Collaborative Testing Services, Inc FORENSIC TESTING PROGRAM

## Tenprint Examination <br> Test No. 23-5141 Summary Report

Each digital sample set contained twelve single-print card pairs, eight questioned tenprint cards, and eight tenprint card standards. Participants were asked to compare the two prints within each single-print pair to determine whether or not they originated from the same source. They were also asked to compare each questioned tenprint card to the standard cards to determine if any shared a common source. Data were returned from 45 participants and are compiled into the following tables:
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## Manufacturer's Information

Each digital sample set consisted of single-print card pairs and tenprint cards for comparison. Items Q1-Q12 contained a series of single-print pairs, and ltems Q13-Q20 contained tenprint cards for comparison to a pool of standards (A-H). In the first section, participants were asked to compare the single-print pairs to determine if both prints originated from a single source. In the second section, participants were asked to compare the questioned tenprint cards to each standard to determine if any shared a common source.

## SAMPLE PREPARATION

Using several anonymized databases containing a limited number of fingerprints, both visual comparison and AFIX comparison software were used to select the single prints and tenprint cards provided in this test.

SINGLE-PRINT PAIRS: For non-matching single-print pairs, prints with similar first and second-level details were chosen, paired together, and designated as either a questioned or standard item in the pair. For each matching item, uniquely collected prints from the same finger of an individual were paired together.

TENPRINT CARDS: For non-matching tenprint card items, cards with similar first and second-level details were chosen and designated as either a questioned item or a comparison standard. For matching items originating from the same source, each card was designated as either a questioned or comparison standard item.

All prints were digitally resized to scale. The test items were then uploaded to the CTS Portal for download by test participants.

VERIFICATION: All predistribution results were consistent with the manufacturer's expected results.

| Single-Print Pairs | Same Source? | Tenprint Card | Match to Standard? |
| :---: | :---: | :---: | :---: |
| Q1 | No | Q13 | Standard D |
| Q2 | No | Q14 | No |
| Q3 | No | Q15 | No |
| Q4 | No | Q16 | Standard H |
| Q5 | No | Q17 | No |
| Q6 | No | Q18 | No |
| Q7 | No | Q19 | Standard G |
| Q8 | Yes | Q20 | Standard A |
| Q9 | No |  |  |
| Q11 | No |  |  |
| Q12 | No |  |  |
|  | No |  |  |

## Summary Comments

Each digital sample set contained a variety of collected single-prints and tenprint cards for comparison. The one-to-one section contained twelve pairs of single-prints (Q1-Q12). Participants were asked to determine if the two collected prints within each pair originated from a single source. The ten-to-ten section contained eight questioned tenprint cards (Q13-Q20) and a pool of eight standard tenprint cards (A-H). Participants were asked to compare each questioned card to each standard card and determine if any pairing shared a common source. Within the single-print pair section, questioned print Q8 shared a common source with its standard print pair. For the tenprint card comparison section, the following common sources were shared between a questioned tenprint card and a standard tenprint card: Q13 with standard D, Q16 with standard H, Q19 with standard G and Q20 with standard A. (Refer to the Manufacturer's Information for preparation details.)

Of the 45 responding participants, 43 participants reported the expected responses for all twelve single-print pairs and the eight questioned tenprint cards. One participant was unable to determine if questioned tenprint cards Q\#17 and Q\#18 shared a common source with any of the standard tenprint cards. One participant did not select a response regarding whether the questioned tenprint cards Q\#19 and Q\#20 shared a common source with one of the standard cards however, reported the consensus letter designation associated the standard tenprint card.

## Single-Print Comparisons

Does each pair of the following collected single-print cards originate from the same source?
TABLE 1 - Item Q1

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DT8HNY | No |
| 2CTWN3 | No | DYNDEY | No |
| 376ATW | No | E2LC73 | No |
| 3C8GC7 | No | EGKHZX | No |
| 3GUJPA | No | ELLPCZ | No |
| 3K2L4L | No | GAR3KP | No |
| 3N2UAG | No | GRAWDZ | No |
| 4WRZFN | No | HDN7R3 | No |
| 643JED | No | JJ8QCU | No |
| 76EFL4 | No | KFB87P | No |
| 76G8DJ | No | KVHFPP | No |
| 78LXHD | No | LF6CZN | No |
| 7E3E93 | No | MWMRHB | No |
| 98 UPLE | No | MZL4FW | No |
| AKDT92 | No | P3LWMZ | No |
| ANVJL7 | No | PJA8A3 | No |
| BP8AYZ | No | R3WHA7 | No |
| CXBPFT | No | R4MX4F | No |
| D2T4JT | No | RB72BH | No |
| DK6TWQ | No | RTC7XU | No |
| DLGP2V | No | UUUAGB | No |

TABLE 1 - Item Q1

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| V4EV4K | No |  |  |
| V7LD3G | No |  |  |
| WWU3NE | No |  |  |
| Response Summary - Q1 |  |  | Total Participants: 45 |
|  |  | Total |  |
|  |  | 0 |  |
|  |  | 45 |  |
|  |  | 0 |  |

TABLE 1 - Item Q2

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |

TABLE 1 - Item Q2

| WebCode | Match | WebCode | Match |
| :--- | :---: | :---: | :---: |
| WWU3NE |  |  |  |
| Response Summary - Q2 |  |  | Total Participants: 45 |
|  | Match | Total |  |
|  | Yes | 0 |  |
|  | No | 45 |  |
|  | Unable To Determine | 0 |  |

TABLE 1 - Item Q3

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |

TABLE 1 - Item Q3

| WebCode | Match | WebCode | Match |
| :--- | :---: | :---: | :---: |
| WWU3NE |  |  |  |
| Response Summary - Q3 |  |  | Total Participants: 45 |
|  | Match | Total |  |
|  | Yes | 0 |  |
|  | No | 45 |  |
|  | Unable To Determine | 0 |  |

TABLE 1 - Item Q4

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |

TABLE 1 - Item Q4

| WebCode | Match | WebCode | Match |
| :--- | :---: | :---: | :---: |
| WWU3NE |  |  |  |
| Response Summary - Q4 |  |  | Total Participants: 45 |
|  | Match | Total |  |
|  | Yes | 0 |  |
|  | No | 45 |  |
|  | Unable To Determine | 0 |  |

TABLE 1 - Item Q5

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |

TABLE 1 - Item Q5

| WebCode | Match | WebCode | Match |
| :--- | :---: | :---: | :---: |
| WWU3NE |  |  |  |
| Response Summary - Q5 |  |  | Total Participants: 45 |
|  | Match | Total |  |
|  | Yes | 0 |  |
|  | No | 45 |  |
|  | Unable To Determine | 0 |  |

TABLE 1 - Item Q6

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |

TABLE 1 - Item Q6

| WebCode | Match | WebCode | Match |
| :--- | :---: | :---: | :---: |
| WWU3NE |  |  |  |
| Response Summary - Q6 |  |  | Total Participants: 45 |
|  | Match | Total |  |
|  | Yes | 0 |  |
|  | No | 45 |  |
|  | Unable To Determine | 0 |  |

TABLE 1 - Item Q7

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |

TABLE 1 - Item Q7

| WebCode | Match | WebCode | Match |
| :--- | :---: | :---: | :---: |
| WWU3NE |  |  |  |
| Response Summary - Q7 |  |  | Total Participants: 45 |
|  | Match | Total |  |
|  | Yes | 0 |  |
|  | No | 45 |  |
|  | Unable To Determine | 0 |  |

TABLE 1 - Item Q8

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | Yes | DYNDEY | Yes |
| 2CTWN3 | Yes | E2LC73 | Yes |
| 376ATW | Yes | EGKHZX | Yes |
| 3C8GC7 | Yes | ELLPCZ | Yes |
| 3GUJPA | Yes | GAR3KP | Yes |
| 3K2L4L | Yes | GRAWDZ | Yes |
| 3N2UAG | Yes | HDN7R3 | Yes |
| 4WRZFN | Yes | JJ8QCU | Yes |
| 643JED | Yes | KFB87P | Yes |
| 76EFL4 | Yes | KVHFPP | Yes |
| 76G8DJ | Yes | LF6CZN | Yes |
| 78LXHD | Yes | MWMRHB | Yes |
| 7E3E93 | Yes | MZL4FW | Yes |
| 98UPLE | Yes | P3LWMZ | Yes |
| AKDT92 | Yes | PJA8A3 | Yes |
| ANVJL7 | Yes | R3WHA7 | Yes |
| BP8AYZ | Yes | R4MX4F | Yes |
| CXBPFT | Yes | RB72BH | Yes |
| D2T4JT | Yes | RTC7XU | Yes |
| DK6TWQ | Yes | UUUAGB | Yes |
| DLGP2V | Yes | V4EV4K | Yes |
| DT8HNY | Yes | V7LD3G | Yes |

TABLE 1 - Item Q8

| WebCode | Match | WebCode | Match |
| :--- | :---: | :---: | :---: |
| WWU3NE | Yes |  |  |
| Response Summary - Q8 |  |  | Total Participants: $\mathbf{4 5}$ |
|  | Match | Total |  |
|  | Yes | 45 |  |
|  | No | 0 |  |
|  | Unable To Determine | 0 |  |

TABLE 1 - Item Q9

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3 K 2 L 4 L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |

TABLE 1 - Item Q9

| WebCode | Match | WebCode | Match |
| :--- | :---: | :---: | :---: |
| WWU3NE |  |  |  |
| Response Summary - Q9 |  |  | Total Participants: 45 |
|  | Match | Total |  |
|  | Yes | 0 |  |
|  | No | 45 |  |
|  | Unable To Determine | 0 |  |

TABLE 1 - Item Q10

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98 UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |



TABLE 1 - Item Q1 1

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |



TABLE 1 - Item Q12

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2AN6VP | No | DYNDEY | No |
| 2CTWN3 | No | E2LC73 | No |
| 376ATW | No | EGKHZX | No |
| 3C8GC7 | No | ELLPCZ | No |
| 3GUJPA | No | GAR3KP | No |
| 3K2L4L | No | GRAWDZ | No |
| 3N2UAG | No | HDN7R3 | No |
| 4WRZFN | No | JJ8QCU | No |
| 643JED | No | KFB87P | No |
| 76EFL4 | No | KVHFPP | No |
| 76G8DJ | No | LF6CZN | No |
| 78LXHD | No | MWMRHB | No |
| 7E3E93 | No | MZL4FW | No |
| 98UPLE | No | P3LWMZ | No |
| AKDT92 | No | PJA8A3 | No |
| ANVJL7 | No | R3WHA7 | No |
| BP8AYZ | No | R4MX4F | No |
| CXBPFT | No | RB72BH | No |
| D2T4JT | No | RTC7XU | No |
| DK6TWQ | No | UUUAGB | No |
| DLGP2V | No | V4EV4K | No |
| DT8HNY | No | V7LD3G | No |



## Tenprint Comparisons

Do any of the Questioned tenprint cards (Q13-Q20) share a common source with any of the standard tenprint cards $(\mathrm{A}-\mathrm{H})$ ?

TABLE 2 - Item Q13

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2AN6VP | Yes | D | D2T4JT | Yes | D |
| 2CTWN3 | Yes | D | DK6TWQ | Yes | D |
| 376ATW | Yes | D | DLGP2V | Yes | D |
| 3C8GC7 | Yes | D | DT8HNY | Yes | D |
| 3GUJPA | Yes | D | DYNDEY | Yes | D |
| 3K2L4L | Yes | D | E2LC73 | Yes | D |
| 3N2UAG | Yes | D | EGKHZX | Yes | D |
| 4WRZFN | Yes | D | ELLPCZ | Yes | D |
| 643JED | Yes | D | GAR3KP | Yes | D |
| 76EFL4 | Yes | D | GRAWDZ | Yes | D |
| 76G8DJ | Yes | D | HDN7R3 | Yes | D |
| 78LXHD | Yes | D | JJ8QCU | Yes | D |
| 7E3E93 | Yes | D | KFB87P | Yes | D |
| 98UPLE | Yes | D | KVHFPP | Yes | D |
| AKDT92 | Yes | D | LF6CZN | Yes | D |
| ANVJL7 | Yes | D | MWMRHB | Yes | D |
| BP8AYZ | Yes | D | MZL4FW | Yes | D |
| CXBPFT | Yes | D | P3LWMZ | Yes | D |

TABLE 2 - Item Q13

| WebCode | Match | Source |  | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PJA8A3 | Yes | D |  |  |  |  |
| R3WHA7 | Yes | D |  |  |  |  |
| R4MX4F | Yes | D |  |  |  |  |
| RB72BH | Yes | D |  |  |  |  |
| RTC7XU | Yes | D |  |  |  |  |
| UUUAGB | Yes | D |  |  |  |  |
| V4EV4K | Yes | D |  |  |  |  |
| V7LD3G | Yes | D |  |  |  |  |
| WWU3NE | Yes | D |  |  |  |  |
| Response Summary - Q13 |  |  |  |  | Totc | icipants: |
| Match |  |  | Total | Source |  |  |
| Yes |  |  | 45 | D (45) |  |  |
| No |  |  | 0 |  |  |  |
| Unable To Determine |  |  | 0 |  |  |  |

TABLE 2 - Item Q14

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2AN6VP | No |  | DLGP2V | No |  |
| 2CTWN3 | No |  | DT8HNY | No |  |
| 376ATW | No |  | DYNDEY | No |  |
| 3C8GC7 | No |  | E2LC73 | No |  |
| 3GUJPA | No |  | EGKHZX | No |  |
| 3K2L4L | No |  | ELLPCZ | No |  |
| 3N2UAG | No |  | GAR3KP | No |  |
| 4WRZFN | No |  | GRAWDZ | No |  |
| 643JED | No |  | HDN7R3 | No |  |
| 76EFL4 | No |  | JJ8QCU | No |  |
| 76G8DJ | No |  | KFB87P | No |  |
| 78LXHD | No |  | KVHFPP | No |  |
| 7E3E93 | No |  | LF6CZN | No |  |
| 98 UPLE | No |  | MWMRHB | No |  |
| AKDT92 | No |  | MZL4FW | No |  |
| ANVJL7 | No |  | P3LWMZ | No |  |
| BP8AYZ | No |  | PJA8A3 | No |  |
| CXBPFT | No |  | R3WHA7 | No |  |
| D2T4JT | No |  | R4MX4F | No |  |
| DK6TWQ | No |  | RB72BH | No |  |

TABLE 2 - Item Q14


TABLE 2 - Item Q15

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2AN6VP | No |  | DLGP2V | No |  |
| 2CTWN3 | No |  | DT8HNY | No |  |
| 376ATW | No |  | DYNDEY | No |  |
| 3C8GC7 | No |  | E2LC73 | No |  |
| 3GUJPA | No |  | EGKHZX | No |  |
| 3K2L4L | No |  | ELLPCZ | No |  |
| 3N2UAG | No |  | GAR3KP | No |  |
| 4WRZFN | No |  | GRAWDZ | No |  |
| 643JED | No |  | HDN7R3 | No |  |
| 76EFL4 | No |  | JJ8QCU | No |  |
| 76G8DJ | No |  | KFB87P | No |  |
| 78LXHD | No |  | KVHFPP | No |  |
| 7E3E93 | No |  | LF6CZN | No |  |
| 98 UPLE | No |  | MWMRHB | No |  |
| AKDT92 | No |  | MZL4FW | No |  |
| ANVJL7 | No |  | P3LWMZ | No |  |
| BP8AYZ | No |  | PJA8A3 | No |  |
| CXBPFT | No |  | R3WHA7 | No |  |
| D2T4JT | No |  | R4MX4F | No |  |
| DK6TWQ | No |  | RB72BH | No |  |

TABLE 2 - Item Q15

| WebCode | Match | Source |  | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RTC7XU | No |  |  |  |  |  |
| UUUAGB | No |  |  |  |  |  |
| V4EV4K | No |  |  |  |  |  |
| V7LD3G | No |  |  |  |  |  |
| WWU3NE | No |  |  |  |  |  |
| Response Summary - Q15 |  |  |  |  | Tota | icipant |
| Match |  |  | Total |  |  |  |
|  | Yes |  | 0 | (N/ |  |  |
|  | No |  | 45 |  | ations) |  |
|  | To Determine |  | 0 |  |  |  |

TABLE 2 - Item Q16

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2AN6VP | Yes | H | DLGP2V | Yes | H |
| 2CTWN3 | Yes | H | DT8HNY | Yes | H |
| 376ATW | Yes | H | DYNDEY | Yes | H |
| 3C8GC7 | Yes | H | E2LC73 | Yes | H |
| 3GUJPA | Yes | H | EGKHZX | Yes | H |
| 3K2L4L | Yes | H | ELLPCZ | Yes | H |
| 3N2UAG | Yes | H | GAR3KP | Yes | H |
| 4WRZFN | Yes | H | GRAWDZ | Yes | H |
| 643JED | Yes | H | HDN7R3 | Yes | H |
| 76EFL4 | Yes | H | JJ8QCU | Yes | H |
| 76G8DJ | Yes | H | KFB87P | Yes | H |
| 78LXHD | Yes | H | KVHFPP | Yes | H |
| 7E3E93 | Yes | H | LF6CZN | Yes | H |
| 98 UPLE | Yes | H | MWMRHB | Yes | H |
| AKDT92 | Yes | H | MZL4FW | Yes | H |
| ANVJL7 | Yes | H | P3LWMZ | Yes | H |
| BP8AYZ | Yes | H | PJA8A3 | Yes | H |
| CXBPFT | Yes | H | R3WHA7 | Yes | H |
| D2T4JT | Yes | H | R4MX4F | Yes | H |
| DK6TWQ | Yes | H | RB72BH | Yes | H |

TABLE 2 - Item Q16

| WebCode | Match | Source |  | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RTC7XU | Yes | H |  |  |  |  |
| UUUAGB | Yes | H |  |  |  |  |
| V4EV4K | Yes | H |  |  |  |  |
| V7LD3G | Yes | H |  |  |  |  |
| WWU3NE | Yes | H |  |  |  |  |
| Response Summary - Q16 |  |  |  |  | Tota | icipant |
| Match |  |  | Total | Source |  |  |
| Yes |  |  | 45 | H (45) |  |  |
| No |  |  | 0 |  |  |  |
| Unable To Determine |  |  | 0 |  |  |  |

TABLE 2 - Item Q17

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2AN6VP | No |  | DLGP2V | No |  |
| 2CTWN3 | No |  | DT8HNY | No |  |
| 376ATW | No |  | DYNDEY | No |  |
| 3C8GC7 | No |  | E2LC73 | No |  |
| 3GUJPA | No |  | EGKHZX | No |  |
| 3 K 2 L 4 L | No |  | ELLPCZ | No |  |
| 3N2UAG | No |  | GAR3KP | No |  |
| 4WRZFN | No |  | GRAWDZ | No |  |
| 643JED | No |  | HDN7R3 | No |  |
| 76EFL4 | No |  | JJ8QCU | No |  |
| 76G8DJ | No |  | KFB87P | No |  |
| 78LXHD | No |  | KVHFPP | No |  |
| 7E3E93 | No |  | LF6CZN | No |  |
| 98 UPLE | No |  | MWMRHB | No |  |
| AKDT92 | No |  | MZL4FW | No |  |
| ANVJL7 | No |  | P3LWMZ | No |  |
| BP8AYZ | No |  | PJA8A3 | No |  |
| CXBPFT | No |  | R3WHA7 | No |  |
| D2T4JT | No |  | R4MX4F | No |  |
| DK6TWQ | UTD |  | RB72BH | No |  |

TABLE 2 - Item Q17

| WebCode | Match | Source |  | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RTC7XU | No |  |  |  |  |  |
| UUUAGB | No |  |  |  |  |  |
| V4EV4K | No |  |  |  |  |  |
| V7LD3G | No |  |  |  |  |  |
| WWU3NE | No |  |  |  |  |  |
| Response Summary - Q17 |  |  |  |  |  | icipants: |
| Match |  |  | Total |  |  |  |
|  |  |  | 0 |  |  |  |
|  |  |  | 44 |  | ations) |  |
| Unable To Determine |  |  | 1 |  |  |  |

TABLE 2 - Item Q18

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2AN6VP | No |  | DLGP2V | No |  |
| 2CTWN3 | No |  | DT8HNY | No |  |
| 376ATW | No |  | DYNDEY | No |  |
| 3C8GC7 | No |  | E2LC73 | No |  |
| 3GUJPA | No |  | EGKHZX | No |  |
| 3 K 2 L 4 L | No |  | ELLPCZ | No |  |
| 3N2UAG | No |  | GAR3KP | No |  |
| 4WRZFN | No |  | GRAWDZ | No |  |
| 643JED | No |  | HDN7R3 | No |  |
| 76EFL4 | No |  | JJ8QCU | No |  |
| 76G8DJ | No |  | KFB87P | No |  |
| 78LXHD | No |  | KVHFPP | No |  |
| 7E3E93 | No |  | LF6CZN | No |  |
| 98 UPLE | No |  | MWMRHB | No |  |
| AKDT92 | No |  | MZL4FW | No |  |
| ANVJL7 | No |  | P3LWMZ | No |  |
| BP8AYZ | No |  | PJA8A3 | No |  |
| CXBPFT | No |  | R3WHA7 | No |  |
| D2T4JT | No |  | R4MX4F | No |  |
| DK6TWQ | UTD |  | RB72BH | No |  |

TABLE 2 - Item Q18

| WebCode | Match | Source |  | WebCode | Maich | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RTC7XU | No |  |  |  |  |  |
| UUUAGB | No |  |  |  |  |  |
| V4EV4K | No |  |  |  |  |  |
| V7LD3G | No |  |  |  |  |  |
| WWU3NE | No |  |  |  |  |  |
| Response Summary - Q18 |  |  | Total | Total Participants: 45 |  |  |
| Match |  |  |  | Source |  |  |
|  |  |  | 0 |  |  |  |
|  |  |  | 44 |  | tions) |  |
|  | To Dete |  | 1 |  |  |  |

TABLE 2 - Item Q19

| WebCode | Match | Source | WebCode | Maitch | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2AN6VP | Yes | G | DLGP2V | Yes | G |
| 2CTWN3 | Yes | G | DT8HNY | Yes | G |
| 376ATW | Yes | G | DYNDEY | Yes | G |
| 3C8GC7 | Yes | G | E2LC73 | Yes | G |
| 3GUJPA | Yes | G | EGKHZX | Yes | G |
| 3K2L4L | Yes | G | ELLPCZ | Yes | G |
| 3N2UAG | Yes | G | GAR3KP | Yes | G |
| 4WRZFN | Yes | G | GRAWDZ | Yes | G |
| 643JED | Yes | G | HDN7R3 | Yes | G |
| 76EFL4 | Yes | G | JJ8QCU | Yes | G |
| 76G8DJ | Yes | G | KFB87P | Yes | G |
| 78LXHD | Yes | G | KVHFPP | Yes | G |
| 7E3E93 | Yes | G | LF6CZN | Yes | G |
| 98UPLE | Yes | G | MWMRHB | Yes | G |
| AKDT92 | Yes | G | MZL4FW | Yes | G |
| ANVJL7 | Yes | G | P3LWMZ | Yes | G |
| BP8AYZ | Yes | G | PJA8A3 | Yes | G |
| CXBPFT | Yes | G | R3WHA7 | Yes | G |
| D2T4JT | Yes | G | R4MX4F | Yes | G |
| DK6TWQ | Yes | G | RB72BH | Yes | G |

TABLE 2 - Item Q19

| WebCode | Match | Source |  | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RTC7XU | Yes | G |  |  |  |  |
| UUUAGB |  | G |  |  |  |  |
| V4EV4K | Yes | G |  |  |  |  |
| V7LD3G | Yes | G |  |  |  |  |
| WWU3NE | Yes | G |  |  |  |  |
| Response Summary - Q19 |  |  |  |  |  | icipants: |
| Match |  |  | Total | Source |  |  |
| Yes |  |  | 44 | G (45) |  |  |
|  |  |  | 0 |  |  |  |
| Unable To Determine |  |  | 0 |  |  |  |

TABLE 2 - Item Q20

| WebCode | Match | Source | WebCode | Match | Source |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2AN6VP | Yes | A | DLGP2V | Yes | A |
| 2CTWN3 | Yes | A | DT8HNY | Yes | A |
| 376ATW | Yes | A | DYNDEY | Yes | A |
| 3C8GC7 | Yes | A | E2LC73 | Yes | A |
| 3GUJPA | Yes | A | EGKHZX | Yes | A |
| 3K2L4L | Yes | A | ELLPCZ | Yes | A |
| 3N2UAG | Yes | A | GAR3KP | Yes | A |
| 4WRZFN | Yes | A | GRAWDZ | Yes | A |
| D43JED | Yes | A | A | ADNTR3 | Yes |

TABLE 2 - Item Q20

| WebCode | Match | Source |  | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RTC7XU | Yes | A |  |  |  |  |
| UUUAGB |  | A |  |  |  |  |
| V4EV4K | Yes | A |  |  |  |  |
| V7LD3G | Yes | A |  |  |  |  |
| WWU3NE | Yes | A |  |  |  |  |
| Response Summary - Q20 |  |  |  |  | Tota | icipants: |
| Match |  |  | Total | Source |  |  |
|  |  |  | 44 | A (45) |  |  |
|  |  |  | 0 |  |  |  |
| Unable To Determine |  |  | 0 |  |  |  |

## Additional Comments

TABLE 3

No Additional Comments were received in this test.

## Test No. 23-5141: Tenprint Examination

data must be submitted by July 03, 2023, 11:59 p.m. EDT to be included in the report

## Participant Code: U1234A <br> WebCode: FC3K7F

## Scenario:

The following prints, including single-print card pairs and tenprint cards, are in need of manual comparison. For the single prints, please compare the like-numbered Questioned and Standard print pairs to determine if they originate from the same source. For the tenprint cards, please compare each Questioned item to the pool of Standard items to determine if any of the Questioned tenprint cards share a common source with any of the Standard tenprint cards.
For the single print pairs, open the like-numbered Questioned and Standard files and compare the two prints.
For the tenprint cards, open a Questioned file and compare it to each Standard file. If a match is found, indicate the letter of the Standard card that was identified as sharing a common source with the Questioned card.

The files within the 'TIF' and 'JPG' folders are the same items, just provided in different formats.
For this test, you are not limited to conducting only on-screen comparisons and may employ any other method you wish. However, because of differences in printing technology, CTS cannot guarantee the quality of images you print from the digital media.

Items Submitted (Sample Pack TPE):
Items Q1-Q12: Twelve single-print card pairs, in TIF and JPG formats.
Items Q13-Q20: Eight questioned tenprint cards, in TIF and JPG formats.
Items A-H: Eight standard tenprint cards for comparison to Q13-Q20, in TIF and JPG formats.

To verify a complete and accurate download, the hash value for the downloaded . ZIP file is as follows:
23-5141_Tenprint Examination.zip MD5 hash value: 3e427749f4994cdb463a4d773448b61e
23-5141_Tenprint Examination.zip SHA1 hash value: 210e2022da1a5198697ff53ad0d456f2ff7b64a7
1.) Does each pair of the following collected single-print cards originate from the same source? *If "Unable to Determine" is selected, please explain your reasoning in the Additional Comments.

|  | Yes | No | Unable to Determine* |
| :--- | :---: | :---: | :---: |
| Q1 |  |  |  |
| Q2 |  | Unable to Determine* |  |
| Q3 |  |  |  |
| Q4 |  |  |  |
|  | Yes |  |  |
| Q5 |  |  |  |
| Q6 |  |  |  |
| Q7 |  |  |  |
| Q8 |  |  |  |
| Q9 |  |  |  |
| Q10 |  |  |  |

2.) Do any of the Questioned tenprint cards (Q13-Q20) share a common source with any of the Standard tenprint cards (A-H)? If so, please identify the letter of the Standard card with which a common source is shared.
*If "Unable to Determine" is selected, please explain your reasoning in the Additional Comments.

|  |  | Yes | No | Unable to Determine* |
| :---: | :---: | :---: | :---: | :---: |
| Q13 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |
| Q14 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |
| Q15 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |
| Q16 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |
|  |  | Yes | No | Unable to Determine* |
| Q17 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |
| Q18 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |
| Q19 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |
| Q20 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |

## 3.) Additional Comments

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

## RELEASE OF DATA TO ACCREDITATION BODIES

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

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

This participant's data is intended for submission to ASCLD/LAB, ANAB, and/or A2LA. (Accreditation Release section below must be completed.)

This participant's data is not intended for submission to ASCLD/LAB, ANAB, and/or A2LA.

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

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

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

A2LA Certificate No.

Step 2: Complete the Laboratory Identifying Information in its entirety

Authorized Contact Person and Title
$\square$

Laboratory Name
$\square$

Location (City/State)

