification), that the afore mentioned Q-Prints were made /caused by one of the soles of the suspect shoes K1 (class association and enough individualizing characteristics or wear).
LXMWK8-5331	The Known left shoe represented by K1a-K1g was identified as having made the shoe imprints Q1, Q6, and Q9. The Known right shoe represented by K1a through K1g was identified as having made the shoe imprints Q3 and Q8. Due to having dissimilar physical size, wear characteristics, and/or individual characteristics, the Known shoes represented by Items K1a-K1g were excluded from having made the shoe imprints Q2, Q4, Q5, and Q7.
LYY4WV-5331	Report: Q1, Q6 and Q9 matched the left sole of K1 in pattern, size, wear and acquired features. Q3 and Q8 matched the right sole of K1 in pattern, size, wear and acquired features. Q5 and Q7 matched the left sole of K1 in pattern, however, both were larger in size than K1 and were also more worn. Q2 and Q4 matched the right sole of K1 in pattern, however, both were larger in size than K1 and were also more worn. For this reason I would exclude the possibility of K1 having made the impressions Q2, Q4, Q5 and Q7. Evaluation: If footwear K1 made impressions Q1, Q3, Q6, Q8 and Q9 in the shop there is a high expectation that these impressions would match the footwear in pattern, size, wear and acquired features. If footwear other than K1 made impressions Q1, Q3, Q6, Q8 and Q9 there is a low expectation that these impressions would match the footwear in pattern and size and a very low expectation that they would match in wear and acquired features. The findings are therefore much more likely if footwear K1, rather than other footwear, made these impressions in the shop. Conclusion: The above findings provide extremely strong support for the view that footwear K1, rather than other footwear, made impressions Q1, Q3, Q6, Q8 and Q9 in the shop. I have chosen the above phrase from the following scale: weak support, moderate support, moderately strong support, strong support, very strong support, extremely strong support. The above findings also show that footwear K1 did not make impressions Q2, Q4, Q5 and Q7 in the shop.
M9XRBQ-5335	Impressions Q1, Q6, and Q9 was in agreement in individualizing characteristics and therefore identified as having been made by the left shoe in item K1. Impressions Q3 and Q8 were in agreement in individualizing characteristics and therefore identified as having been made by the right shoe in item K1. Impressions Q2, Q4, Q5, and Q7 were excluded as having been made by the shoes in item K1 due to opposite tread alignment or disagreement in individualizing characteristics, size, and wear.
MKU3YK-5331	Where A = Conclusive support that shoe made recovered detail. Where B = Strong support that shoe made recovered detail. Where F = There were indications of non-association. Full elimination was not made as questioned footwear were not available at the time of the examination.
MT4WP7-5331	The submitted photographs of the soles of the suspect shoes (K1a - K1c) and the known imprints made with the recovered shoes (K1d - K1g) were used for comparison purposes. Nine question imprints were photographed at the scene. The question imprints denoted as "Q1" and "Q9" are partial shoe impressions and the question imprint "Q6" is a partial left shoe impression. These impressions are similar in size, shape, tread design, and wear and share at least one or more randomly acquired characteristics with the known imprints of the left suspect shoe (K1d - K1g). It is my opinion that these partial shoe impressions and partial left shoe impression were made by the left suspect shoe. The question imprints denoted as "Q3" and "Q8" are partial shoe impressions. These impressions are

TABLE 2

WebCode-Test	Conclusions
	similar in size, shape, tread design, and wear and share at least two randomly acquired characteristics with the known imprints of the right suspect shoe (K1d - K1g). It is my opinion that these partial shoe impressions were made by the right suspect shoe. The question imprint denoted as "Q2" is a partial right shoe impression and the question imprint denoted as "Q4" is a full right shoe impression. These impressions are both dissimilar in size and/or wear characteristics to the known imprints of the right suspect shoe (K1d - K1g). It is my opinion that this partial right shoe impression and full right shoe impression were not made by the suspect right shoe. The question imprint denoted as "Q5" is a full left shoe impression and the question impression denoted as "Q7" is a partial left shoe impression. These impressions are both dissimilar in size and wear characteristics to the known imprints of the left suspect shoe (K1d - K1g). It is my opinion that this full left shoe impression and partial left shoe impression were not made by the suspect left shoe.
N6XBN3-5331	Q1 and Q6 were identified to the left shoe of Exhibit K1. Q2, Q4, Q5, and Q7 have indications of non-association with Exhibit K1. Q3 and Q8 exhibit a high degree of association with the right shoe of Exhibit K1. Q9 exhibits a high degree of association with the left shoe of Exhibit K1.
N6ZZVK-5331	Imprint Q-1 is identified as being made by the left shoe of item K1. Imprint Q-2 was not made by the left or right shoe of item K1. Imprint Q-3 is identified as being made by the right shoe of item K1. Imprint Q-4 was not made by the left or right shoe of item K1. Imprint Q-5 was not made by the left or right shoe of item K1. Imprint Q-6 is identified as being made by the left shoe of item K1. Imprint Q-7 was not made by the left or right shoe of item K1. Imprint Q-8 is identified as being made by the right shoe of item K1. Imprint Q-9 Corresponds in class characteristics, wear, and one randomly acquired characteristic with the left shoe of item K1 and presents a high degree of association.
NBLKP8-5331	Q1: CONCLUSIVE evidence. Q2: EXCLUSION. Q3: EXTREMELY STRONG evidence. Q4: EXCLUSION. Q5: EXCLUSION. Q6: CONCLUSIVE evidence. Q7: EXCLUSION. Q8: CONCLUSIVE evidence. Q9: VERY STRONG evidence
NCVXK9-5331	Footwear marks Q1,Q6 and Q9 have been made by the submitted left shoe. Footwear marks Q3 and Q8 have been made by the submitted right shoe. Footwear marks Q2,Q4,Q5 and Q7 have been eliminated from having been made by the submitted left and right shoes.
NF2XPT-5331	PHYSICAL EVIDENCE EXAMINATION REPORT: SUMMARY: Three imprints, Items 001-Q1, Q6, and Q9, were produced by the recovered left shoe represented in Items 001-K1a through 001-K1g. One imprint, Item 001-Q8, was produced by the recovered right shoe. One imprint, Item 001-Q3, was likely produced by the recovered right shoe. The remaining four imprints, Items 001-Q2, Q4, Q5, and Q7, were not produced by either of the recovered shoes. EVIDENCE EXAMINED: Note: In this report, a two-part number, for example 001- 1, references an item. The first portion (001) is the laboratory submission number and the second portion (1) is the item number. Item Description 001-K1a through c: Three photograph depicting the soles of the recovered shoes. 001-K1d through g: Four photographs depicting known imprints produced by the recovered shoes. 001-Q1 through Q3: One photograph depicting three questioned imprints found in the front of the store. 001-Q4 through Q6: One photograph depicting three questioned imprints found on a newspaper in the front of the store. 001-Q7 through Q9: One photograph depicting three questioned imprints found behind the cash register. EXAMINATION, RESULTS and CONCLUSIONS: I was requested to compare the questioned imprints in three photographs, Items 001-Q1 through 001-Q9, to the photographs of the recovered shoes and the known imprints they produced, Items 001-K1a through 001-K1g. All of the questioned imprints and the known imprints have been produced with a black substance. Items 001-Q1, Q6, and Q9 each depict a left shoe imprint. When I compared these imprints to the photographs of the recovered left shoe sole and its known imprints, Items 001-K1a through g, 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 three imprints were produced by the recovered left shoe. Item 001-Q8 depicts a right shoe imprint. When I compared this imprint to photographs of the recovered right shoe sole and its known imprints, Items 001-K1a through g, I observed correspondence in their size, tread design, and general wear pattern. I also observed sufficient correspondence in the quantity and quality of randomly

TABLE 2

WebCode-Test	Conclusions
	<p>acquired characteristics to conclude it was produced by the recovered right shoe. Item 001-Q3 also depicts a right shoe imprint and during the comparison I observed correspondence in their size, tread design, and general wear pattern. The fidelity of the randomly acquired characteristics, however, was obscured by the texture of the flooring but their location and general shape corresponded to the recovered shoe. Therefore, I concluded that Item 001-Q3 was likely produced by the recovered right shoe. Items 001-Q2 and Q4 each depict a right shoe, and Items 001-Q5 and Q7 each depict a left shoe. When I compared these imprints to the photographs of the recovered shoes and their known imprints, Items 001-K1a through g, I observed differences in their wear pattern and randomly acquired characteristics. I concluded that these imprints were not produced by the recovered shoes.</p>
NRQUQQ-5331	<p>Impressions Q1, Q6, and Q9 were made by the recovered left Crocs shoe, K1-left. Impressions Q3 and Q8 were made by the recovered right Crocs shoe, K1-right. Impressions Q2 and Q4 were made by a second right shoe based on differences in wear and individual characteristics. Impressions Q5 and Q7 were made by a second left shoe based on differences in wear and individual characteristics.</p>
NRRGV6-5331	<p>The partial left shoeprint impression (Q1) depicted in the photograph from the crime scene was similar in class characteristics (tread design, size) and also share randomly acquired characteristics to the recovered left shoe (K1a through K1g). It is our opinion that the partial left shoeprint impression depicted in the photograph from the crime scene was made by the recovered left shoe. The partial right shoeprint impression (Q2) depicted in the photograph from the crime scene was dissimilar in class characteristics (size) to the recovered right shoes (K1a through K1g). It is our opinion that the partial right shoeprint impression depicted in the photograph from the crime scene was not made by the recovered right shoe. The partial right shoeprint impression (Q3) depicted in the photograph from the crime scene was similar in class characteristics (tread design, size) and also share randomly acquired characteristics to the recovered right shoe (K1a through K1g). It is our opinion that the partial right shoeprint impression depicted in the photograph from the crime scene was made by the recovered right shoe. The full right shoeprint impression (Q4) depicted in the photograph from the crime scene was dissimilar in class characteristics (size) to the recovered right shoe (K1a through K1g). It is our opinion that the full right shoeprint impression depicted in the photograph from the crime scene was not made by the recovered right shoe. The full left shoeprint impression (Q5) depicted in the photograph from the crime scene was dissimilar in class characteristics (size) to the recovered left shoe (K1a through K1g). It is our opinion that the full left shoeprint impression depicted in the photograph from the crime scene was not made by the recovered left shoe. The full left shoeprint impression (Q6) depicted in the photograph from the crime scene was similar in class characteristics (tread design, size) and also share randomly acquired characteristics to the recovered left shoe (K1a through K1g). It is our opinion that the full left shoeprint impression depicted in the photograph from the crime scene was made by the recovered left shoe. The full left shoeprint impression (Q7) depicted in the photograph from the crime scene was dissimilar in class characteristics (size) to the recovered left shoe (K1a through K1g). It is our opinion that the full left shoeprint impression depicted in the photograph from the crime scene was not made by the recovered left shoe. The full right shoeprint impression (Q8) depicted in the photograph from the crime scene was similar in class characteristics (tread design, size) and also share randomly acquired characteristics to the recovered right shoe (K1a through K1g). It is our opinion that the full right shoeprint impression depicted in the photograph from the crime scene was made by the recovered right shoe. The partial left shoeprint impression (Q9) depicted in the photograph from the crime scene was similar in class characteristics (tread design, size) and also share randomly acquired characteristics to the recovered left shoe (K1a through K1g). It is our opinion that the partial left shoeprint impression depicted in the photograph from the crime scene was made by the recovered left shoe.</p>
PFPFV7-5331	<p>The Item Q1 through Q9 questioned footwear impressions were analyzed, compared, and evaluated with the Item K1 right and left known footwear. The Item Q1 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 left shoe. The Item Q2 questioned footwear impression does not correspond in specific wear with the Item K1 shoes. The Item Q3 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 right shoe. The Item Q4 questioned</p>

TABLE 2

WebCode-Test	Conclusions
	<p>footwear impression does not correspond in specific wear with the Item K1 shoes. The Item Q5 questioned footwear impression does not correspond in physical size and specific wear with the Item K1 shoes. The Item Q6 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 left shoe. The Item Q7 questioned footwear impression does not correspond in specific wear with the Item K1 shoes. The Item Q8 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 right shoe. The Item Q9 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 left shoe. Based upon the above factors, it is the opinion of this examiner that: The Item K1 right shoe was the source of, and made the Items Q3 and Q8 questioned footwear impressions. The combination of characteristics observed between the Items Q3 and Q8, questioned footwear impressions, and the Item K1 right shoe occurring from another source is considered a practical impossibility. The Item K1 left shoe was the source of, and made the Items Q1, Q6 and Q9 questioned footwear impression. The combination of characteristics observed between the Item Q1, Q6 and Q9 questioned footwear impressions, and the Item K1 left shoe occurring from another source is considered a practical impossibility. The Items Q2, Q4, Q5 and Q7 questioned footwear impressions share a high degree of non-association with the Items K1 right/left shoes. The Items Q2, Q4, Q5 and Q7 questioned footwear impressions were not made by the Items K1 right/left shoes. All conclusions listed herein have been verified by a second qualified latent print examiner.</p>
PKL3QF-5331	<p>It was determined that the impressions, Q-1, Q-3, Q-6, Q-8 and Q-9 were made by the submitted shoes, K-1. It was also determined that the impressions, Q-2, Q-4, Q-5 and Q-7, were not made by the submitted shoes, K-1.</p>
PLGKQV-5335	<p>The questioned imprints Q1 and Q6 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 shoe sole and the known imprints, which were made with the left shoesole. The recovered left shoe was the source of, and made, the questioned imprints Q1 and Q6. Another item of footwear being the source of the imprints is considered a practical impossibility. The questioned imprints Q3 and Q8 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 imprints, 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 imprints are included in the population of possible sources only if they display the same wear and randomly acquired characteristics observed in the questioned imprints Q3 and Q8. The questioned imprint Q9 is associated with the sole of the left shoe. It corresponds in class characteristics of design, physical size, and general wear and randomly acquired characteristics to the recovered left shoe and the known imprints, which were made with the left shoe sole. 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 Q9. Sufficient differences were noted in the comparison of class characteristics between the questioned imprints Q2, Q4, Q5 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, Q4, Q5 and Q7.</p>
PN6WP2-5332	<p>Q1, Q6, Q8 and Q9 were made by the known shoe, K1. There is agreement of class, wear and randomly acquired defects sufficient for an identification. Q3 shares a high degree of association with the known shoe, K1. There is agreement of class, wear and a few randomly acquired defects sufficient for association. Q2, Q4, Q5 and Q7 were not made by the known shoe, K1. There is sufficient differences in wear and randomly acquired characteristics to exclude.</p>
PTEFNU-5331	<p>The questioned imprints Q3 and Q8 were made by the suspect's right shoe whilst Q1, Q6 and Q9 were made by the suspect's left shoe. The questioned imprints Q2 and Q4 were not made by the suspect's pair of shoes, but were made by the same shoe (right). The questioned imprints Q5 and Q7 were not made by the suspect's pair of shoe, neither by those who made imprints Q2 and Q4.</p>

TABLE 2

WebCode- Test	Conclusions
Q2N7K6- 5331	Imprints Q5 and Q7 have been made by the same shoe (left shoe).
Q4WC6K- 5331	The known items of footwear, K1, were compared to the questioned imprints, Q1 through Q9. The comparison and examination revealed the following information: Q1 and Q6 were made by the left known outsole, K1. Q3 and Q8 were made by the right known outsole, K1. Q2 and Q4 were made by the same right outsole, which was not K1. Q5 and Q7 were made by the same left outsole, which was not K1. Q9 could have been made by the known left outsole, K1, or another outsole with similar features.
QAM2XN- 5331	Q1, Q6 and Q9 were made by K1 left. Q3 and Q8 were made by K1 right. Q2, Q4, Q5 and Q7 could not have been made by K1 left or right.
QC6TU7- 5335	Questioned impressions Q1, Q6, and Q9 were made by the submitted left Crocs brand shoe, Men's size 11, K1. Questioned impressions Q3 and Q8 were made by the submitted right Crocs brand shoe, Men's size 11, K1. Questioned impressions Q2 and Q4 were made by a second right shoe. Suspect shoes include Crocs brand shoes; however, any suspect shoes should be submitted to the laboratory for examination. Questioned impressions Q5 and Q7 were made a second left shoe. Suspect shoes include Crocs brand shoes; however, any suspect shoes should be submitted to the laboratory for examination.
QFRXHN- 5331	In my opinion, the findings show conclusively that five of the marks (Q1, Q3, Q6, Q8 and Q9) recovered from the scene were made by the pair of shoes relating to the suspect. In my opinion, the findings show conclusively that four of the marks (Q2, Q4, Q5 and Q7) recovered from the scene were not made by the pair of shoes relating to the suspect.
QGJLP6- 5331	Comparison examinations were conducted and the findings of this examiner are as follows: Impressions Q1, Q6, and Q9 were made by the submitted Left shoe (K1). Impressions Q3 and Q8 were made by the submitted Right shoe (K1). Impressions Q2 and Q4 were made by an additional Right shoe with similar outsole design as the submitted (K1) shoe. Impressions Q5 and Q7 were made by an additional Left shoe with similar outsole design as the submitted (K1) shoe.
QGJLP6- 5331	In the opinion of this examiner, the particular known footwear was not the source of, and did not make the impressions identified as Q2, Q4, Q5, and Q7. This elimination is based on disagreement in size and wear pattern/degree of wear with known footwear for impressions Q5 and Q7 and disagreement in wear pattern/degree of wear for impressions Q2, and Q4. In the opinion of this examiner, the particular known left footwear was the source of, and did make, the crime scene impression identified as Q1. This is based on agreement of class characteristics, sizing, wear pattern, and the presence of three individual characteristics that are matching in size, orientation, and spatial relationship. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, the particular known right footwear was the source of, and did make, the crime scene impression identified as Q3. This is based on agreement of class characteristics, sizing, wear pattern, and the presence of four individual characteristics that are matching in size, orientation, and spatial relationship. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, the particular known left footwear was the source of, and did make, the crime scene impression identified as Q6. This is based on agreement of class characteristics, sizing, wear pattern, and the presence of three individual characteristics that are matching in size, orientation, and spatial relationship. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, the particular known right footwear was the source of, and did make, the crime scene impression identified as Q8. This is based on agreement of class characteristics, sizing, wear pattern, and the presence of four individual characteristics that are matching in size, orientation, and spatial relationship. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, the particular known left footwear was the source of, and did make, the crime scene impression identified as Q9. This is based on agreement of class characteristics, sizing, wear pattern, and the presence of three individual characteristics that are matching in size, orientation, and spatial relationship. Another item of footwear being the source of the impression is considered a practical impossibility.

TABLE 2

WebCode-Test	Conclusions
QHG647-5331	<p>Q1: The questioned impression & known item (left shoe) share agreement of class & randomly acquired characteristics of sufficient quality & quantity - Identification. Q2: The questioned impression & known items exhibit sufficient differences of class & randomly acquired characteristics - Exclusion. Q3: As per Q1 (right shoe) - Identification. Q4: As per Q2 - Exclusion. Q5: As per Q2 - Exclusion. Q6: As per Q1 (left shoe)- Identification. Q7: As per Q2 - Exclusion. Q8: As per Q1 (right shoe) - Identification. Q9: As per Q1 (left shoe) - Identification.</p>
QK2QG9-5331	<p>Footwear impression Q1 orients with a left shoe. This impression corresponds to the K1 left shoe in outsole design, physical size, wear and three randomly acquired characteristics. Therefore, the K1 left shoe was identified as the source of this impression. Footwear impression Q2 orients with a right shoe. This impression corresponds to the K1 right shoe in outsole design. However, differences in physical size and wear were observed between this impression and the K1 right shoe. Therefore, the K1 right shoe was eliminated as the source of this impression. Footwear impression Q3 orients with a right shoe. This impression corresponds to the K1 right shoe in outsole design, physical size, wear and three randomly acquired characteristics. Therefore, the K1 right shoe was identified as the source of this impression. Footwear impression Q4 orients with a right shoe. This impression corresponds to the K1 right shoe in outsole design. However, differences in physical size and wear were observed between this impression and the K1 right shoe. Therefore, the K1 right shoe was eliminated as the source of this impression. Footwear impression Q5 orients with a left shoe. This impression corresponds to the K1 left shoe in outsole design. However, differences in physical size and wear were observed between this impression and the K1 left shoe. Therefore, the K1 left shoe was eliminated as the source of this impression. Footwear impression Q6 orients with a left shoe. This impression corresponds to the K1 left shoe in outsole design, physical size, wear and four randomly acquired characteristics. Therefore, the K1 left shoe was identified as the source of this impression. Footwear impression Q7 orients with a left shoe. This impression corresponds to the K1 left shoe in outsole design. However, differences in physical size and wear were observed between this impression and the K1 left shoe. Therefore, the K1 left shoe was eliminated as the source of this impression. Footwear impression Q8 orients with a right shoe. This impression corresponds to the K1 right shoe in outsole design, physical size, wear and four randomly acquired characteristics. Therefore, the K1 right shoe was identified as the source of this impression. Footwear impression Q9 orients with a left shoe. This impression corresponds to the K1 left shoe in outsole design, physical size, wear and two randomly acquired characteristics. Therefore, the K1 left shoe was identified as the source of this impression.</p>
QLXYVK-5332	<p>Item 2: Digital image; One (1) partial questioned footwear impression (Q1); Same tread size, design and matching randomly acquired characteristics as the left known shoe (Item 1); This questioned impression was made exclusively by this known shoe. One (1) partial questioned footwear impression (Q2); Same tread design as the known shoe (Item 1); but different with respect to tread size and wear characteristics; Exclusion. One (1) partial questioned footwear impression (Q3); Same tread size, design and apparent randomly acquired characteristics as the right known shoe (Item 1) – insufficient for identification; Could have been made by this shoe. Although it could not be conclusively identified to the known shoe, this questioned impression was found to exhibit unusual matching characteristics that would not be expected to be found in the population of this evidence type. Item 3: Digital image; One (1) partial questioned footwear impression (Q4); Same tread design as the known shoe (Item 1); but different with respect to tread size and wear characteristics; Exclusion. One (1) partial questioned footwear impression (Q5); Same tread design as the known shoe (Item 1); but different with respect to tread size and wear characteristics; Exclusion. One (1) partial questioned footwear impression (Q6); Same tread size, design and matching randomly acquired characteristics as the left known shoe (Item 1); This questioned impression was made exclusively by this known shoe. Item 4: Digital image; One (1) partial questioned footwear impression (Q7); Same tread design as the known shoe (Item 1); but different with respect to tread size and wear characteristics; Exclusion. One (1) partial questioned footwear impression (Q8); Same tread size, design and matching randomly acquired characteristics as the right known shoe (Item 1); This questioned impression was made exclusively by this known shoe. One (1) partial questioned footwear impression (Q9); Same tread size, design and matching randomly acquired characteristics as the left known shoe (Item 1); This questioned impression was made exclusively by this known shoe.</p>

TABLE 2

WebCode-Test	Conclusions
QQ9ALT-5331	<p>Three imprints (Q1-Q3) were observed on the vinyl tile in the front of the store, three imprints (Q4-Q6) were observed a newspaper in the front of the store, and three imprints (Q7-Q9) were observed on the vinyl tile behind the cash register. These imprints (Q1-Q9) all featured the same tread design consisting of curving rectangular-shaped elements bordered by square-shaped elements. A pair of Men's size 11 Crocs Santa Cruz 2 shoes (K1) was submitted for comparison. The tread design observed on the outsole of the Crocs shoes (K1) consisted of curving rectangular-shaped elements bordered by square-shaped elements. The imprints (Q1-Q9) were visually compared to the Crocs shoes (K1). The partial imprint (Q1) corresponds in tread design, physical shape and size, wear, and several randomly acquired individual characteristics to the LEFT Crocs shoe (K1). Therefore, the partial imprint (Q1) was IDENTIFIED as having been made by the LEFT Crocs shoe (K1). The partial imprint (Q2) corresponds in tread design to the RIGHT Crocs shoe (K1); however, there are differences in physical shape and size, wear, and randomly acquired individual characteristics. Therefore, the LEFT and RIGHT Crocs shoes (K1) can be ELIMINATED as a source of the partial imprint (Q2). The partial imprint (Q3) corresponds in tread design, physical shape and size, wear, and several randomly acquired individual characteristics to the RIGHT Crocs shoe (K1). Therefore, the partial imprint (Q3) was IDENTIFIED as having been made by the RIGHT Crocs shoe (K1). The imprint (Q4) corresponds in tread design to the RIGHT Crocs shoe (K1); however, there are differences in physical shape and size, wear, and randomly acquired individual characteristics. Therefore, the LEFT and RIGHT Crocs shoes (K1) can be ELIMINATED as a source of the imprint (Q4). The imprint (Q5) corresponds in tread design to the LEFT Crocs shoe (K1); however, there are differences in physical shape and size, wear, and randomly acquired individual characteristics. Therefore, the LEFT and RIGHT Crocs shoes (K1) can be ELIMINATED as a source of the imprint (Q5). The imprint (Q6) corresponds in tread design, physical shape and size, wear, and several randomly acquired individual characteristics to the LEFT Crocs shoe (K1). Therefore, the imprint (Q6) was IDENTIFIED as having been made by the LEFT Crocs shoe (K1). The imprint (Q7) corresponds in tread design to the LEFT Crocs shoe (K1); however, there are differences in physical shape and size, wear, and randomly acquired individual characteristics. Therefore, the LEFT and RIGHT Crocs shoes (K1) can be ELIMINATED as a source of the imprint (Q7). The imprint (Q8) corresponds in tread design, physical shape and size, wear, and several randomly acquired individual characteristics to the RIGHT Crocs shoe (K1). Therefore, the imprint (Q8) was IDENTIFIED as having been made by the RIGHT Crocs shoe (K1). The partial imprint (Q9) corresponds in tread design, physical shape and size, wear, and several randomly acquired individual characteristics to the LEFT Crocs shoe (K1). Therefore, the partial imprint (Q9) was IDENTIFIED as having been made by the LEFT Crocs shoe (K1). Additionally, the imprints (Q2 and Q4) are consistent in tread design, physical shape and size, wear, and a few randomly acquired individual characteristics. The imprints (Q2 and Q4) were likely made by the same unknown RIGHT shoe. The imprints (Q5 and Q7) are consistent in tread design, physical shape and size, wear, and a few randomly acquired individual characteristics. The imprints (Q5 and Q7) were likely made by the same unknown LEFT shoe.</p>
QWXP3-5331	<p>Q1 was identified as the left K1 shoe. The impression & the shoe share agreement of class & randomly acquired characteristics of sufficient quality & quantity. Q2 was made by a right shoe, however the right K1 shoe was excluded as the source due to differences in class & randomly acquired characteristics. Q3 was made by a right shoe. There is limited association of similar class characteristics between the questioned & known items with significant limiting factors (partial nature, few randomly acquired & non-descript features). Q4, Q5, & Q7: were excluded as having been made by K1 shoes due to differences in class & randomly acquired characteristics. Q6 & Q9 were made by a left shoe and were identified as the left K1 shoe. Q8 was made by a right shoe and shows a high degree of association w/the R K1 shoe.</p>
QX66LC-5331	<p>The submitted photo (item #4) depicts three footwear impression labeled Q1, Q2, and Q3: The partial impression labeled Q1 shares class and unique characteristics with the suspect's left shoe, indicating that this questioned impression was made by the suspect's left shoe. The partial impression labeled Q2 exhibits the same manufacturer's design as the suspect's right shoe, however the degree of wear depicted in the questioned impression is significantly greater than the degree of wear evident</p>

TABLE 2

WebCode-Test	Conclusions
	<p>on the suspect's shoes, indicating that the questioned impression was not made by the suspect's shoes. The partial impression labeled Q3 shares class and unique characteristics with the suspect's right shoe, indicating that this questioned impression was made by the suspect's right shoe. The submitted photo (item #5) depicts three footwear impressions labeled Q4, Q5, and Q6: The footwear impression labeled Q4 exhibits the same manufacturer's design as the suspect's right shoe, however the degree of wear depicted in the questioned impression is significantly greater than the degree of wear evident on the suspect's shoes, indicating that the questioned impression was not made by the suspect's shoes. The footwear impression labeled Q5 exhibits the same manufacturer's design as the suspect's left shoe, however the degree of wear depicted in the questioned impression is significantly greater than the degree of wear evident on the suspect's shoes, indicating that the questioned impression was not made by the suspect's shoes. The footwear impression labeled Q6 shares class and unique characteristics with the suspect's left shoe, indicating that this questioned impression was made by the suspect's left shoe. The submitted photo (item #6) depicts three footwear impressions labeled Q7, Q8, and Q9: The footwear impression labeled Q7 exhibits the same manufacturer's design as the suspect's left shoe, however the degree of wear depicted in the questioned impression is significantly greater than the degree of wear evident on the suspect's shoes, indicating that the questioned impression was not made by the suspect's shoes. The footwear impression labeled Q8 shares class and unique characteristics with the suspect's right shoe, indicating that this questioned impression was made by the suspect's right shoe. The partial impression labeled Q9 shares class and unique characteristics with the suspect's left shoe, indicating that this questioned impression was made by the suspect's left shoe.</p>
R3ZTR6-5335	[No Conclusions Reported.]
R4B3TV-5331	<p>Q1 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q2 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q3 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q4 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q5 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q6 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by the known left shoe. Q7 - The questioned footwear impression is similar in outsole design to the know pair of shoes, however, it does not correspond in physical size or general wear; therefore, it was determined that the questioned footwear impression was not made by either of the known shoes. Q8 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known right shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics also present in the known right shoe. Therefore, it was determined that the questioned footwear impression was made by the known right shoe. Q9 - The questioned footwear impression corresponds in outsole design, physical size, and general wear with the known left shoe submitted. Additionally, the questioned footwear impression contains unique identifying characteristics that are also present in the known left shoe. Therefore, it was determined that the questioned footwear impression was made by</p>

TABLE 2

WebCode-Test	Conclusions
RKFXDV-5332	<p>the known left shoe.</p> <p>Based on an assessment of class and randomly acquired characteristics, it is my opinion the left Crocs brand shoe was the source of, and made, the questioned marks Q1, Q6 and Q9. The chance of another shoe being the source of the marks is considered negligible. Based on an assessment of class and randomly acquired characteristics, it is my opinion the right Crocs brand shoe was the source of, and made, the questioned marks Q3 and Q8. The chance of another shoe being the source of the marks is considered negligible. The shoe marks labelled Q2, Q4, Q5 and Q7 displayed similar patters but were different sizes to the submitted Crocs brand shoes. As such, it is my opinion that they were excluded from having produced the marks.</p>
RVCHK9-5331	<p>Question 1: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics are visible meaning that this known is the only one capable of making this impression. Question 2: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics is visible but does not correspond, meaning that the known is not capable of leaving this impression. Question 3: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics are visible meaning that this known is the only one capable of making this impression. Question 4: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics is visible but does not correspond meaning that this known is not capable of leaving this impression. Question 5: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics is visible but does not correspond meaning that the known is not capable of leaving this impression. Question6: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics are visible meaning that this known is the only one capable of making this impression. Question 7: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics is visible but does not correspond, meaning that the known is not capable of leaving this impression. Question 8: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics are visible meaning that this known is the only one capable of making this impression. Question 9: The design and physical size are the same. the design elements are in a specific order which corresponds. The wear and individual characteristics are visible meaning that this known is the only one capable of making this impression. All of the above crime scene prints are partial prints</p>
T2XUY2-5331	<p>[No Conclusions Reported.]</p>
T9WF64-5331	<p>Impressions Examination and Comparison: In comparing the Questioned imprints (Items #Q1, #Q6, and #Q9) to the Known recovered shoes and impressions (#K1A-#K1G), it was found that the tread design, tread size, general wear pattern, and unique wear characteristics are consistent with the Known left shoe. Therefore, in the opinion of the examiner, Items #Q1, #Q6, and #Q9 were made by the Known left shoe. In comparing the Questioned imprints (Items #Q3 and #Q8) to the Known recovered shoes and impressions (#K1A-#K1G), it was found that the tread design, tread size, general wear pattern, and unique wear characteristics are consistent with the Known right shoe. Therefore, in the opinion of the examiner, Items #Q3 and #Q8 were made by the Known right shoe. In comparing the Questioned imprints (Items #Q2, #Q4, #Q5, and #Q7) to the Known recovered shoes and impressions (#K1A-#K1G), it was found that the tread design appears to be consistent, however, the tread size and/or general wear patterns are different. Therefore, in the opinion of the examiner, Items #Q2, #Q4, #Q5, and #Q7 could not have been made by the Known recovered shoes. All evidence will be returned to the submitter.</p>
TABCLM-5332	<p>It is the opinion of the undersigned examiners that Q2 was made by a right shoe and is not consistent in size and wear characteristics with the known right shoe. Q2 was not made by the known right shoe. It is the opinion of the undersigned examiners that Q3 is consistent in outsole design, physical size,</p>

TABLE 2

WebCode-Test	Conclusions
	<p>physical shape and wear characteristics with the known right shoe. In addition, there are individual characteristics present in Q3 which are consistent in location, size and shape with the known right shoe. Q3 was made by the known right shoe. It is the opinion of the undersigned examiners that Q4 was made by a right shoe and is not consistent in size and wear characteristics with the known right shoe. Q4 was not made by the known right shoe. It is the opinion of the undersigned examiners that Q5 was made by a left shoe and is not consistent in size and wear characteristics with the known left shoe. Q5 was not made by the known left shoe. It is the opinion of the undersigned examiners that Q6 is consistent in outsole design, physical size, physical shape and wear characteristics with the known left shoe. In addition, there are individual characteristics present in Q6 which are consistent in location, size and shape with the known left shoe. Q6 was made by the known left shoe. It is the opinion of the undersigned examiners that Q7 was made by a left shoe and is not consistent in size and wear characteristics with the known left shoe. Q7 was not made by the known left shoe. It is the opinion of the undersigned examiners that Q8 is consistent in outsole design, physical size, physical shape and wear characteristics with the known right shoe. In addition, there are individual characteristics present in Q8 which are consistent in location, size and shape with the known right shoe. Q8 was made by the known right shoe. It is the opinion of the undersigned examiners that Q9 is consistent in outsole design, physical size, physical shape and wear characteristics with the known left shoe. In addition, there are individual characteristics present in Q9 which are consistent in location, size and shape with the known left shoe. Q9 was made by the known left shoe.</p>
TAVPWZ-5332	<p>B. Extremely strong support for... Q1, Q6, Q8, Q9. Strong support for..... Q3. G. The shoes has not... We never use the conclusion "Identification"</p>
TCYBTD-5331	<p>An examination was conducted comparing the known submitted left and right outsoles (Crocs – Santa Cruz 2 Luxe Leather Men’s size 11 US) to nine questioned crime scene footwear impressions of value (Q1 – Q9). Q1 is identified as being made by the submitted left "Crocs" outsole based on design, physical size, degree/position of wear, and randomly acquired characteristics. Another item of footwear being the source of the impression is considered a practical impossibility. Q2 is excluded as being made by either of the submitted "Crocs" outsoles. Q3 is identified as being made by the submitted right "Crocs" outsole based on design, physical size, degree/position of wear, and randomly acquired characteristics. Another item of footwear being the source of the impression is considered a practical impossibility. Q4 is excluded as being made by either of the submitted "Crocs" outsoles. Q5 is excluded as being made by either of the submitted "Crocs" outsoles. Q6 is identified as being made by the submitted left "Crocs" outsole based on design, physical size, degree/position of wear, and randomly acquired characteristics. Another item of footwear being the source of the impression is considered a practical impossibility. Q7 is excluded as being made by either of the submitted "Crocs" outsoles. Q8 is identified as being made by the submitted right "Crocs" outsole based on design, physical size, degree/position of wear, and randomly acquired characteristics. Another item of footwear being the source of the impression is considered a practical impossibility. Q9 is identified as being made by the submitted left "Crocs" outsole based on design, physical size, degree/position of wear, and randomly acquired characteristics. Another item of footwear being the source of the impression is considered a practical impossibility.</p>
TF2EFT-5331	<p>Photographs of the shoe prints submitted as Q1-Q9 were examined and compared to the photographs of known soles and test shoe prints submitted as K1. The shoe prints submitted as Q1, Q6, and Q9 were made by the K1 left shoe. The shoe prints submitted as Q3 and Q8 were made by the K1 right shoe. The shoe prints submitted as Q2, Q4, Q5, and Q7 were not made by the K1 shoes.</p>
TJGENY-5335	<p>Known shoe K1 (left shoe) was identified as the source of impressions Q1, Q6, and Q9. Known shoe K1 (right shoe) was identified as the source of impressions Q3 and Q8. Known shoe K1 (right shoe) was excluded as the source of impressions Q2 and Q4. Known shoe K1 (left shoe) was excluded as the source of impressions Q5 and Q7.</p>
TKC3HB-5331	<p>During the examination we have taken into account the Dark Walked Impression's test traces. In case of Q8 imprint, we cannot exclude statement B, but statement A is more likely.</p>

TABLE 2

WebCode-Test	Conclusions
TQGBE6-5331	<p>The Q1 footwear impression corresponds to the K1 left shoe in outsole design, physical size, wear and four randomly acquired characteristics. Therefore, the K1 left shoe was identified as the source of this impression. Although the Q2 footwear impression corresponds to the K1 right shoe in outsole design, there are observable differences in physical size and wear. Therefore, the K1 right shoe was eliminated as the source of this impression. The Q3 footwear impression corresponds to the K1 right shoe in outsole design, physical size, wear and three randomly acquired characteristics. Therefore, the K1 right shoe was identified as the source of this impression. Although the Q4 footwear impression corresponds to the K1 right shoe in outsole design, there are observable differences in physical size and wear. Therefore, the K1 right shoe was eliminated as the source of this impression. Although the Q5 footwear impression corresponds to the K1 left shoe in outsole design, there are observable differences in physical size and wear. Therefore, the K1 left shoe was eliminated as the source of this impression. The Q6 footwear impression corresponds to the K1 left shoe in outsole design, physical size, wear and three randomly acquired characteristics. Therefore, the K1 left shoe was identified as the source of this impression. Although the Q7 footwear impression corresponds to the K1 left shoe in outsole design, there are observable differences in physical size and wear. Therefore, the K1 left shoe was eliminated as the source of this impression. The Q8 footwear impression corresponds to the K1 right shoe in outsole design, physical size, wear and four randomly acquired characteristics. Therefore, the K1 right shoe was identified as the source of this impression. The Q9 footwear impression corresponds to the K1 left shoe in outsole design, physical size, wear and two randomly acquired characteristics. Therefore, the K1 left shoe was identified as the source of this impression.</p>
TUERRY-5332	<p>Example of the three conclusion wordings I would have used: In my opinion, the footwear mark evidence provides conclusive support for the proposition that the mark Q8 was made by the right shoe from the suspect (conclusive association). In my opinion, the footwear mark evidence provides very strong support for the proposition that the mark Q6 was made by the left shoe from the suspect. In my opinion, the mark Q7 was not made by the submitted shoes (conclusive elimination)</p>
U4Z7E3-5331	<p>Impressions Q1, Q3, Q6, Q8, and Q9 correspond in general outsole design, physical size & areas of damage to the pair of K shoes. Accordingly, impressions Q1, Q3, Q6, Q8, and Q9 were made by the K shoes. Impressions Q2, Q4, Q5, and Q7 correspond in general outsole design to the pair of K shoes. However, differences in wear were found between the K shoes and these impressions. As a result of these differences, it was determined that impressions Q2, Q4, Q5 and Q7 were not made by the K shoes.</p>
UD9HV7-5331	<p>Questioned imprints of Q1-Q9 were compared with known imprints made with the recovered shoes found to be consistent in shape, physical size. Unknown footwear impression Q1 were made by the left known shoe of K1G. Unknown footwear impression Q8 were made by the right known shoe of K1G. Unknown footwear impression Q9 were made by the left known shoe of K1G. Unknown footwear impressions Q2,Q3,Q4,Q5,Q6,Q7 were eliminated.</p>
UEZLFZ-5332	<p>The results speak with certainty that imprints Q1 and Q6 have been made by the suspect's left shoe (Identification). The results speak with certainty that imprint Q8 has been made by the suspect's right shoe (Identification). The results strongly support that imprint Q3 has been made by the suspect's right shoe (High degree of association). The results strongly support that imprint Q9 has been made by the suspect's left shoe (High degree of association). The results speak with certainty that imprints Q2, Q4, Q5 and Q7 have not been made by any of the suspect's shoes (Elimination).</p>
UHMTTM-5331	<p>I examined and compared the evidence impressions (Q1-Q9) with the test impressions reportedly from the known shoes (K1). Based on consistent class characteristic and matching individual detail, I concluded the following: Q1 in the store entry was made by the same left shoe that made the test impression (K1) and Q3 was made by the same right shoe that made the test impression in K1. Q6 on the newspaper and Q9 by the cash register were most likely made by the same left shoe that made the test impressions, however there wasn't enough matching individual detail for an identification. Q8 by the cash register was most likely made by the same right shoe that made the test impressions, however there was not enough matching individual detail for an identification.</p>

TABLE 2

WebCode-Test	Conclusions
UJEHL2-5331	Q1, Q6 and Q9 come from left shoe K1. Q3 and Q8 come from right shoe K1. Q2, Q4, Q5 and Q7 do not come from shoes K1.
UJVZX3-5335	<p>Imprint Q1: The visible manufacturing characteristics (size, soledesign elements and texture details) on the scene print are concordant respectively compatible with the test print of the suspect's left shoe. In addition, there are concordances relating to wear characteristics and four sole damage characteristics. There are no inexplicable differences. The quality and quantity of the print respectively the characteristics enable an identification. According to the examination, the suspect's left shoe sole can be identified as the origin of the scene print. Imprint Q2: The size of the scene print is not concordant respectively compatible with the test prints of the soles of the suspect shoes. In addition, there are differences concerning the wear characteristics. The quality of the print enables to exclude that the scene print originates from the suspect's shoes. Imprint Q3: The visible manufacturing characteristics (size, soledesign elements and texture details) on the scene print are concordant respectively compatible with the test print of the suspect's right shoe. In addition, there are concordances relating to wear characteristics and one sole damage characteristic. There are no inexplicable differences. The limited quantity of corresponding sole damages limits the evidentiary value. The result of the examination supports the hypothesis that the scene print originates from the suspects right shoe. Imprint Q4: There are significant differences concerning the wear characteristics. The quality of the print enables to exclude that the scene print originates from the suspect's shoes. Imprint Q5: The size of the scene print is not concordant respectively compatible with the test print of the suspect's shoes. In addition, there are significant differences concerning the wear characteristics. The quality of the print enables to exclude that the scene print originates from the suspect's shoes. Imprint Q6: The visible manufacturing characteristics (size, soledesign elements and texture details) on the scene print are concordant respectively compatible with the test print of the suspect's left shoe. In addition, there are concordances relating to wear characteristics and three sole damage characteristics. There are no inexplicable differences. The quality and quantity of the print respectively the characteristics enable an identification. According to the examination, the suspect's left shoe sole can be identified as the origin of the scene print. Imprint Q7: The size of the scene print is not concordant respectively compatible with the test prints of the soles of the suspect shoes. In addition, there are significant differences concerning the wear characteristics. The quality of the print enables to exclude that the scene print originates from the suspect's shoes. Imprint Q8: The visible manufacturing characteristics (size, soledesign elements and texture details) on the scene print are concordant respectively compatible with the test print of the suspect's right shoe. In addition, there are concordances relating to wear characteristics and two sole damage characteristics. There are no inexplicable differences. The limited quantity and quality of corresponding sole damages limits the evidentiary value. The result of the examination very strongly supports the hypothesis that the scene print originates from the suspects right shoe. Imprint Q9: The visible manufacturing characteristics (size, soledesign elements and texture details) on the scene print are concordant respectively compatible with the test print of the suspect's left shoe. In addition, there are concordances relating to wear characteristics and two sole damage characteristics. There are no inexplicable differences. The limited quantity of corresponding sole damages limits the evidentiary value. The result of the examination strongly supports the hypothesis that the scene print originates from the suspects left shoe.</p>
UT3CXX-5332	The right shoe of K1 is the source of impressions Q3 and Q8 and the left shoe of K1 is the source of impression Q1, Q6 and Q9. The unknown impressions Q2, Q4, Q5 and Q7 bear similar class characteristics to the known shoes; however, comparison of randomly acquired characteristics and wear patterns revealed the shoes of K1 display a high level of non-association with these unknown impressions.
UWNRUK-5331	Q1, Q6 and Q9 are identified as being made by the left shoe of K1. Q3 and Q8 are identified as being made by the right shoe of K1. Q2, Q4, Q5 and Q7 are eliminated from being made by K1.
V77ZM8-5332	Based upon my experience of undertaking and interpreting the results of footwear comparisons, and the level of correspondence noted in pattern, pattern size, pattern configuration, specific degree of wear, manufacturing detail and several damage features, in my opinion, the findings show CONCLUSIVELY that the Crocs K1 have made footwear marks recorded in the photographs. The

TABLE 2

WebCode-Test	Conclusions
	photographs also include footwear marks which are similar in pattern to various parts of the tread of the Crocs K1, however there are clear discrepancies apparent in the overall pattern size and the degree of wear. These discrepancies are such that, in my opinion these marks have not been made by the Crocs K1.
VA74LL-5335	On the item Q1 there is a shoeprint which correspond in pattern, wear and several individual characteristics with the left shoes of the item K1. The shoeprint of the item Q1 is left by the left shoe of the item K1 (A on range of conclusion). On the items Q3 and Q9 there are partial shoeprints which correspond in pattern, wear and some individual characteristics with the shoes of the item K1. There is high degree of association that the shoeprints of the items Q3, Q6 and Q9 are left by the shoes of the item K1 (B on Range of Conclusion). On the items Q6 and Q8 there are a shoeprints which correspond in pattern, wear, measurable size and some individual characteristics with the right shoe of the item K1. There is high degree of association that the shoeprints of the item Q6 and Q8 are left by the right shoe of the item K1 (B on Range of Conclusion). On the items Q2, Q4, Q5 and Q7 there are shoeprints which doesn't correspond in wear and measurable size with the shoes of the item K1. The shoeprints of the items Q2, Q4, Q5 and Q7 are not left by the shoes of item K1 (G on Range of Conclusion).
VBYMAK-5331	The right and left exemplar shoes were excluded as the source of questioned impressions Q2, Q4, Q5 and Q7. Sufficient differences were noted in the comparison of class characteristics (e.g. pattern, general wear, size) between the questioned impressions and the exemplar footwear to exclude the footwear as the source of these questioned impressions. The left exemplar shoe and questioned impressions Q1, Q6 and Q9 share agreement of class and randomly acquired characteristics. Therefore, the left exemplar shoe was identified as the source of questioned impressions Q1, Q6 and Q9. The right exemplar shoe and questioned impressions Q3 and Q8 share agreement of class and randomly acquired individual characteristics. Therefore, the right exemplar shoe was identified as the source of questioned impressions Q3 and Q8.
VKMQL-5331	The Items Q1, Q6, and Q9 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 Items Q3 and Q8 questioned impressions were made by the Item K1 Right shoe. These identifications are based on sufficient agreement of the combination of individual characteristics and all discernible class characteristics. The Items Q2, Q4, Q5, and Q7 questioned impressions were not made by either the Item K1 Left or Right shoe. These eliminations are based on differences in class characteristics.
VQTGYD-5332	[No Conclusions Reported.]
W28Y8A-5331	Q1 was identified as being made by the left shoe of K1. Q2 was excluded as being made by either shoe in K1. Q3 was identified as being made by the right shoe of K1. Q4 was excluded as being made by either shoe in K1. Q5 was excluded as being made by either shoe in K1. Q6 was identified as being made by the left shoe of K1. Q7 was excluded as being made by either shoe in K1. Q8 was identified as being made by the right shoe of K1. Q9 was identified as being made by the left shoe of K1.
W9PUYJ-5331	In the opinion of the examiner, Item 001.A (K1a) left Crocs brand men's size 11 (US) shoe was the source of, and made, Item 001.B.01 (Q1) left partial shoe track on a vinyl tile near the front of the store. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, Item 001.A (K1a) right Crocs brand men's size 11 (US) shoe was not the source of, and did not make, Item 001.B.02 (Q2) right partial shoe track found on a vinyl tile near the front of the store. In the opinion of the examiner, the characteristics observed exhibit strong associations between Item 001.B.03 (Q3) right partial shoe track on a vinyl tile near the front of the store and Item 001.A (K1a) right Crocs brand men's size 11 (US) shoe; however, the quantity and/or quality 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 characteristics observed in Item 001.B.03 (Q3). In the opinion of

TABLE 2

WebCode-Test	Conclusions
	<p>the examiner, Item 001.A (K1a) right Crocs brand men's size 11 (US) shoe was not the source of, and did not make, Item 001.C.01 (Q4) right full shoe track found on a newspaper near the front of the store. In the opinion of the examiner, Item 001.A (K1a) left Crocs brand men's size 11 (US) shoe was not the source of, and did not make, Item 001.C.02 (Q5) left full shoe track found on a newspaper near the front of the store. In the opinion of the examiner, Item 001.A (K1a) left Crocs brand men's size 11 (US) shoe was the source of, and made, Item 001.C.03 (Q6) left full shoe track on a newspaper near the front of the store. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, Item 001.A (K1a) left Crocs brand men's size 11 (US) shoe was not the source of, and did not make, Item 001.D.01 (Q7) left full shoe track found on a vinyl tile behind the cash register. In the opinion of the examiner, Item 001.A (K1a) right Crocs brand men's size 11 (US) shoe was the source of, and made, Item 001.D.02 (Q8) right full shoe track on a vinyl tile behind the cash register. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, the characteristics observed exhibit strong associations between Item 001.D.03 (Q9) left partial shoe track on a vinyl tile behind the cash register and Item 001.A (K1a) left Crocs brand men's size 11 (US) shoe; however, the quantity and/or quality 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 Item 001.D.03 (Q9).</p>
WALDXY-5331	<p>Questioned impressions Q1, Q6 and Q9 were all made by the left shoe. Questioned impression Q3 was made by the right shoe. Questioned impression Q8 had a high degree of association with the right shoe but there was insufficient information in this impression to be more conclusive. Questioned impression Q2, Q4, Q5 and Q7 were not made by the shoes provided.</p>
WCPDCX-5331	<p>The left and right exemplar shoes are excluded as possible sources of unknown impressions item 9 (Q2), Item 11 (Q4), Item 12 (Q5) and Item 14 (Q7). The exemplar right shoe is the source of the unknown impression item 15 (Q8). The exemplar left shoe is the source of the unknown impressions Item 8 (Q1), Item 13 (Q6) and Item 16 (Q9). There is a high degree association between the unknown partial impression present on item 10 (Q3) and the outsole of the exemplar right shoe. For another shoe it be considered as a possible source of this impression, it would have to share the same physical shape, size, tread design general wear and randomly acquired characteristics.</p>
WGKYQ2-5331	<p>Photos of the K1 shoes (K1a, K1b and K1c) and test impressions of the K1 shoes (K1d through K1g) were visually compared to questioned footwear impressions Q1 through Q9. The K1 left shoe was similar in tread design, size and wear characteristics to questioned footwear impressions Q1, Q6 and Q9. Additionally, Q1, Q6 and Q9 each contained several voids which were similar in size, shape and position to randomly acquired characteristics in the K1 left shoe. The K1 left shoe was identified as having made questioned footwear impressions Q1, Q6 and Q9 (Identification). The K1 right shoe was similar in tread design, size and wear characteristics to questioned footwear impressions Q3 and Q8. Additionally, Q3 and Q8 each contained several voids which were similar in size, shape and position to randomly acquired characteristics in the K1 right shoe. The K1 right shoe was identified as having made questioned footwear impressions Q3 and Q8 (Identification). The K1 right shoe was similar in tread design to questioned footwear impressions Q2 and Q4; however, the K1 right shoe was smaller in size than Q2 and Q4 and did not make these impressions (Exclusion). The K1 left shoe was similar in tread design to questioned footwear impressions Q5 and Q7; however, the K1 left shoe was smaller in size than Q5 and Q7 and did not make these impressions (Exclusion).</p>
WJ9Q66-5335	<p>The unknown impression Q1 was made by the known left outsole. The unknown impression Q2 was not made by the known left or right outsole. The unknown impression Q3 was made by the known right outsole. The unknown impression Q4 was not made by the known left or right outsole. The unknown impression Q5 was not made by the known left or right outsole. The unknown impression Q6 was made by the known left outsole. The unknown impression Q7 was not made by the known left or right outsole. The unknown impression Q8 was made by the known right outsole. The unknown impression Q9 was made by the known left outsole.</p>

TABLE 2

WebCode-Test	Conclusions
WLWDLY-5332	[No Conclusions Reported.]
WQ6K34-5332	None provided - see additional comments section below
WWBGL4-5331	1) K1A AND K1B is the same shoe and can not be print found at the scene of scene (different shoe). 2) K1C , K1F and K1F is the same shoe and is imprint which was recovered at the scene of crime. 3) K1e and K1d the heel and the sole is facing each other on different left and right shoe. shoe can not be like that the pattern type is not really the same
WX8QZE-5331	RESULTS OF EXAMINATION/ANALYSIS: 1. Observed Impressions a. Laboratory item #4: 3 questioned impressions on white/blue textured tile: i. Q1 - one partial questioned footwear impression in black residue; ii. Q2 - one partial questioned footwear impression in black residue; iii. Q3 - one partial questioned footwear impression in black residue; b. Laboratory item #5: 3 questioned impressions on newspaper: i. Q4 - one almost complete footwear impression in black residue; ii. Q5 - one almost complete footwear impression in black residue; iii. Q6 - one almost complete footwear impression in black residue; c. Laboratory item #6: 3 questioned impressions on yellow textured tile: i. Q7 - one almost complete footwear impression in black residue; ii. Q8 - one almost complete footwear impression in black residue; iii. Q9 - one partial questioned footwear impression in black residue; 2. Comparison: a. Questioned footwear impressions Q1 through Q9 were compared to the photographs of the known left and right "Crocs Santa Cruz 2 Luxe Leather", men's size 11(US) shoes, K1L and K1R, as well as test impressions generated by K1L and K1R with the following results: i. Q2, Q4, Q5, Q7 and the known shoes K1L and K1R are different with respect to physical size and wear. ii. Q1 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q1 and K1L exhibit 4 corresponding individual characteristics. iii. Q3 and K1R are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q3 and K1R exhibit 1 corresponding individual characteristic. iv. Q6 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q6 and K1L exhibit 7 corresponding individual characteristics. v. Q8 and K1R are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q8 and K1R exhibit 3 corresponding individual characteristics. vi. Q9 and K1L are consistent and exhibit no discriminating differences with respect to class characteristics: size, shape, tread design, and wear pattern. In addition, Q9 and K1L exhibit 3 corresponding individual characteristics. INTERPRETATION OF RESULTS: 1. It is the opinion of the undersigned that questioned footwear impressions Q2, Q4, Q5, Q7 could not have been made by the known left or right "Crocs Santa Cruz 2 Luxe Leather" men's size 11 (US) shoes (K1L and K1R) submitted as Laboratory items #1 through #3. 2. It is the opinion of the undersigned that questioned footwear impressions Q1, Q6, and Q9 were made by the left known "Crocs Santa Cruz 2 Luxe Leather", men's size 11 (US) shoe (K1L) submitted as Laboratory items #1 through #3. 3. It is the opinion of the undersigned that questioned footwear impressions Q3 and Q8 were made by the right known "Crocs Santa Cruz 2 Luxe Leather" men's size 11 (US) shoe (K1R) submitted as Laboratory items #1 through #3.
XDUMDU-5335	Q3 & Q8: It is the opinion of this examiner the right known standard (Item K1R) is the source of and made the questioned impressions Q3 and Q8. Q1, Q6, & Q9: It is the opinion of this examiner the left known standard (Item K1L) is the source of and made the questioned impressions Q1, Q6, and Q9. It is the opinion of this examiner than neither the right known standard (Item K1R) or the left known standard (Item K1L) is the source of, and did not make the questioned impressions Q2, Q4, Q5, or Q7.
XF8WTL-5331	The questioned prints Q2, Q4, Q5, Q7 showed differences in details and wear. Therefore they could not have been made by the suspects shoes K1. Q1, Q6, Q8 and Q9 showed the same details in pattern, size, wear and randomly acquired characteristics to identify the suspects shoe K1. The partial print Q3 showed the same details in pattern, size and wear as K1. There are some details from the

TABLE 2

WebCode-Test	Conclusions
	right shoe K1 in the print which could not be determined as RAC`s or as class characteristics on the basis of the provided photos of the shoes. The lightning of the shoe photos K1a to K1c made it impossible to see details which would be necessary for examination. Therefore we chose step C - association of class characteristics for print Q3.
XGFAAM-5331	The submitted images and known impressions of the suspect shoes (K1a-K1g) were examined and compared to the questioned impressions visible in Q1-Q9. Q1, Q6, and Q9 correspond to the known left shoe in tread pattern, tread size, tread wear, and individual characteristics including scratches, nicks, and gouges in the surface. Thus, Q1, Q6, and Q9 were made by the known left shoe. Q3 and Q8 correspond to the known right shoe in tread pattern, tread size, tread wear, and individual characteristics including scratches and gouges in the surface. Thus, Q3 and Q8 were made by the known right shoe. Q2, Q4, Q5, and Q7 correspond to the known shoes in tread pattern, however, they are different in tread wear, tread size, and individual characteristics. Thus Q2, Q4, Q5, and Q7 could not have been made by the known shoes.
XML7UM-5331	Examination and comparison of the photographs of the known shoe (K1a-K1g) and the photographs of the questioned footwear impressions (Q1 through Q8) yielded the following results and conclusions; Questioned footwear impressions Q1, Q6 and Q9 and the known left shoe are consistent with respect to tread design, size, manufacturing characteristics, wear and individualizing characteristics. Therefore, Q1, Q6 and Q9 were made by the left shoe. Questioned impressions Q3, Q8 and the known right shoe are consistent with respect to thread design, size, manufacturing characteristics, wear and individualizing characteristics. Therefore, Q3 and Q8 were made by the right shoe. Questioned footwear impressions Q2, Q4, Q5 and Q7 and the known shoes are dissimilar with respect to size and wear. Therefore, Q2, Q4, Q5 and Q7 were not made by the known shoes.
XQHPVL-5331	Items Q1, Q3, Q6, Q8, and Q9 (questioned imprints) were made by item K (known suspect's shoes). Items Q2, Q4, Q5, and Q7 (questioned imprints) could not have been made by item K (known suspect's shoes) base on different size and lack of individual characteristics.
XRFX-5331	Identification: In my opinion, the known footwear was the source of, and made, the questioned impression. Another item of footwear being the source of the impression is considered a practical impossibility. Exclusion: In my opinion, the known footwear was not the source of, and did not make, the questioned impression.
XWTKZV-5331	The report below reflects the professional opinion reached by this examiner, based on the information available at the time of analysis. Ten (10) photographs was received from the submitting agency, and were used for this footwear examination: EVIDENCE: Item #Q1-Q3: Questioned imprints found in the front of the store on textured vinyl tile. Item #Q4-Q6: Questioned imprints found on a newspaper in the front of the store. Item #Q7-Q9: Questioned imprints found behind the cash register on textured vinyl tile. Item #K1a-K1g: One pair of Crocs, Santa Cruz 2 Luxe, US size men`s 11. (Photographs only). COMPARISON: The footwear imprints labeled Q1-Q9 were compared with the pair of shoes labeled Item K1 with the following results: The questioned imprints labeled Item #Q1, Q6 and Q9 corresponds 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 Item #Q1, Q6 and Q9 were made by the known 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 Item #Q3 and Q8 corresponds in design, pattern, size 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 Item #Q3 and Q8 were made by the known 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 Item# Q2, Q4, Q5, and Q7 were of a different size than that of the known shoes labeled K1. The shoes were eliminated as having been the source of the imprints. If any additional shoes become available please submit them to the lab for further comparison.
Y2XY7-5331	The partial outsole impression visible in Exhibit #Q1, the outsole impression visible in Exhibit #Q6, and the partial outsole impression visible in Exhibit #Q9 were identified as having been made by the

TABLE 2

WebCode-Test	Conclusions
	<p>outsle of the left shoe in Exhibit #K1. The partial outsle impression visible in Exhibit #Q3 and the outsle impression visible in Exhibit #Q8 were identified as having been made by the outsle of the right shoe in Exhibit #K1. The partial outsle and outsle impressions visible in Exhibits #Q2, #Q4, #Q5, and #Q7 were excluded from having been made by the outsle of either shoe in Exhibit #K1 based on class characteristic differences (size).</p>
Y94D4V-5332	<p>Questioned latent shoe impression Q1 was identified as the Left Shoe of K1: Crocs Size Size 11. The shoe impression corresponds in outsle design, general wear, physical size and shape, and randomly acquired characteristics of sufficient quality and quantity. Questioned latent shoe impression Q2 was excluded as the Right and Left Shoes of K1: Crocs Size 11. The shoe impression does not correspond in general wear or physical size or shape or randomly acquired characteristics. Questioned latent shoe impression Q3 was identified as the Right Shoe of K1: Crocs Size 11. The shoe impression corresponds in outsle design, general wear, physical size and shape, and randomly acquired characteristics of sufficient quality and quantity. Questioned latent shoe impression Q4 was excluded as the Right and Left Shoes of K1: Crocs Size 11. The shoe impression does not correspond in general wear or physical size or shape or randomly acquired characteristics. Questioned latent shoe impression Q5 was excluded as the Right and Left Shoes of K1: Crocs Size 11. The shoe impression does not correspond in general wear or physical size or shape or randomly acquired characteristics. Questioned latent shoe impression Q6 was identified as the Left shoe of K1: Crocs Size 11. The shoe impression corresponds in outsle design, general wear, physical size and shape, and randomly acquired characteristics of sufficient quality and quantity. Questioned latent shoe impression Q7 was excluded and the Right and Left Shoes of K1: Crocs Size 11. The shoe impression does not correspond in general wear or physical size or shape or randomly acquired characteristics. Questioned latent shoe impression Q8 was identified as the Right Shoe of K1: Crocs Size 11. The shoe impression corresponds in outsle design, general wear, physical size and shape, and randomly acquired characteristics of sufficient quality and quantity. Questioned latent shoe impression Q9 was identified as the Left Shoe of K1: Crocs Size 11. The shoe impression corresponds in outsle design, general wear, physical size and shape, and randomly acquired characteristics of sufficient quality and quantity.</p>
YB938P-5332	<p>Nine (9) questioned impressions of value for comparison purposes were observed on Item 001.02 and designated as Q1 through Q9. The questioned impressions Q1 through Q9 were compared to the submitted photographs and test impressions of the footwear outsoles and designated K1 (Item 001.01) with the following results: The impression Q1 in the provided photograph represents the heel and arch area of a left footwear outsle impression. The design, physical size, and general degree of wear of the heel and arch areas of the impression correspond to that of the heel and arch areas of the left outsle of K1. Additionally, void areas in the heel area of impression Q1 were found to correspond in size, shape, and position to damage observed on the left outsle of K1. Based on this correspondence of both manufactured and randomly acquired accidental characteristics related to wearing of the shoe, the left outsle of K1 was identified as the source of impression Q1. It is the opinion of the examiner that impression Q1 was made by the left outsle of K1. The impression Q2 in the provided photograph represents the forefoot area of a right footwear outsle impression. While general features of the design of the forefoot area of the impression are similar to those observed in the forefoot area of the right outsle of K1, K1 differs in physical size from the impression Q2. Additionally, the impression Q2 exhibits a greater degree of general wear than the right outsle of K1. Based on these differences of class characteristics, the right outsle of K1 was excluded as the source of impression Q2. It is the opinion of the examiner that impression Q2 was not made by the right outsle of K1. The impression Q3 in the provided photograph represents the heel and arch area of a right footwear outsle impression. The design, physical size, and general degree of wear of the heel and arch areas of the impression correspond to that of the heel and arch areas of the right outsle of K1. Additionally, void areas in the heel area of impression Q1 were found to correspond in size, shape, and position to damage observed on the right outsle of K1. Based on this correspondence of both manufactured and randomly acquired accidental characteristics related to wearing of the shoe, the right outsle of K1 was identified as the source of impression Q1. It is the opinion of the examiner that impression Q1 was made by the right outsle of K1. The impression Q4 in the provided photograph represents a nearly complete right footwear outsle impression. While general features of</p>

TABLE 2

WebCode-Test	Conclusions
	<p>the design of the forefoot area of the impression are similar to those observed in the heel, arch, and forefoot areas of the right outsole of K1, K1 differs in physical size from the impression Q4. Additionally, the impression Q4 exhibits a greater degree of general wear than the right outsole of K1. Based on these differences of class characteristics, the right outsole of K1 was excluded as the source of impression Q4. It is the opinion of the examiner that impression Q4 was not made by the right outsole of K1. The impression Q5 in the provided photograph represents a nearly complete left footwear outsole impression. While general features of the design of the forefoot area of the impression are similar to those observed in the heel, arch, and forefoot areas of the left outsole of K1, K1 differs in physical size from the impression Q5. Additionally, the impression Q5 exhibits a greater degree of general wear than the left outsole of K1. Based on these differences of class characteristics, the left outsole of K1 was excluded as the source of impression Q5. It is the opinion of the examiner that impression Q5 was not made by the left outsole of K1. The impression Q6 in the provided photograph represents a nearly complete left footwear outsole impression. The design, physical size, and general degree of wear of the heel, arch, and forefoot areas of the impression correspond to that of the heel, arch, and forefoot areas of the left outsole of K1. Additionally, void areas in the heel and forefoot areas of impression Q6 were found to correspond in size, shape, and position to damage observed on the left outsole of K1. Based on this correspondence of both manufactured and randomly acquired accidental characteristics related to wearing of the shoe, the left outsole of K1 was identified as the source of impression Q6. It is the opinion of the examiner that impression Q6 was made by the left outsole of K1. The impression Q7 in the provided photograph represents a nearly complete left footwear outsole impression. While general features of the design of the forefoot area of the impression are similar to those observed in the heel, arch, and forefoot areas of the left outsole of K1, K1 differs in physical size from the impression Q7. Additionally, the impression Q5 exhibits a greater degree of general wear than the left outsole of K1. Based on these differences of class characteristics, the left outsole of K1 was excluded as the source of impression Q7. It is the opinion of the examiner that impression Q7 was not made by the left outsole of K1. The impression Q8 in the provided photograph represents a nearly complete right footwear outsole impression. The design, physical size, and general degree of wear of the heel, arch, and forefoot areas of the impression correspond to that of the heel, arch, and forefoot areas of the right outsole of K1. Additionally, two small void areas in the forefoot area of impression Q8 were found to correspond in overall shape and location to damage observed in the respective areas on the right outsole of K1. Based on the described observations it was determined there is a high degree of association between impression Q8 and the right outsole of K1. It is the opinion of the examiner the right outsole of K1 is a strong possible source of the impression Q8. Other right shoe outsoles sharing the same design and general degree of wear could also be considered possible sources of impression Q8. The impression Q9 in the provided photograph represents the heel and arch areas of a left footwear outsole impression. The design, physical size, and general degree of wear of the heel and arch areas of the impression correspond to that of the heel and arch areas of the left outsole of K1. Additionally, a void area in the heel area of impression Q9 was found to correspond in overall shape and location to damage observed in the respective area on the left outsole of K1. Based on the described observations it was determined there is a high degree of association between impression Q9 and the left outsole of K1. It is the opinion of the examiner the left outsole of K1 is a strong possible source of the impression Q9. Other left shoe outsoles sharing the same design and general degree of wear could also be considered possible sources of impression Q9.</p>
YFEYRP-5335	<p>Nine unknown impressions (Q1 – Q9) in Item 1 were compared to the known shoes represented in photographs K1a – K1g also from Item 1. A complete evaluation of an unknown 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 outsole of the shoe that are represented in the questioned impression. The unknown left impressions in Q1 and Q6 and the unknown right impressions in Q3 and Q8 corresponded in general tread design, physical size and shape of tread, wear and the presence of randomly acquired characteristics to the known shoes represented in photographs K1a – K1g in Item 1. Therefore, the shoes represented in the Item 1 images are the source of these unknown impressions (Type I Association/Identification). The unknown impression in Q9 corresponded in general tread design, physical size and shape of tread, and wear to</p>

TABLE 2

WebCode-Test	Conclusions
	<p>the known left shoe represented in images K1a – K1g in Item 1. In addition, there were several corresponding characteristics found in both the unknown impression and the images of the known left shoe. However, not having the known shoe to verify these characteristics was a limiting factor in this examination. It would not be expected that these characteristics would be found in the population of this type of evidence and, therefore, it is highly likely that the shoe represented in the Item 1 images made the unknown impression. (Type II Association). The unknown impressions in Q2, Q4, Q5 and Q7 exhibited different wear pattern, physical size and/or randomly acquired characteristics to the known shoes represented in the images in Item 1. Therefore, these shoes can be eliminated as being a possible source for the unknown impressions (Elimination). Interpretation: The following descriptions are meant to provide context to the opinions reached in this report. Every type of conclusion may not be applicable in every case or for every material type. Type I Association: Identification: An association in which items share individual characteristics and/or physically fit together that demonstrate the items were once from the same source. Type II Association: Association with distinct characteristics: An association in which items correspond in all measured physical properties, chemical composition and/or microscopic characteristics and share distinctive characteristic(s) that would not be expected to be found in the population of this evidence type. The distinctive characteristics were not sufficient for a Type I Association. Type III Association: Association with conventional characteristics: An association in which items correspond in all measured physical properties, chemical composition and/or microscopic characteristics and could have originated from the same source. Because it is possible for another sample to be indistinguishable from the submitted evidence, an individual source cannot be determined. Type IV Association: Association with limitations: An association in which items could not be differentiated based on observed and/or measured properties and/or chemical composition. As compared to the categories above, this type of association has decreased evidential value as a result of items that are more commonly encountered in the relevant population, the inability to perform a complete analysis, limited information, or minor variations observed in the data. Inconclusive: No conclusion could be reached regarding an association or an elimination between the items. Dissimilar: The items were dissimilar in physical properties and/or chemical composition, indicating that the items may not have originated from the same source. However, these dissimilarities were insufficient for a definitive Elimination. Elimination: Items exhibit dissimilarities in one or more of the following: physical properties, chemical composition or microscopic characteristics and, therefore, conclusively did not originate from the same source.</p>
YFYF8R-5331	<p>The left Crocs shoe (Item K1) is similar in general tread design, size, and apparent wear, and shares multiple randomly acquired characteristics with Items Q1, Q6, and Q9. Therefore, the left Crocs shoe (Item K1) was identified as having made these questioned shoe impressions (Items Q1, Q6, and Q9). The right Crocs shoe (Item K1) is similar in general tread design, size, and apparent wear, and shares at least one randomly acquired characteristic with Items Q3 and Q8. Therefore, the right Crocs shoe (Item K1) was identified as having made these questioned shoe impressions (Items Q3 and Q8). The Crocs shoes (Item K1) bear a similar general tread design to Items Q2, Q4, Q5, and Q7, however gross differences were observed in wear characteristics. Because of these observed differences, the Crocs shoes are excluded as having been the source of these questioned shoe impressions. COMMENTS: Items Q2, Q4, Q5, and Q7 exhibit more wear than the known Crocs shoes (Item K1) and are of similar size or slightly larger than the Crocs shoes (Item K1). Items Q2 and Q4 were determined to have been made by a right shoe. These two questioned impressions are similar in size and apparent wear and share one possible randomly acquired characteristic. This is a high degree of association. Items Q5 and Q7 were determined to have been made by a left shoe. These two questioned impressions are similar in size and apparent wear and share multiple possible randomly acquired characteristics. Based on these observed similarities, Items Q5 and Q7 were identified as having been made by the same shoe.</p>
YJZJWU-5332	<p>The Item K1 left shoe has been identified as being the source of the Q1FW1 impression. The Q2FW1 impression was not made by the Item K1 shoes. The Item K1 right shoe has been identified as being the source of the Q3FW1 impression. The Q4FW1 impression was not made by the Item K1 shoes. The Q5FW1 impression was not made by the Item K1 shoes. The Item K1 left shoe has been identified as being the source of the Q6FW1 impression. The Q7FW1 impression was not made by the Item K1</p>

TABLE 2

WebCode-Test	Conclusions
YPL26G-5331	<p>shoes. The Item K1 right shoe has been identified as being the source of the Q8FW1 impression. The Item K1 left shoe has been identified as being the source of the Q9FW1 impression.</p> <p>In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was the source of, and made, item (001.B.01) (Q1) questioned imprint found in the front of the store. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was not the source of, and did not make, item (001.B.02) (Q2) questioned imprint found in the front of the store. In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was the source of, and made, item (001.B.03) (Q3) questioned imprint found in the front of the store. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was not the source of, and did not make, item (001.C.01) (Q4) questioned imprint found on a newspaper in the front of the store. In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was not the source of, and did not make, item (001.C.02) (Q5) questioned imprint found on a newspaper in the front of the store. In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was the source of, and made, item (001.C.03) (Q6) questioned imprint found on a newspaper in the front of the store. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was not the source of, and did not make, item (001.D.01) (Q7) questioned imprint found behind the cash register. In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was the source of, and made, item (001.D.02) (Q8) questioned imprint found behind the cash register. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of this examiner, item # 001.A Crocs men's size 11 shoe was the source of, and made, item (001.D.03) (Q9) questioned imprint found behind the cash register. Another item of footwear being the source of the impression is considered a practical impossibility.</p>
YQGJ6W-5332	<p>HAVING CONDUCTED A SHOE MARK COMPARISON BETWEEN THE KNOWN SHOE K1 AND THE NINE (9) QUESTIONED IMPRESSIONS, I HAVE FORMED THE FOLLOWING OPINION: 1. THE LEFT (L) SHOE OF K1 WAS THE SOURCE OF, AND MADE THE QUESTIONED IMPRESSIONS Q1, Q6 & Q9. THE CHANCE OF ANOTHER SHOE BEING THE SOURCE OF THE IMPRESSIONS IS CONSIDERED NEGLIGIBLE. 2. THE RIGHT (R) SHOE OF K1 WAS THE SOURCE OF, AND MADE THE QUESTION IMPRESSIONS Q3 & Q8. THE CHANCE OF ANOTHER SHOE BEING THE SOURCE OF THE IMPRESSION IS CONSIDERED NEGLIGIBLE. 3. THE LEFT (L) & RIGHT (R) SHOE OF K1 WAS NOT THE SOURCE AND DID NOT MAKE THE QUESTIONED IMPRESSIONS Q2, Q4, Q5 & Q7.</p>
YQLEZJ-5331	<p>On examination, I found: i. The individual characteristics of the left shoe sole to be similar to the questioned imprints Q1, Q6 and Q9. ii. The individual characteristics of the right shoe sole to be similar to the questioned imprints Q3 and Q8. iii. The individual characteristics of the right and left shoe soles to be dissimilar to the questioned imprints Q2, Q4, Q5 and Q7. Therefore, I am of the opinion that: i. The questioned imprints Q1, Q6 and Q9 were made by the left shoe. ii. The questioned imprints Q3 and Q8 were made by the right shoe. iii. The questioned imprints Q2, Q4, Q5 and Q7 were not made by the right or left shoe.</p>
ZHLCDX-5331	<p>Shoes K1a-g did not correspond in pattern arrangement to marks Q2, Q4, Q5 or Q7. in my opinion, they can be eliminated from having made these marks. Left shoe K1a-g corresponded in pattern, pattern arrangement and wear to Q1. Several damage features were also present that corresponded. In my opinion, Left shoe K1a-g conclusively made mark Q1. Right shoe K1a-g corresponded in pattern, pattern arrangement and wear to Q3, Some additional poorly defined features were present which corresponded. In my opinion, Right shoe K1a-g probably made mark Q3. Left shoe K1a-g corresponded in pattern, pattern arrangement and wear to Q6 and Q9. Some damage features were present that corresponded, that were either poorly defined or may not be unique. In my opinion, Left shoe K1a-g Almost certainly made marks Q6 and Q9. Right shoe K1a-g corresponded in pattern, pattern arrangement and wear to mark Q8. Several characteristic damage features were also present that corresponded. In my opinion, Right shoe K1a-g Conclusively made mark Q8.</p>

TABLE 2

WebCode-Test	Conclusions
ZJE67V-5331	<p>The Items Q1 through Q9 questioned footwear impressions were analyzed, compared and evaluated with the Items K1 right and left known footwear. The Item Q1 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 left shoe. The Item Q2 questioned footwear impression does not correspond in specific wear with the Item K1 shoes. The Item Q3 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 right shoe. The Item Q4 questioned footwear impression does not correspond in specific wear with the Item K1 shoes. The Item Q5 questioned footwear impression does not correspond in size and specific wear with the Item K1 shoes. The Item Q6 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 left shoe. The Item Q7 questioned footwear impression does not correspond in specific wear with the Item K1 shoes. The Item Q8 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 right shoe. The Item Q9 questioned footwear impression corresponds in tread design, physical size, general wear, and accidental characteristics with the Item K1 left shoe. Based upon the above factors, this examiners opinion is as follows: The Item K1 right shoe was the source of, and made, the questioned footwear impressions Q3 and Q8. The questioned impressions Q3 and Q8 and the known footwear K1 right shoe share agreement of class and randomly acquired characteristics of sufficient quality and quantity. Another item of footwear being the source of the impression is considered a practical impossibility. The Item K1 left shoe was the source of, and made, the questioned footwear impressions Q1, Q6 and Q9. The questioned impressions Q1, Q6 and Q9 and the known footwear K1 left shoe share agreement of class and randomly acquired characteristics of sufficient quality and quantity. Another item of footwear being the source of the impression is considered a practical impossibility. The Items Q2, Q4, Q5 and Q7 questioned footwear impressions exhibit dissimilarities with the known footwear Item K1 right/left shoes. The Items Q2, Q4, Q5 and Q7 questioned footwear impressions were not made by the Items K1 right/left shoes. All conclusions listed herein have been verified by a second qualified latent print examiner.</p>
ZVRXPG-5332	<p>The suspect's shoes were identified as having made the Q1, Q3, Q6, Q8, and Q9 impressions. The suspect's shoes were eliminated as having made the Q2, Q4, Q5, and Q7 impressions.</p>
ZW3AER-5335	<p>In the opinion of the examiner, the left known footwear was the source of, and made, the questioned impression Q1-IMP1. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, the right known footwear was not the source of, and did not make, the impression Q1-IMP1. In the opinion of the examiner, the right and left known footwear was not the source of, and did not make, the impression Q2-IMP1. In the opinion of the examiner, the right known footwear was the source of, and made, the questioned impression Q3-IMP1. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, the left known footwear was not the source of, and did not make, the impression Q3-IMP1. In the opinion of the examiner, the right and left known footwear was not the source of, and did not make, the impression Q4-IMP1. In the opinion of the examiner, the right and left known footwear was not the source of, and did not make, the impression Q5-IMP1. In the opinion of the examiner, the left known footwear was the source of, and made, the questioned impression Q6-IMP1. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, the right known footwear was not the source of, and did not make, the impression Q6-IMP1. In the opinion of the examiner, the right and left known footwear was not the source of, and did not make, the impression Q7-IMP1. In the opinion of the examiner, the right known footwear was the source of, and made, the questioned impression Q8-IMP1. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, the left known footwear was not the source of, and did not make, the impression Q8-IMP1. In the opinion of the examiner, the left known footwear was the source of, and made, the questioned impression Q9-IMP1. Another item of footwear being the source of the impression is considered a practical impossibility. In the opinion of the examiner, the right known footwear was not the source of, and did not make, the impression Q9-IMP1.</p>

Additional Comments

TABLE 3

WebCode-Test	Additional Comments
3C7H9C-5332	METHODS OF ANALYSIS: Impression analysis was performed using a combination of visual, side by side and digital overlay comparisons.
3LUL9Y-5335	The photographs of the known shoes were not properly taken. It appears as though the camera was focused on the logo in the arch rather than the tread (was autofocus used?). Much of the rest of the shoe was not in good focus. I would suggest taking exam quality photographs next time. At our lab, we treat proficiencies exactly like casework. During the course of any impressions examination a great deal of documentation is created (reports, detailed notes, annotated image close-ups, and image overlays). Because of the amount of documentation produced during such examinations, having a proficiency with 9 unknown impressions is a heavy time burden. Although the impressions themselves were not difficult to examine, I would suggest lowering the number of impressions used.
3QACTE-5331	Test impressions of rolling the toe and heel area separately are more of a hindrance than helpful. It would be useful to have the victim's shoes for elimination. Using smaller shoes for testing would be nice to help stay on an 8.5x11 page.
4X6DBY-5331	Where I have resulted as (A) identification, there is at least 1 clear and well defined identifying feature in correspondence as well as pattern, size and wear. Where I have resulted as (G) exclusion, there is a lack of correspondence in size and wear. Where I have resulted as (B) high degree of association, there is a correspondence in pattern, size and wear, also 1 possible identifying feature which does not appear well defined and may be affected by the surface texture.
688626-5332	Our reports are presented in a table format which does not translate well to the space CTS offers for report wording.
6C2CVU-5331	An Association Scale for Footwear Impressions would be inserted into the report to define the terms that were used.
6NQ46H-5331	Laboratory policy prohibits the use of result statements that are not previously approved. Accepted laboratory footwear impression conclusions are: Could have, Identification, Elimination
6W8MHP-5332	Recovered footwear has not been submitted for examination, though photographs are available K1a-c Appearance of damage features cannot be confirmed against source, though photographs of soles are available K1b-c.
7NPB6N-5335	1. "Q2" and "Q4" correspond to each other in class characteristics, unusual wear and randomly acquired characteristics, indicating a high degree of association between them. 2. "Q5" and "Q7" correspond to each other in class characteristics, unusual wear and randomly acquired characteristics, indicating a high degree of association between them.
9J6DBH-5331	Laboratory policy prohibits the use of result statements that are not previously approved. Accepted laboratory footwear impression conclusions are: Could have, Identification, Elimination
9LD7QQ-5331	Laboratory policy prohibits the use of result statements that are not previously approved. Accepted laboratory footwear impression conclusions are: Could have, Identification, Elimination
A9M2TE-5331	Laboratory policy prohibits the use of result statements that are not previously approved. Accepted laboratory footwear impression conclusions are: Could have, Identification, Elimination
AJ6HN7-5332	the photograph of the shoes were of low quality, not sufficient for comparison.
ANVHQK-5331	The test impression were (in my opinion) not well made. They did not capture all the pattern elements of the shoes sufficiently and if this was a case I would have preferred to make more test impressions. The photographs of the shoe soles were also not of sufficient quality to allow complete visualisation of some of the feaures that appeared in the test impressions. Usually I prefer to have the actual shoes to examine when performing a comparison.

TABLE 3

WebCode-Test	Additional Comments
B9JT6R-5332	THE UNKNOWN SHOE PRINTS LABELED AS Q2,Q4,Q5 and Q7 SHARE THE SAME DESIGN ALTHOUGH THESE SHOE PRINTS ARE LONGER AND SHOW HIGHER WEAR THAN THE SOLES UNDER INVESTIGATION.
BCHC3J-5331	During normal casework, the known shoes would be required in order to confirm any random identifying characteristics observed in the unknown impressions.
CUHEJN-5335	At least one other pair of training shoes made some of the impressions from the shop
CWNACL-5331	A range of conclusions terminology scale would be included with my report.
DNMHJG-5332	The appearance of the shoe soles K1 was very 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.
DTDJAG-5331	Q3 appears to have been made by right shoe from K1. The individual characteristics present on the outsoles cannot be visualized clearly in the photographs, therefore a definitive identification cannot be made.
GGEM2Y-5331	Photographs K1A - K1C did not appear to be in sharp focus. This made it difficult to see some randomly acquired characteristics on the soles of the known shoes.
JPYW36-5331	Laboratory policy prohibits the use of result statements that are not previously approved. Accepted laboratory footwear impression conclusions are: Could have, Identification, Elimination
KC6XRD-5331	1.Questioned impressions labelled Q2 was found to be consistent in shape, physical size and individual characteristics with Questioned impressions labelled Q4, both two were right shoes. 2.Questioned impressions labelled Q5 was found to be consistent in shape, physical size and individual characteristics with Questioned impressions labelled Q7, both two were left shoes.
KV7HU9-5331	The trial was made more difficult by not having the actual footwear. It was not always possible to determine if a particular feature on the shoe soles was a result of wear or if they were caused by damage, given the images submitted.
LYY4WV-5331	In our footwear casework we evaluate the findings. We do not provide the conclusion of "Identification" in footwear cases. The highest point is "extremely strong support".
MKU3YK-5331	Some of the marks where result = B could move to "A" if original footwear was available for examination. Some of the marks where result = F could move to "G" if original footwear was available.
MT4WP7-5331	All excluded imprints exhibited dissimilar size and/or wear characteristics than those of the known imprints made with the recovered shoes (K1d - K1g).
N6XBN3-5331	1. Too many questioned impressions; took an in-necessarily long time to complete. 2. Photography of the known impressions limited conclusions 3. K1D and K1E had ball reversed from the heel; not something I would do in casework. 4. Crocs are exceptionally squishy. If not previously known, this would have impacted conclusions (not actually having shoes to compare)
NBLKP8-5331	Q1: Specific wear & 3 x randomly acquired characteristics in agreement. Q2: Crime scene mark LARGER & wear/damage in disagreement. Q3: Specific wear & 3 x randomly acquired characteristics in agreement. Q4: Crime scene mark LARGER & wear/damage in disagreement. Q5: Crime scene mark LARGER & wear/damage in disagreement. Q6: Specific wear & 4 x randomly acquired characteristics in agreement. Q7: Crime scene mark LARGER & wear/damage in disagreement. Q8: Specific wear & 4 x randomly acquired characteristics in agreement. Q9: Specific wear & 1 x randomly acquired characteristics in agreement
PLGKQV-5335	The submitted photographs of the soles should be high resolution, sharp images with well illuminated randomly acquired characteristics.

TABLE 3

WebCode-Test	Additional Comments
QC6TU7-5335	It was difficult to confirm whether or not features in the marks were genuine damage in the absence of the footwear items and with the quality of the photographs provided.
R4B3TV-5331	Laboratory policy prohibits the use of result statements that are not previously approved. Accepted laboratory footwear impression conclusions are: Could have, Identification, Elimination
TF2EFT-5331	Q2 and Q4 appear to be the same right shoe. Q5 and Q7 appear to be the same left shoe.
TUERRY-5332	Features on shoes assumed to be damage, in a real case would confirm this by examining the shoe sole itself.
UD9HV7-5331	Q2, Q3, Q4, Q5, Q6, Q7 likely to be exclusion as no distinct reference points could be found.
UHMTTM-5331	There was enough differences in the size & spatial relationship of Q2, Q4, Q5, and Q7 to eliminate them as having been made by the same shoe that made the test impressions.
UJVZX3-5335	Normally, no identifications are made when the examiner is not in possession of the examined shoe. For this proficiency test, it was assumed that the submitted pictures of the sole are equivalent to the actual shoes.
UT3CXX-5332	Under the definitions supplied with this test, one cannot exclude impressions with similar class characteristics (pattern type) even if differences between the randomly acquired characteristics and wear of the shoe and impression support an exclusion. Additionally, the exclusion definition as written does not allow for differences between class characteristics due to differences in molds. This is different from the conclusions presented in the SWGTREAD document. The directions supplied with this test state an exclusion occurs when the Q and K exhibit sufficient difference of class AND randomly acquired characteristics. SWGTREAD's definition states "... Sufficient differences were noted in the comparison of class AND/OR randomly acquired characteristics between the Q impression and K footwear..." Thus allowing exclusion of shoes with similar out-sole pattern but significant difference in randomly acquired characteristics.
V77ZM8-5332	The above conclusion is based on the findings of each of the individual marks taken collectively and assuming that the features have all been randomly acquired.
WALDXY-5331	I think that the Q8 impression was made by the right shoe but I cannot formally identify it for the following reasons: It is only a partial impression of the right side of the shoe with at least half of the impression not available for comparison to assist forming a conclusion, The front part of the impression in the ball/toe area is overlaid with another impression (Q7) so the information in that area is not clear, The substrate the impression is made on is not flat but has a pattern of numerous fine linear impressions in it to mimic woodgrain. This pattern interferes with and confuses the remaining information available in Q8 for comparison.
WGKYQ2-5331	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

TABLE 3

WebCode-Test	Additional Comments
	<p>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.</p> <p>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.</p> <p>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>
WJ9Q66-5335	The unknown impressions, Q2, Q4, Q5, and Q7 are eliminated as being made from the known right or left outsole. The wear, spacing of elements, and the individual characteristics are not the same.
WQ6K34-5332	The Footwear Unit in [Laboratory] does not report on evidential outcomes; instead we screen footwear cases to allow us to recommend cases for submission to Forensic Service Providers. We have indicated a high degree of association for all those imprints that disclose damage features (randomly acquired characteristics) in agreement. However we would never report on an Identification as this is beyond our remit but would recommend these imprints for full evidential comparisons by FSP's. The imprints we deem to be Excluded cannot be attributed to the recovered shoes.
WWBGL4-5331	only item K1c can be included at the crime scene not K1a and K1B and K1c can not be image of the recovered shoes(K1a)
YB938P-5332	Images of recovered shoes were blurry when attempting to zoom in to closely examine fine detail which made aspects of analysis more difficult.
YFYF8R-5331	The photographs of the Crocs shoes (K1a-K1c) were received with a fold in the photos giving the appearance of characteristics present on the tread of the shoe. Only by looking at the location (slight variation) and reflection from lighting could you tell that the defect was in the photograph and not the shoes. This characteristic also did not show up in the test impression photographs, so it was disregarded for comparison purposes. Also, if a textured surface is used in the Q images, there should be photographs with different lighting angles as well. Apparent randomly acquired characteristics in the heel of Q8 were disregarded for comparison because of the effect of the texture (running in the same direction as the characteristic) in the photo which could have been minimized by different lighting. Since examination is limited to the photographs provided, there is no ability to take additional photos or make additional test impressions.
ZHLCDX-5331	Damage features were noted in the heel areas of Q5 and Q7 that corresponded with each other such that these marks may have been made by the same shoe.
ZW3AER-5335	I would like to see question 2 (conclusion wording) in a different format next year to allow for tables or clarification if generic wording is needed or if all conclusions need to be written out.

-End of Report-
(Appendix may follow)

Appendix: Data Sheet

Collaborative Testing Services ~ Forensic Testing Program

Test No. 18-5331: Footwear Imprint Evidence

DATA MUST BE RECEIVED BY June 04, 2018 TO BE INCLUDED IN THE REPORT

Participant Code:

WebCode:

Accreditation Release Statement

CTS submits external proficiency test data directly to ASCLD/LAB, ANAB, and 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 on the last page must be completed and submitted.)
- This participant's data is **NOT** intended for submission to ASCLD/LAB, ANAB, or A2LA.

Scenario:

Police are investigating a case of assault and robbery at a local convenience store. Footwear imprints were recovered from the front of the shop, where the clerk was assaulted, and behind the cash register. Based on surveillance footage, a suspect was identified and shoes were recovered from his home the following day. The shoes 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 Crocs, and the shoe tag reads: Santa Cruz 2 Luxe Leather, Men's size 11 (US), 45-46 (EUR), 10 (UK).

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 walk across a sheet of paper.

Items Submitted (Sample Pack FIEP):

- K1a: Photograph of the soles of the recovered shoes, lighted from above.
- K1b-K1c: Two oblique lighted images of the soles of the recovered shoes, light direction indicated by arrows.
- K1d-K1g: Known imprints made with the recovered shoes.
- Q1-Q3: Questioned imprints found in the front of the store (textured vinyl tile).
- Q4-Q6: Questioned imprints found on a newspaper in the front of the store.
- Q7-Q9: Questioned imprints found behind the cash register (textured vinyl tile).

Please return all pages of this data sheet.

Page 1 of 4

Participant Code:

WebCode:

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 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.

Example:

<u>Imprint</u>	<u>L/R</u>	<u>Imprint</u>	<u>L/R</u>
Q1: <u> B </u>	<u> R </u>	Q2: <u> G </u>	<u> </u>

<i>Store Entry</i>		<i>Newspaper</i>		<i>By Cash Register</i>	
<u>Imprint</u>	<u>L/R</u>	<u>Imprint</u>	<u>L/R</u>	<u>Imprint</u>	<u>L/R</u>
Q1:	<u> </u>	Q4:	<u> </u>	Q7:	<u> </u>
Q2:	<u> </u>	Q5:	<u> </u>	Q8:	<u> </u>
Q3:	<u> </u>	Q6:	<u> </u>	Q9:	<u> </u>

Participant Code:

WebCode:

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

3.) Additional Comments

<p>Return Instructions: Data must be received via online data entry, fax (please include a cover sheet), or mail by <i>June 04, 2018</i> to be included in the report. Emailed data sheets are not accepted.</p>	<p>Participant Code: ONLINE DATA ENTRY: www.cts-portal.com</p>
<p>QUESTIONS? TEL: +1-571-434-1925 (8 am - 4:30 pm EST) EMAIL: forensics@cts-interlab.com www.ctsforensics.com</p>	<p>FAX: +1-571-434-1937 MAIL: Collaborative Testing Services, Inc. P.O. Box 650820 Sterling, VA 20165-0820 USA</p>

Please return all pages of this data sheet.

Collaborative Testing Services ~ Forensic Testing Program

RELEASE OF DATA TO ACCREDITATION BODIES

The following Accreditation Releases will apply only to:

Participant Code:

WebCode:

for Test No. **18-5331: Footwear Imprint Evidence**

This release page must be completed and received by **June 4, 2018** to have this participant's submitted data included in the reports forwarded to the respective Accreditation Bodies.

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

Signature and Title _____

Laboratory Name _____

Location (City/State) _____

Return Instructions

Accreditation Release

Please submit the completed Accreditation Release at the same time as your full data sheet. See Data Sheet Return Instructions on the previous page.

*Questions? Contact us 8 am-4:30 pm EST
Telephone: +1-571-434-1925
email: forensics@cts-interlab.com*

Please return all pages of this data sheet.