Collaborative Testing Services, Inc FORENSIC TESTING PROGRAM

## Tenprint Examination <br> Test No. 22-5141 Summary Report

Each digital sample pack contained twelve single print 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 48 participants and are compiled into the following tables:
Page
Manufacturer's Information $\underline{2}$
Summary Comments $\underline{3}$
Table 1: Single Print Comparisons 4
Table 2: Tenprint Comparisons $\underline{8}$
Table 3: Additional Comments $\underline{44}$

Appendix: Data Sheet

[^0]
## Manufacturer's Information

Each digital sample pack consisted of twenty questioned fingerprints and tenprint cards for comparison. Items Q1-Q12 contained a series of single print pairs, and Items 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.

| Single Print Pair | Same Source? | Tenprint Card | Match to Standard? |
| :---: | :---: | :---: | :---: |
| Q1 | No | Q13 | Standard G |
| Q2 | No | Q14 | No |
| Q3 | Yes | Q15 | No |
| Q4 | No | Q16 | No |
| Q5 | No | Q17 | No |
| Q6 | No | Q18 | Standard C |
| Q7 | Yes | Q19 | Standard B |
| Q8 | No | Q20 |  |
| Q10 | No |  |  |
| Q11 | Yes |  |  |
| Q12 | No |  |  |

## Summary Comments

Each digital sample pack 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. (Refer to the Manufacturer's Information for preparation details.)

Of the 48 responding participants, 47 ( $97.9 \%$ ) reported the expected responses for all twelve single-print pairs and eight tenprint comparisons. One participant reported no common source between the questioned tenprint cards and any of the standard tenprint cards for the three items where a tenprint common source was expected (Q13, Q18, and Q19).

## Single Print Comparisons

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

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | BVE449 | No |
| 3QLEYW | No | CTLFEL | No |
| 49KPNK | No | ELU6Z8 | No |
| 4AYEPC | No | EWEB6T | No |
| 4DXPLC | No | F22LLZ | No |
| 4NZQLB | No | F3FWHJ | No |
| 4U2AEU | No | F6NZJQ | No |
| 4ZAM3K | No | FQ3PN6 | No |
| 883UJY | No | H83GH6 | No |
| 93MQ4D | No | HN9MQF | No |
| 96QG88 | No | LULVM2 | No |
| 99DV6X | No | QLDWX8 | No |
| $9 F 4 Q R Q$ | No | QURY2M | No |
| 9F99PP | No | RAUVXR | No |
| 9KGJNB | No | RBR6TU | No |
| 9NLZFM | No | REPPVT | No |
| 9ZF7FC | No | RLBH8T | No |
| B8MUZP | No | RT9EN4 | No |
| BBL6VN | No | UQYXHD | No |
| BFM4J6 | No | VYNYLZ | No |



TABLE 1 - Item Q2

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | ELU6Z8 | No |
| 3QLEYW | No | EWEB6T | No |
| 49KPNK | No | F22LLZ | No |
| 4AYEPC | No | F3FWHJ | No |
| 4DXPLC | No | F6NZJQ | No |
| 4NZQLB | No | FQ3PN6 | No |
| 4U2AEU | No | H83GH6 | No |
| 4ZAM3K | No | HN9MQF | No |
| 883UJY | No | LULVM2 | No |
| 93MQ4D | No | QLDWX8 | No |
| 96QG88 | No | QURY2M | No |
| 99DV6X | No | RAUVXR | No |
| 9F4QRQ | No | RBR6TU | No |
| 9F99PP | No | REPPVT | No |
| 9KGJNB | No | RLBH8T | No |
| 9NLZFM | No | RT9EN4 | No |
| 9ZF7FC | No | UQYXHD | No |
| B8MUZP | No | VYNYLZ | No |
| BBL6VN | No | WBTUZL | No |
| BFM4J6 | No | WEVCF3 | No |
| BVE449 | No | X339UN | No |
| CTLFEL | No |  |  |

TABLE 1 - Item Q2

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| XMLBNM | No |  |  |
| XRFECZ | No |  |  |
| XWCT6G | No |  |  |
| Y48B29 | No |  |  |
| YHKVAW | No |  |  |
| Response Summary - Q2 Total Participants: 48 <br> Match Total  |  |  |  |
|  | 0 |  |  |
|  | 48 |  |  |
| Unable To | 0 |  |  |

TABLE 1 - Item Q3

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | Yes | ELU6Z8 | Yes |
| 3QLEYW | Yes | EWEB6T | Yes |
| 49KPNK | Yes | F22LLZ | Yes |
| 4AYEPC | Yes | F3FWHJ | Yes |
| 4DXPLC | Yes | F6NZJQ | Yes |
| 4NZQLB | Yes | FQ3PN6 | Yes |
| 4U2AEU | Yes | H83GH6 | Yes |
| 4ZAM3K | Yes | HN9MQF | Yes |
| 883UJY | Yes | LULVM2 | Yes |
| 93MQ4D | Yes | QLDWX8 | Yes |
| 96QG88 | Yes | QURY2M | Yes |
| 99DV6X | Yes | RAUVXR | Yes |
| 9F4QRQ | Yes | RBR6TU | Yes |
| 9F99PP | Yes | REPPVT | Yes |
| 9KGJNB | Yes | RLBH8T | Yes |
| 9NLZFM | Yes | RT9EN4 | Yes |
| 9ZF7FC | Yes | UQYXHD | Yes |
| B8MUZP | Yes | VYNYLZ | Yes |
| BBL6VN | Yes | WBTUZL | Yes |
| BFM4J6 | Yes | WEVCF3 | Yes |
| BVE449 | Yes | X339UN | Yes |
| CTLFEL | Yes |  |  |

TABLE 1 - Item Q3

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| XMLBNM | Yes |  |  |
| XRFECZ | Yes |  |  |
| XWCT6G | Yes |  |  |
| Y48B29 | Yes |  |  |
| YHKVAW | Yes |  |  |
| Response Summary - Q3 Total Participants: 48 |  |  |  |
|  |  |  |  |
| Yes | 48 |  |  |
| No | 0 |  |  |
| Unable To Determine | 0 |  |  |

TABLE 1 - Item Q4

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | ELU6Z8 | No |
| 3QLEYW | No | EWEB6T | No |
| 49KPNK | No | F22LLZ | No |
| 4AYEPC | No | F3FWHJ | No |
| 4DXPLC | No | F6NZJQ | No |
| 4NZQLB | No | FQ3PN6 | No |
| 4U2AEU | No | H83GH6 | No |
| 4ZAM3K | No | HN9MQF | No |
| 883UJY | No | LULVM2 | No |
| 93MQ4D | No | QLDWX8 | No |
| 96QG88 | No | QURY2M | No |
| 99DV6X | No | RAUVXR | No |
| 9F4QRQ | No | RBR6TU | No |
| 9F99PP | No | REPPVT | No |
| 9KGJNB | No | RLBH8T | No |
| 9NLZFM | No | RT9EN4 | No |
| 9ZF7FC | No | UQYXHD | No |
| B8MUZP | No | VYNYLZ | No |
| BBL6VN | No | WBTUZL | No |
| BFM4J6 | No | WEVCF3 | No |
| BVE449 | No | X339UN | No |
| CTLFEL | No |  |  |


| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| XMLBNM | No |  |  |
| XRFECZ | No |  |  |
| XWCT6G | No |  |  |
| Y48B29 | No |  |  |
| YHKVAW | No |  |  |
| Response Summary - Q4 Total Participants: 48 |  |  |  |
|  |  |  |  |
| Yes | 0 |  |  |
| No | 48 |  |  |
| Unable To Determine | 0 |  |  |

TABLE 1 - Item Q5

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | ELU6Z8 | No |
| 3QLEYW | No | EWEB6T | No |
| 49KPNK | No | F22LLZ | No |
| 4AYEPC | No | F3FWHJ | No |
| 4DXPLC | No | F6NZJQ | No |
| 4NZQLB | No | FQ3PN6 | No |
| 4U2AEU | No | H83GH6 | No |
| 4ZAM3K | No | HN9MQF | No |
| 883UJY | No | LULVM2 | No |
| 93MQ4D | No | QLDWX8 | No |
| 96QG88 | No | QURY2M | No |
| 99DV6X | No | RAUVXR | No |
| 9F4QRQ | No | RBR6TU | No |
| 9F99PP | No | REPPVT | No |
| 9KGJNB | No | RLBH8T | No |
| 9NLZFM | No | RT9EN4 | No |
| 9ZF7FC | No | UQYXHD | No |
| B8MUZP | No | VYNYLZ | No |
| BBL6VN | No | WBTUZL | No |
| BFM4J6 | No | WEVCF3 | No |
| BVE449 | No | X339UN | No |
| CTLFEL | No |  |  |

TABLE 1 - Item Q5


TABLE 1 - Item Q6

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | ELU6Z8 | No |
| 3QLEYW | No | EWEB6T | No |
| 49KPNK | No | F22LLZ | No |
| 4AYEPC | No | F3FWHJ | No |
| 4DXPLC | No | F6NZJQ | No |
| 4NZQLB | No | FQ3PN6 | No |
| 4U2AEU | No | H83GH6 | No |
| 4ZAM3K | No | HN9MQF | No |
| 883UJY | No | LULVM2 | No |
| 93MQ4D | No | QLDWX8 | No |
| 96QG88 | No | QURY2M | No |
| 99DV6X | No | RAUVXR | No |
| 9F4QRQ | No | RBR6TU | No |
| 9F99PP | No | REPPVT | No |
| 9KGJNB | No | RLBH8T | No |
| 9NLZFM | No | RT9EN4 | No |
| 9ZF7FC | No | UQYXHD | No |
| B8MUZP | No | VYNYLZ | No |
| BBL6VN | No | WBTUZL | No |
| BFM4J6 | No | WEVCF3 | No |
| BVE449 | No | X339UN | No |
| CTLFEL | No |  |  |

TABLE 1 - Item Q6

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| XMLBNM | No |  |  |
| XRFECZ | No |  |  |
| XWCT6G | No |  |  |
| Y48B29 | No |  |  |
| YHKVAW | No |  |  |
| Response Summary - Q6 Total Participants: 48 |  |  |  |
|  |  |  |  |
| Yes | 0 |  |  |
| No | 48 |  |  |
| Unable To Determine | 0 |  |  |

TABLE 1 - Item Q7

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | Yes | ELU6Z8 | Yes |
| 3QLEYW | Yes | EWEB6T | Yes |
| 49KPNK | Yes | F22LLZ | Yes |
| 4AYEPC | Yes | F3FWHJ | Yes |
| 4DXPLC | Yes | F6NZJQ | Yes |
| 4NZQLB | Yes | FQ3PN6 | Yes |
| 4U2AEU | Yes | H83GH6 | Yes |
| 4ZAM3K | Yes | HN9MQF | Yes |
| 883UJY | Yes | LULVM2 | Yes |
| 93MQ4D | Yes | QLDWX8 | Yes |
| 96QG88 | Yes | QURY2M | Yes |
| 99DV6X | Yes | RAUVXR | Yes |
| 9F4QRQ | Yes | RBR6TU | Yes |
| 9F99PP | Yes | REPPVT | Yes |
| 9KGJNB | Yes | RLBH8T | Yes |
| 9NLZFM | Yes | RT9EN4 | Yes |
| 9ZF7FC | Yes | UQYXHD | Yes |
| B8MUZP | Yes | VYNYLZ | Yes |
| BBL6VN | Yes | WBTUZL | Yes |
| BFM4J6 | Yes | WEVCF3 | Yes |
| BVE449 | Yes | X339UN | Yes |
| CTLFEL | Yes |  |  |

TABLE 1 - Item Q7

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| XMLBNM | Yes |  |  |
| XRFECZ | Yes |  |  |
| XWCT6G | Yes |  |  |
| Y48B29 | Yes |  |  |
| YHKVAW | Yes |  |  |
| Response Summary - Q7 Total Participants: 48 |  |  |  |
|  |  |  |  |
| Yes | 48 |  |  |
| No | 0 |  |  |
| Unable To Determine | 0 |  |  |

TABLE 1 - Item Q8

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | ELU6Z8 | No |
| 3QLEYW | No | EWEB6T | No |
| 49KPNK | No | F22LLZ | No |
| 4AYEPC | No | F3FWHJ | No |
| 4DXPLC | No | F6NZJQ | No |
| 4NZQLB | No | FQ3PN6 | No |
| 4U2AEU | No | H83GH6 | No |
| 4ZAM3K | No | HN9MQF | No |
| 883UJY | No | LULVM2 | No |
| 93MQ4D | No | QLDWX8 | No |
| 96QG88 | No | QURY2M | No |
| 99DV6X | No | RAUVXR | No |
| 9F4QRQ | No | RBR6TU | No |
| 9F99PP | No | REPPVT | No |
| 9KGJNB | No | RLBH8T | No |
| 9NLZFM | No | RT9EN4 | No |
| 9ZF7FC | No | UQYXHD | No |
| B8MUZP | No | VYNYLZ | No |
| BBL6VN | No | WBTUZL | No |
| BFM4J6 | No | WEVCF3 | No |
| BVE449 | No | X339UN | No |
| CTLFEL | No |  |  |

TABLE 1 - Item Q8


TABLE 1 - Item Q9

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | ELU6Z8 | No |
| 3QLEYW | No | EWEB6T | No |
| 49KPNK | No | F22LLZ | No |
| 4AYEPC | No | F3FWHJ | No |
| 4DXPLC | No | F6NZJQ | No |
| 4NZQLB | No | FQ3PN6 | No |
| 4U2AEU | No | H83GH6 | No |
| 4ZAM3K | No | HN9MQF | No |
| 883UJY | No | LULVM2 | No |
| 93MQ4D | No | QLDWX8 | No |
| 96QG88 | No | QURY2M | No |
| 99DV6X | No | RAUVXR | No |
| 9F4QRQ | No | RBR6TU | No |
| 9F99PP | No | REPPVT | No |
| 9KGJNB | No | RLBH8T | No |
| 9NLZFM | No | RT9EN4 | No |
| 9ZF7FC | No | UQYXHD | No |
| B8MUZP | No | VYNYLZ | No |
| BBL6VN | No | WBTUZL | No |
| BFM4J6 | No | WEVCF3 | No |
| BVE449 | No | X339UN | No |
| CTLFEL | No |  |  |


| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| XMLBNM | No |  |  |
| XRFECZ | No |  |  |
| XWCT6G | No |  |  |
| Y48B29 | No |  |  |
| YHKVAW | No |  |  |
| Response Summary - Q9 |  | s: 48 |  |
| Match | Total |  |  |
| Yes | 0 |  |  |
| No | 48 |  |  |
| Unable To Determine | 0 |  |  |

TABLE 1 - Item Q10

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | Yes | ELU6Z8 | Yes |
| 3QLEYW | Yes | EWEB6T | Yes |
| 49KPNK | Yes | F22LLZ | Yes |
| 4AYEPC | Yes | F3FWHJ | Yes |
| 4DXPLC | Yes | F6NZJQ | Yes |
| 4NZQLB | Yes | FQ3PN6 | Yes |
| 4U2AEU | Yes | H83GH6 | Yes |
| 4ZAM3K | Yes | HN9MQF | Yes |
| 883UJY | Yes | LULVM2 | Yes |
| 93MQ4D | Yes | QLDWX8 | Yes |
| 96QG88 | Yes | QURY2M | Yes |
| 99DV6X | Yes | RAUVXR | Yes |
| 9F4QRQ | Yes | RBR6TU | Yes |
| 9F99PP | Yes | REPPVT | Yes |
| 9KGJNB | Yes | RLBH8T | Yes |
| 9NLZFM | Yes | RT9EN4 | Yes |
| 9ZF7FC | Yes | UQYXHD | Yes |
| B8MUZP | Yes | VYNYLZ | Yes |
| BBL6VN | Yes | WBTUZL | Yes |
| BFM4J6 | Yes | WEVCF3 | Yes |
| BVE449 | Yes | X339UN | Yes |
| CTLFEL | Yes |  |  |



TABLE 1 - Item Q1 1

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | ELU6Z8 | No |
| 3QLEYW | No | EWEB6T | No |
| 49KPNK | No | F22LLZ | No |
| 4AYEPC | No | F3FWHJ | No |
| 4DXPLC | No | F6NZJQ | No |
| 4NZQLB | No | FQ3PN6 | No |
| 4U2AEU | No | H83GH6 | No |
| 4ZAM3K | No | HN9MQF | No |
| 883UJY | No | LULVM2 | No |
| 93MQ4D | No | QLDWX8 | No |
| 96QG88 | No | QURY2M | No |
| 99DV6X | No | RAUVXR | No |
| 9F4QRQ | No | RBR6TU | No |
| 9F99PP | No | REPPVT | No |
| 9KGJNB | No | RLBH8T | No |
| 9NLZFM | No | RT9EN4 | No |
| 9ZF7FC | No | UQYXHD | No |
| B8MUZP | No | VYNYLZ | No |
| BBL6VN | No | WBTUZL | No |
| BFM4J6 | No | WEVCF3 | No |
| BVE449 | No | X339UN | No |
| CTLFEL | No |  |  |



TABLE 1 - Item Q12

| WebCode | Match | WebCode | Match |
| :---: | :---: | :---: | :---: |
| 2HEBGD | No | ELU6Z8 | No |
| 3QLEYW | No | EWEB6T | No |
| 49KPNK | No | F22LLZ | No |
| 4AYEPC | No | F3FWHJ | No |
| 4DXPLC | No | F6NZJQ | No |
| 4NZQLB | No | FQ3PN6 | No |
| 4U2AEU | No | H83GH6 | No |
| 4ZAM3K | No | HN9MQF | No |
| 883UJY | No | LULVM2 | No |
| 93MQ4D | No | QLDWX8 | No |
| 96QG88 | No | QURY2M | No |
| 99DV6X | No | RAUVXR | No |
| 9F4QRQ | No | RBR6TU | No |
| 9F99PP | No | REPPVT | No |
| 9KGJNB | No | RLBH8T | No |
| 9NLZFM | No | RT9EN4 | No |
| 9ZF7FC | No | UQYXHD | No |
| B8MUZP | No | VYNYLZ | No |
| BBL6VN | No | WBTUZL | No |
| BFM4J6 | No | WEVCF3 | No |
| BVE449 | No | X339UN | No |
| CTLFEL | 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 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2HEBGD | Yes | G | BBL6VN | Yes | G |
| 3QLEYW | Yes | G | BFM4J6 | Yes | G |
| 49KPNK | Yes | G | BVE449 | Yes | G |
| 4AYEPC | Yes | G | CTLFEL | Yes | G |
| 4DXPLC | Yes | G | ELU6Z8 | Yes | G |
| 4NZQLB | Yes | G | EWEB6T | Yes | G |
| 4U2AEU | Yes | G | F22LLZ | Yes | G |
| 4ZAM3K | Yes | G | F3FWHJ | Yes | G |
| 883UJY | No |  | F6NZJQ | Yes | G |
| 93MQ4D | Yes | G | FQ3PN6 | Yes | G |
| 96QG88 | Yes | G | H83GH6 | Yes | G |
| 99DV6X | Yes | G | HN9MQF | Yes | G |
| 9F4QRQ | Yes | G | LULVM2 | Yes | G |
| 9F99PP | Yes | G | QLDWX8 | Yes | G |
| 9KGJNB | Yes | G | QURY2M | Yes | G |
| 9NLZFM | Yes | G | RAUVXR | Yes | G |
| 9ZF7FC | Yes | G | RBR6TU | Yes | G |
| B8MUZP | Yes | G | REPPVT | Yes | G |

TABLE 2 - Item Q13

| WebCode | Match |  | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RLBH8T | Yes |  | G |  |  |  |
| RT9EN4 | Yes |  | G |  |  |  |
| UQYXHD | Yes |  | G |  |  |  |
| VYNYLZ | Yes |  | G |  |  |  |
| WBTUZL | Yes |  | G |  |  |  |
| WEVCF3 | Yes |  | G |  |  |  |
| X339UN | Yes |  | G |  |  |  |
| XMLBNM | Yes |  | G |  |  |  |
| XRFECZ | Yes |  | G |  |  |  |
| XWCT6G | Yes |  | G |  |  |  |
| Y48B29 | Yes |  | G |  |  |  |
| YHKVAW | Yes |  | G |  |  |  |
| Response Summary - Q13 |  |  | Total Participants: 48 | nts: 48 |  |  |
|  | Yes | 47 | G (47) |  |  |  |
|  | No | 1 |  |  |  |  |
| Unable To | etermine | 0 |  |  |  |  |

TABLE 2 - Item Q14

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2HEBGD | No |  | BVE449 | No |  |
| 3QLEYW | No |  | CTLFEL | No |  |
| 49KPNK | No |  | ELU6Z8 | No |  |
| 4AYEPC | No |  | EWEB6T | No |  |
| 4DXPLC | No |  | F22LLZ | No |  |
| 4NZQLB | No |  | F3FWHJ | No |  |
| 4U2AEU | No |  | F6NZJQ | No |  |
| 4ZAM3K | No |  | FQ3PN6 | No |  |
| 883UJY | No |  | H83GH6 | No |  |
| 93MQ4D | No |  | HN9MQF | No |  |
| 96QG88 | No |  | LULVM2 | No |  |
| 99DV6X | No |  | QLDWX8 | No |  |
| $9 F 4 Q R Q$ | No |  | QURY2M | No |  |
| 9F99PP | No |  | RAUVXR | No |  |
| 9KGJNB | No |  | RBR6TU | No |  |
| 9NLZFM | No |  | REPPVT | No |  |
| 9ZF7FC | No |  | RLBH8T | No |  |
| B8MUZP | No |  | RT9EN4 | No |  |
| BBL6VN | No |  | UQYXHD | No |  |
| BFM4J6 | No |  | VYNYLZ | No |  |

TABLE 2 - Item Q14


TABLE 2 - Item Q15

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2HEBGD | No |  | BVE449 | No |  |
| 3QLEYW | No |  | CTLFEL | No |  |
| 49KPNK | No |  | ELU6Z8 | No |  |
| 4AYEPC | No |  | EWEB6T | No |  |
| 4DXPLC | No |  | F22LLZ | No |  |
| 4NZQLB | No |  | F3FWHJ | No |  |
| 4U2AEU | No |  | F6NZJQ | No |  |
| 4ZAM3K | No |  | FQ3PN6 | No |  |
| 883UJY | No |  | H83GH6 | No |  |
| 93MQ4D | No |  | HN9MQF | No |  |
| 96QG88 | No |  | LULVM2 | No |  |
| 99DV6X | No |  | QLDWX8 | No |  |
| $9 F 4 Q R Q$ | No |  | QURY2M | No |  |
| 9F99PP | No |  | RAUVXR | No |  |
| 9KGJNB | No |  | RBR6TU | No |  |
| 9NLZFM | No |  | REPPVT | No |  |
| 9ZF7FC | No |  | RLBH8T | No |  |
| B8MUZP | No |  | RT9EN4 | No |  |
| BBL6VN | No |  | UQYXHD | No |  |
| BFM4J6 | No |  | VYNYLZ | No |  |

TABLE 2 - Item Q15


TABLE 2 - Item Q16

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2HEBGD | No |  | BVE449 | No |  |
| 3QLEYW | No |  | CTLFEL | No |  |
| 49KPNK | No |  | ELU6Z8 | No |  |
| 4AYEPC | No |  | EWEB6T | No |  |
| 4DXPLC | No |  | F22LLZ | No |  |
| 4NZQLB | No |  | F3FWHJ | No |  |
| 4U2AEU | No |  | F6NZJQ | No |  |
| 4ZAM3K | No |  | FQ3PN6 | No |  |
| 883UJY | No |  | H83GH6 | No |  |
| 93MQ4D | No |  | HN9MQF | No |  |
| 96QG88 | No |  | LULVM2 | No |  |
| 99DV6X | No |  | QLDWX8 | No |  |
| $9 F 4 Q R Q$ | No |  | QURY2M | No |  |
| 9F99PP | No |  | RAUVXR | No |  |
| 9KGJNB | No |  | RBR6TU | No |  |
| 9NLZFM | No |  | REPPVT | No |  |
| 9ZF7FC | No |  | RLBH8T | No |  |
| B8MUZP | No |  | RT9EN4 | No |  |
| BBL6VN | No |  | UQYXHD | No |  |
| BFM4J6 | No |  | VYNYLZ | No |  |

TABLE 2 - Item Q16


TABLE 2 - Item Q17

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2HEBGD | No |  | BVE449 | No |  |
| 3QLEYW | No |  | CTLFEL | No |  |
| 49KPNK | No |  | ELU6Z8 | No |  |
| 4AYEPC | No |  | EWEB6T | No |  |
| 4DXPLC | No |  | F22LLZ | No |  |
| 4NZQLB | No |  | F3FWHJ | No |  |
| 4U2AEU | No |  | F6NZJQ | No |  |
| 4ZAM3K | No |  | FQ3PN6 | No |  |
| 883UJY | No |  | H83GH6 | No |  |
| 93MQ4D | No |  | HN9MQF | No |  |
| 96QG88 | No |  | LULVM2 | No |  |
| 99DV6X | No |  | QLDWX8 | No |  |
| 9F4QRQ | No |  | QURY2M | No |  |
| 9F99PP | No |  | RAUVXR | No |  |
| 9KGJNB | No |  | RBR6TU | No |  |
| 9NLZFM | No |  | REPPVT | No |  |
| 9ZF7FC | No |  | RLBH8T | No |  |
| B8MUZP | No |  | RT9EN4 | No |  |
| BBL6VN | No |  | UQYXHD | No |  |
| BFM4J6 | No |  | VYNYLZ | No |  |

TABLE 2 - Item Q17


TABLE 2 - Item Q18

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2HEBGD | Yes | C | BVE449 | Yes | C |
| 3QLEYW | Yes | C | CTLFEL | Yes | C |
| 49KPNK | Yes | C | ELU6Z8 | Yes | C |
| 4AYEPC | Yes | C | EWEB6T | Yes | C |
| 4DXPLC | Yes | C | F22LLZ | Yes | C |
| 4NZQLB | Yes | C | F3FWHJ | Yes | C |
| 4U2AEU | Yes | C | F6NZJQ | Yes | C |
| 4ZAM3K | Yes | C | FQ3PN6 | Yes | C |
| 883UJY | No |  | H83GH6 | Yes | C |
| 93MQ4D | Yes | C | HN9MQF | Yes | C |
| 96QG88 | Yes | C | LULVM2 | Yes | C |
| 99DV6X | Yes | C | QLDWX8 | Yes | C |
| 9F4QRQ | Yes | C | QURY2M | Yes | C |
| 9F99PP | Yes | C | RAUVXR | Yes | C |
| 9KGJNB | Yes | C | RBR6TU | Yes | C |
| 9NLZFM | Yes | C | REPPVT | Yes | C |
| 9ZF7FC | Yes | C | RLBH8T | Yes | C |
| B8MUZP | Yes | C | RT9EN4 | Yes | C |
| BBL6VN | Yes | C | UQYXHD | Yes | C |
| BFM4J6 | Yes | C | VYNYLZ | Yes | C |

TABLE 2 - Item Q18

| WebCode | Match |  | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WBTUZL | Yes |  | C |  |  |  |
| WEVCF3 | Yes |  | C |  |  |  |
| X339UN | Yes |  | C |  |  |  |
| XMLBNM | Yes |  | C |  |  |  |
| XRFECZ | Yes |  | C |  |  |  |
| XWCT6G | Yes |  | C |  |  |  |
| Y48B29 | Yes |  | C |  |  |  |
| YHKVAW | Yes |  | C |  |  |  |
| Response Summary - Q18 Total Participants: 48 <br> Match <br> Total <br> Source |  |  |  |  |  |  |
| Yes |  | 47 | C (47) |  |  |  |
| No |  | 1 |  |  |  |  |
| Unable To Determine |  | 0 |  |  |  |  |

TABLE 2 - Item Q19

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2HEBGD | Yes | B | BVE449 | Yes | B |
| 3QLEYW | Yes | B | CTLFEL | Yes | B |
| 49 KPNK | Yes | B | ELU6Z8 | Yes | B |
| 4AYEPC | Yes | B | EWEB6T | Yes | B |
| 4DXPLC | Yes | B | F22LLZ | Yes | B |
| 4NZQLB | Yes | B | F3FWHJ | Yes | B |
| 4U2AEU | Yes | B | F6NZJQ | Yes | B |
| 4ZAM3K | Yes | B | FQ3PN6 | Yes | B |
| 883UJY | No |  | H83GH6 | Yes | B |
| 93MQ4D | Yes | B | HN9MQF | Yes | B |
| 96QG88 | Yes | B | LULVM2 | Yes | B |
| 99DV6X | Yes | B | QLDWX8 | Yes | B |
| 9F4QRQ | Yes | B | QURY2M | Yes | B |
| 9F99PP | Yes | B | RAUVXR | Yes | B |
| 9KGJNB | Yes | B | RBR6TU | Yes | B |
| 9NLZFM | Yes | B | REPPVT | Yes | B |
| 9ZF7FC | Yes | B | RLBH8T | Yes | B |
| B8MUZP | Yes | B | RT9EN4 | Yes | B |
| BBL6VN | Yes | B | UQYXHD | Yes | B |
| BFM4J6 | Yes | B | VYNYLZ | Yes | B |

TABLE 2 - Item Q19

| WebCode | Maitch |  | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WBTUZL | Yes |  | B |  |  |  |
| WEVCF3 | Yes |  | B |  |  |  |
| X339UN | Yes |  | B |  |  |  |
| XMLBNM | Yes |  | B |  |  |  |
| XRFECZ | Yes |  | B |  |  |  |
| XWCT6G | Yes |  | B |  |  |  |
| Y48B29 | Yes |  | B |  |  |  |
| YHKVAW | Yes |  | B |  |  |  |
| Response Summary - Q19 Total Participants: 48 <br> Match Total |  |  |  |  |  |  |
| Yes 47 |  |  | B (47) |  |  |  |
| No |  | 1 |  |  |  |  |
| Unable To | mine | 0 |  |  |  |  |

TABLE 2 - Item Q20

| WebCode | Match | Source | WebCode | Match | Source |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2HEBGD | No |  | BVE449 | No |  |
| 3QLEYW | No |  | CTLFEL | No |  |
| 49KPNK | No |  | ELU6Z8 | No |  |
| 4AYEPC | No |  | EWEB6T | No |  |
| 4DXPLC | No |  | F22LLZ | No |  |
| 4NZQLB | No |  | F3FWHJ | No |  |
| 4U2AEU | No |  | F6NZJQ | No |  |
| 4ZAM3K | No |  | FQ3PN6 | No |  |
| 883UJY | No |  | H83GH6 | No |  |
| 93MQ4D | No |  | HN9MQF | No |  |
| 96QG88 | No |  | LULVM2 | No |  |
| 99DV6X | No |  | QLDWX8 | No |  |
| $9 F 4 Q R Q$ | No |  | QURY2M | No |  |
| 9F99PP | No |  | RAUVXR | No |  |
| 9KGJNB | No |  | RBR6TU | No |  |
| 9NLZFM | No |  | REPPVT | No |  |
| 9ZF7FC | No |  | RLBH8T | No |  |
| B8MUZP | No |  | RT9EN4 | No |  |
| BBL6VN | No |  | UQYXHD | No |  |
| BFM4J6 | No |  | VYNYLZ | No |  |

TABLE 2 - Item Q20


## Additional Comments

TABLE 3

## Collaborative Testing Services ~ Forensic Testing Program

## Test No. 22-5141: Tenprint Examination

# data must be submitted by July 5, 2022, 11:59 p.m. to be included in the report 

Participant Code: U1234A<br>WebCode: 3972PE

## 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:
22-5141_Tenprint Examination.zip MD5 hash value: 2f20ba72b0ff429f352a1be73cbcc289
22-5141_Tenprint Examination.zip SHA1 hash value: 5cd0e433076ded2a7d356126e1923fbef06ad00d
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 |  |  |  |
| Q3 |  |  |  |
| Q4 | Uo |  |  |
|  |  |  |  |
| Q5 |  |  |  |
| Q6 |  |  |  |
| Q7 |  |  |  |
| Q8 |  |  |  |
|  |  |  |  |

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 | $\square$ |  |  |
| Q14 | $\square$ |  |  |
| Q15 | Yes |  |  |
| Q16 | $\square$ | Unable to Determine* |  |
| Q17 | $\square$ |  |  |

## 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

Laboratory Name
$\square$

Location (City/State)


[^0]:    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.

