



## Ron Smith & Associates, Inc.

### Testing Division

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## Summary Report

Latent Print Processing Proficiency Test #23501

Issued: April 28, 2023

On February 27, 2023, Ron Smith and Associates, Inc. (RS&A) shipped the Latent Print Processing Proficiency Test #23501. Participants were required to submit their responses no later than April 7, 2023 in order for them to be included in this summary report.

A total of 80 tests were ordered and shipped, with 73 participants returning their responses. **This summary report is based on 292 individual responses (73 participants returning 4 responses each).** The test included four items for latent print processing.

The results presented in this report reflect whether or not the participants' submitted results agree or disagree with the assigned values garnered from pre-distribution testing and outlined in *The Manufacturer's Report* (Appendix 1). The primary purpose of a Summary Report is to provide an overall documentation of all the submitted responses. It is RS&A's intention to go a step further by providing more meaningful statistical results through analyzing the submitted responses in relation to the demographics obtained from each of the examiners participating in this proficiency test. All results and statistics for this test will be outlined through graphs and charts found in the remainder of this report.

Prior to distribution of this test, all the expected responses were determined, by internal and external consensus, to be either "Friction Ridge Detail **was** Developed" or "Friction Ridge Detail **was not** Developed". In designing this proficiency test, it is understood that sometimes friction ridge detail may be present on an item during the manufacturing process. For this reason, all items are cleaned prior to being included in a test. Because of the latent nature of the prints, it is possible that some portions of friction ridge detail can be missed in the cleaning process. To satisfy this condition for the test, all developed friction ridge detail has to be photographed in order to be given credit. If the photograph is accepted, the participant will be given credit for the friction ridge development in instances when the expected answer was "Friction Ridge Detail **was not** Developed".

RS&A strives to maintain the confidentiality of all its clients and participants. All results are obtained and published using randomly generated test codes. RS&A will not release the identity of any participant without the written consent of the participant and/or the agency involved.

For any questions or further information, please contact our Proficiency Testing Coordinator by emailing [testing@ronsmithandassociates.com](mailto:testing@ronsmithandassociates.com) or by calling toll free at 1-866-832-6772.

## Appendix 1

### Test Manufacturer's Information

#### Latent Print Processing Proficiency Test #23501

This proficiency test consisted of four items labeled as Item #1 (car charger), Item #2 (hand sanitizer), Item #3 (red cup) and Item #4 (paper bag). The items were similar to those normally encountered in latent print processing casework. The participant was required to process the items for the presence or absence of friction ridge detail. The assigned values are as follows:

| Item #                   | Assigned Value  |
|--------------------------|---|
| Item #1 (Car Charger)    | Friction Ridge Detail <b>Was</b> Developed – Supported with Electronically Captured Image |
| Item #2 (Hand Sanitizer) | Friction Ridge Detail <b>Was</b> Developed – Supported with Electronically Captured Image |
| Item #3 (Red Cup)        | Friction Ridge Detail <b>Was</b> Developed – Supported with Electronically Captured Image |
| Item #4 (Paper Bag)      | Friction Ridge Detail <b>Was</b> Developed – Supported with Electronically Captured Image |

The assigned values below were determined through the ground truth information and verified through unanimous agreement during pre-distribution testing.

#### Known Matrix used:

**Item 1:** Sebaceous oils, **Item 2:** Sebaceous oils, **Item 3:** Sebaceous oils, **Item 4:** Amino Acids

Individual reports will be provided to participants by mid April 2023. The final summary report for this test will be posted on the Ron Smith and Associates website by late April 2023 using the following link: <http://www.ronsmithandassociates.com/proficiency/lpprocessing.html>

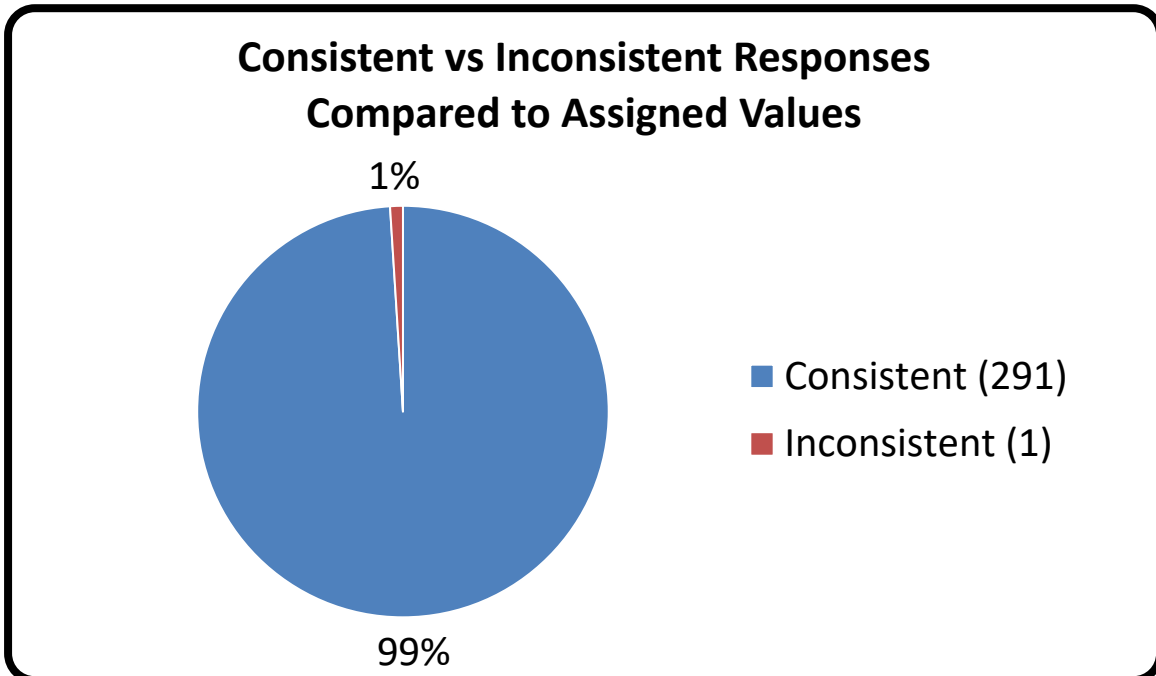
It is recommended to postpone evaluating an individual's performance until after you have received the statistical averages contained in the summary report.

For any questions or further information, contact the Proficiency Testing Coordinator by emailing [testing@ronsmithandassociates.com](mailto:testing@ronsmithandassociates.com) or call toll free at 1-866-832-6772.

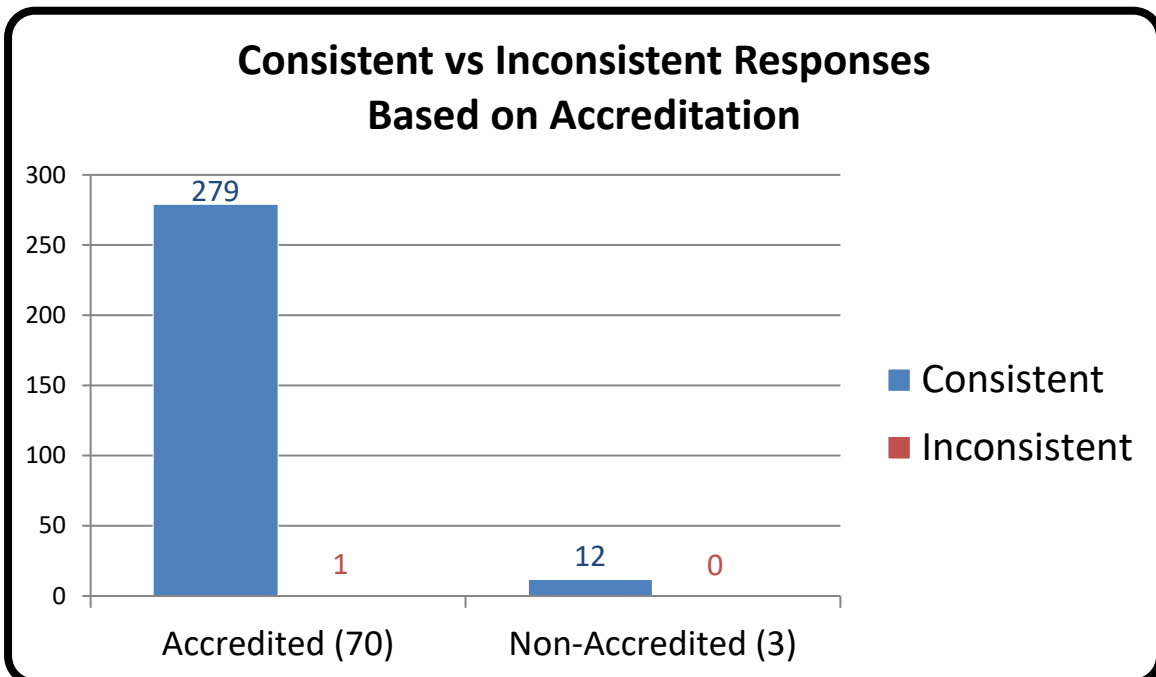
**Authorized by:** Jon Byrd, CEO

**Issue Date:** April 17, 2023

## Appendix 2



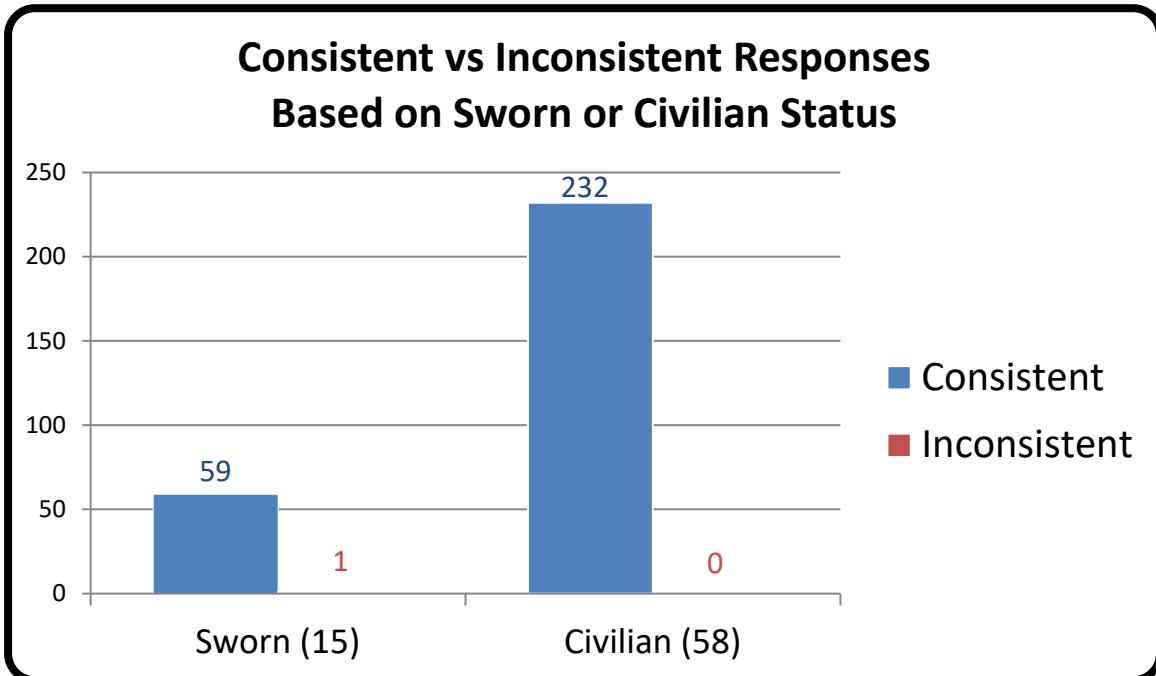
## Appendix 3



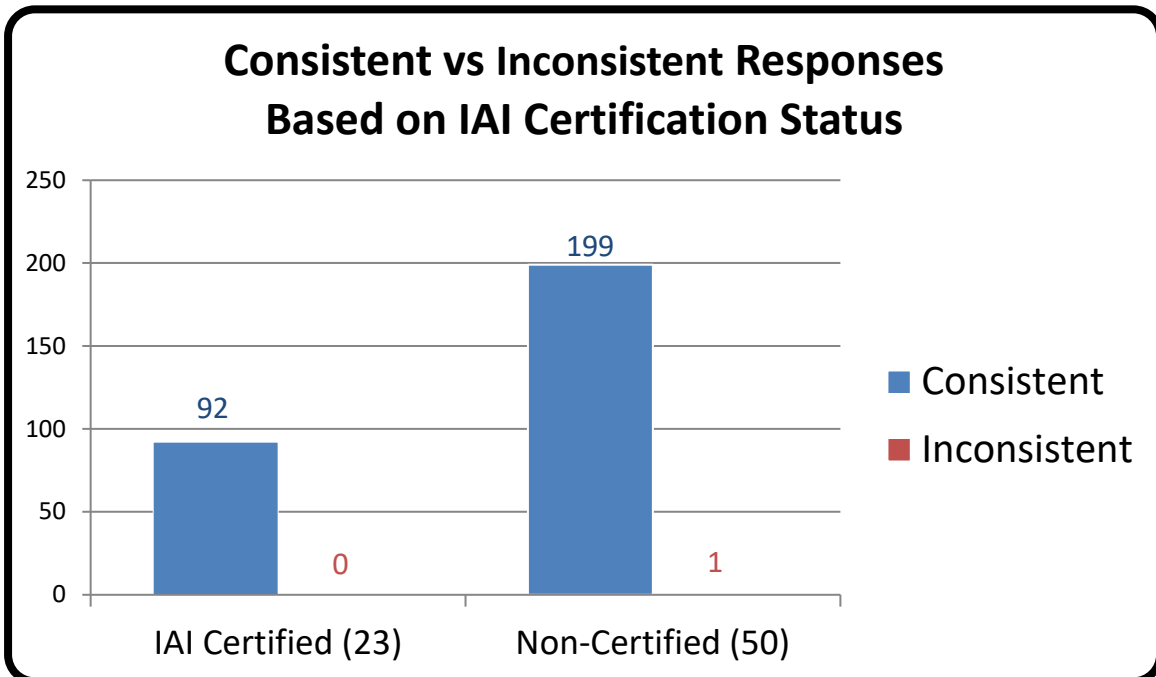
\*Numerical values shown are based on **73 participant submissions, each with 4 responses, equaling 292 total responses.**

\*For further information, please read **Manufacturer's Additional Observations** on the final page of this report.

## Appendix 4



## Appendix 5

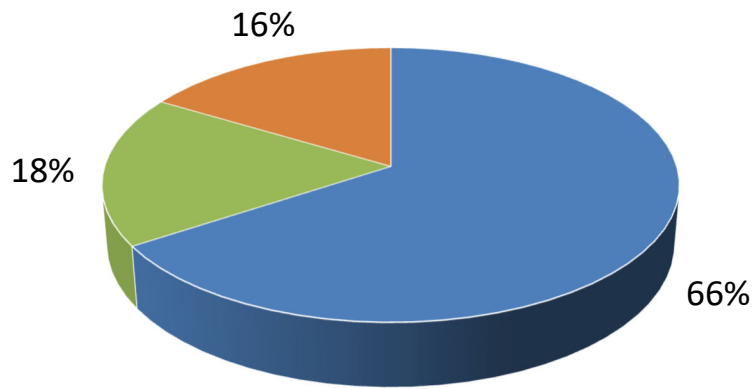


\*Numerical values shown are based on **73 participant submissions, each with 4 responses, equaling 292 total responses.**

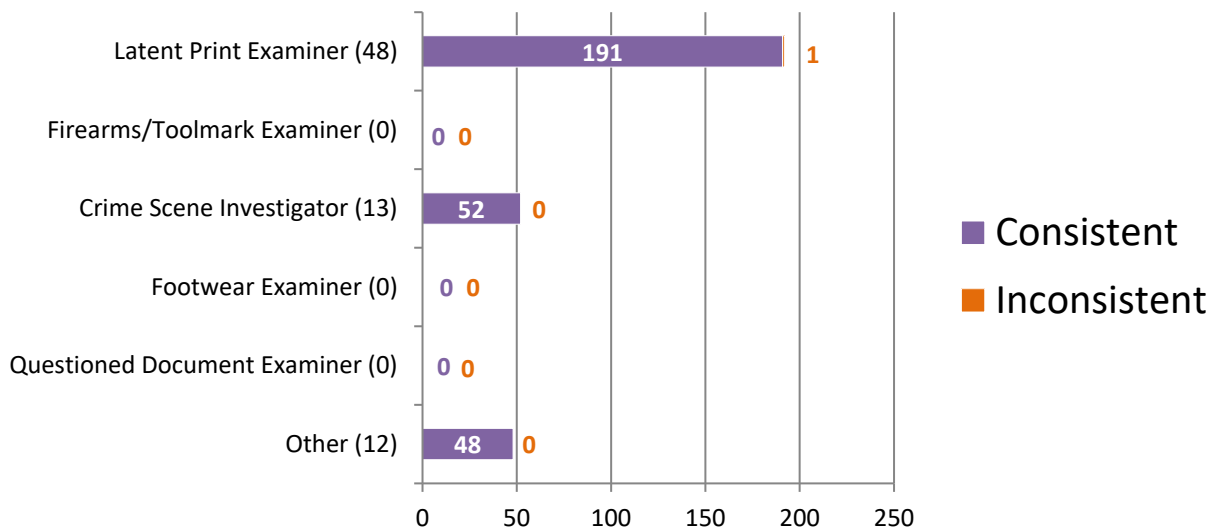
\*For further information, please read *Manufacturer's Additional Observations* on the final page of this report.

## Appendix 6

### Percentage of Participants Based on Primary Job Position



### Consistent vs Inconsistent Responses Based on Primary Job Position

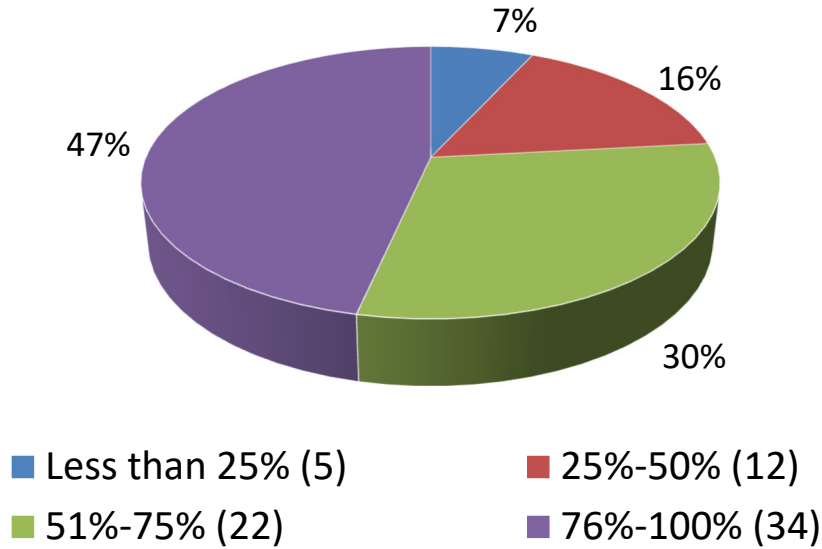


\*Numerical values shown are based on **73 participant submissions, each with 4 responses, equaling 292 total responses.**

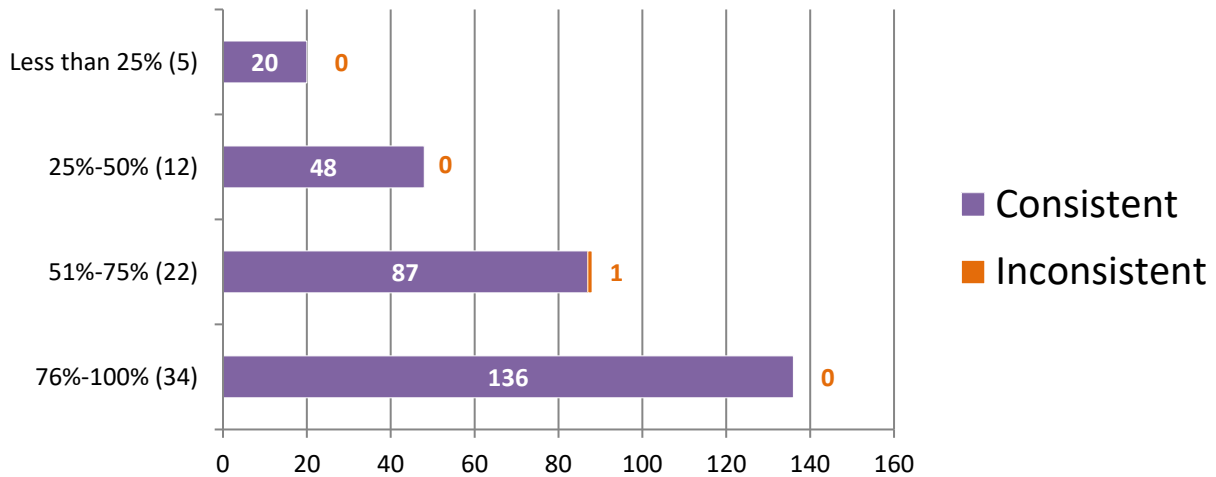
\*For further information, please read **Manufacturer's Additional Observations** on the final page of this report.

## Appendix 7

### Percentage of Participants Based on Time Devoted to Processing of Latent Print Evidence



### Consistent vs Inconsistent Responses Based on Time Devoted to Processing of Latent Print Evidence

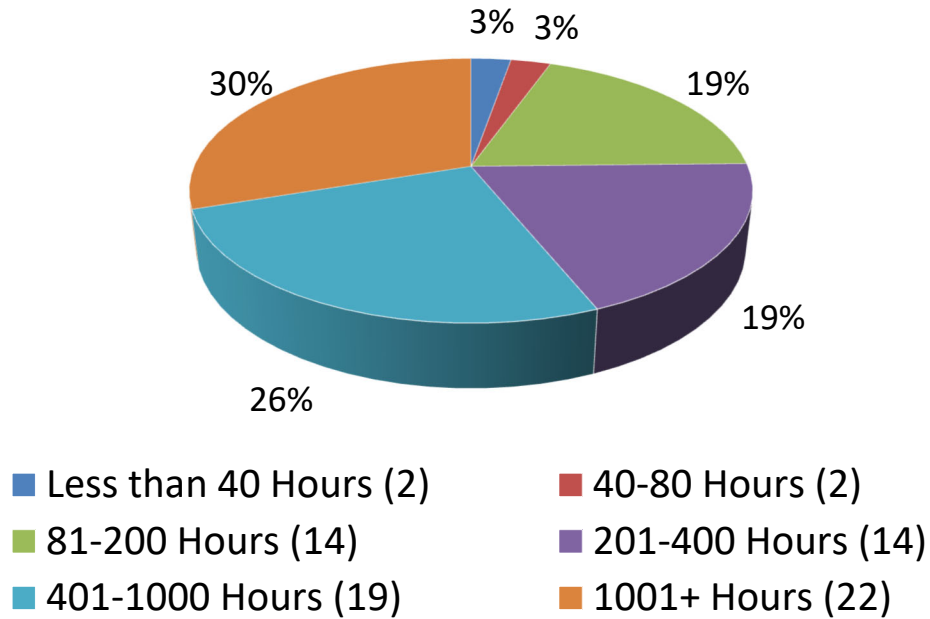


\*Numerical values shown are based on **73 participant submissions**, each with **4 responses**, equaling **292 total responses**.

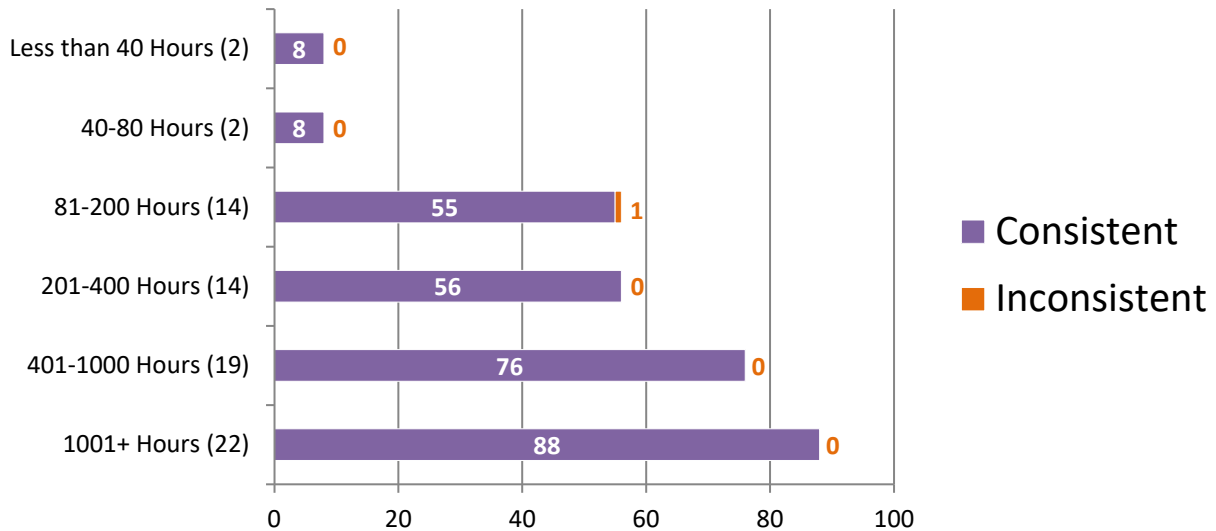
\*For further information, please read **Manufacturer's Additional Observations** on the final page of this report.

## Appendix 8

### Percentage of Participants Based on Hours of Latent Print Processing Training Completed



### Consistent vs Inconsistent Responses Based on Hours of Latent Print Processing Training Completed

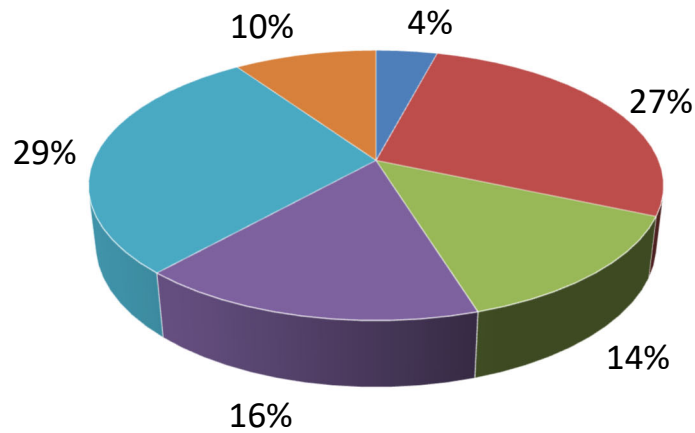


\*Numerical values shown are based on **73 participant submissions, each with 4 responses, equaling 292 total responses.**

\*For further information, please read **Manufacturer's Additional Observations** on the final page of this report.

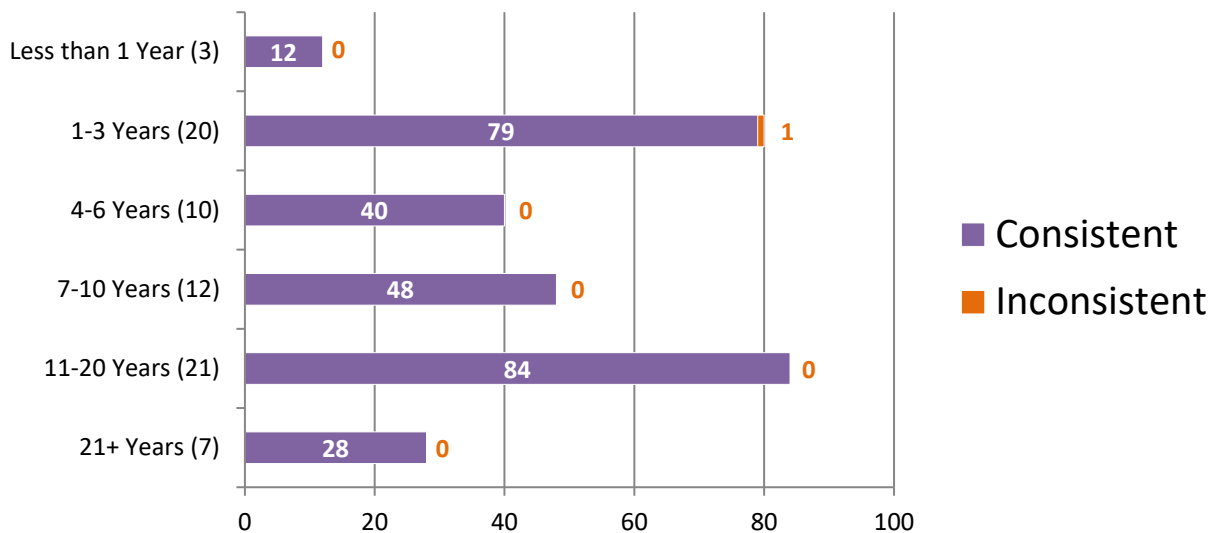
## Appendix 9

### Percentage of Participants Based on Years of Experience in Latent Print Processing



■ Less than 1 Year (3)    ■ 1-3 Years (20)    ■ 4-6 Years (10)  
■ 7-10 Years (12)    ■ 11-20 Years (21)    ■ 21+ Years (7)

### Consistent vs Inconsistent Responses Based on Years of Experience in Latent Print Processing



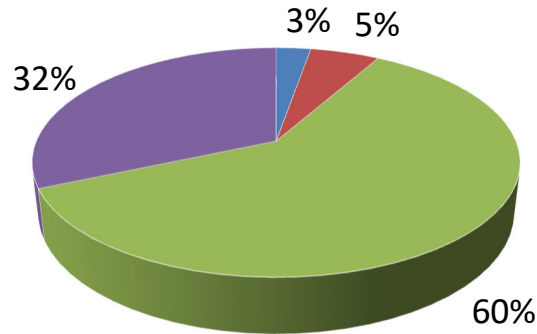
\*Numerical values shown are based on **73 participant submissions, each with 4 responses, equaling 292 total responses.**

\*For further information, please read **Manufacturer's Additional Observations** on the final page of this report.

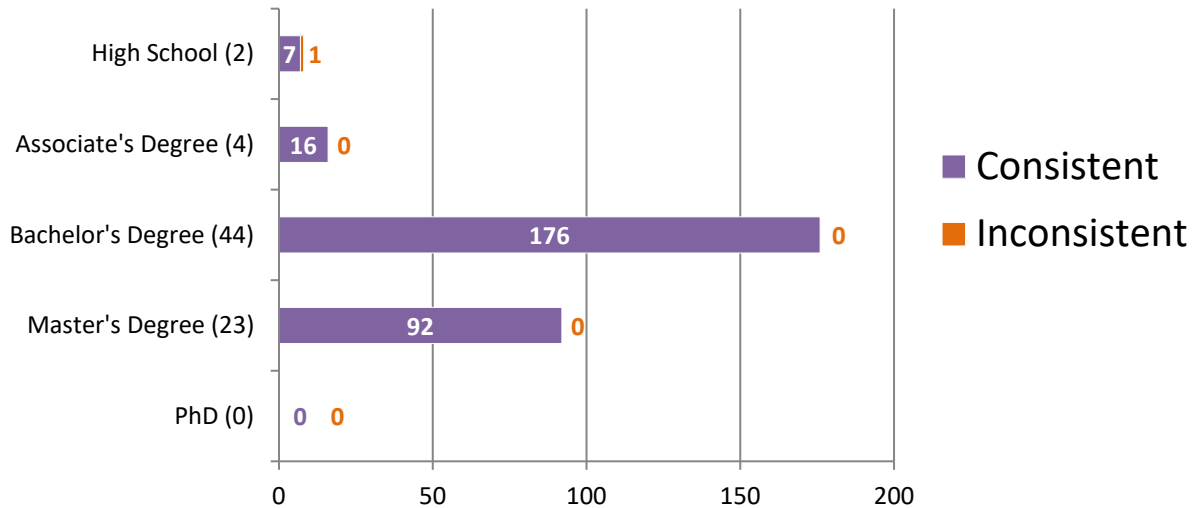


## Appendix 10

### Percentage of Participants Based on Highest Level of Education Completed



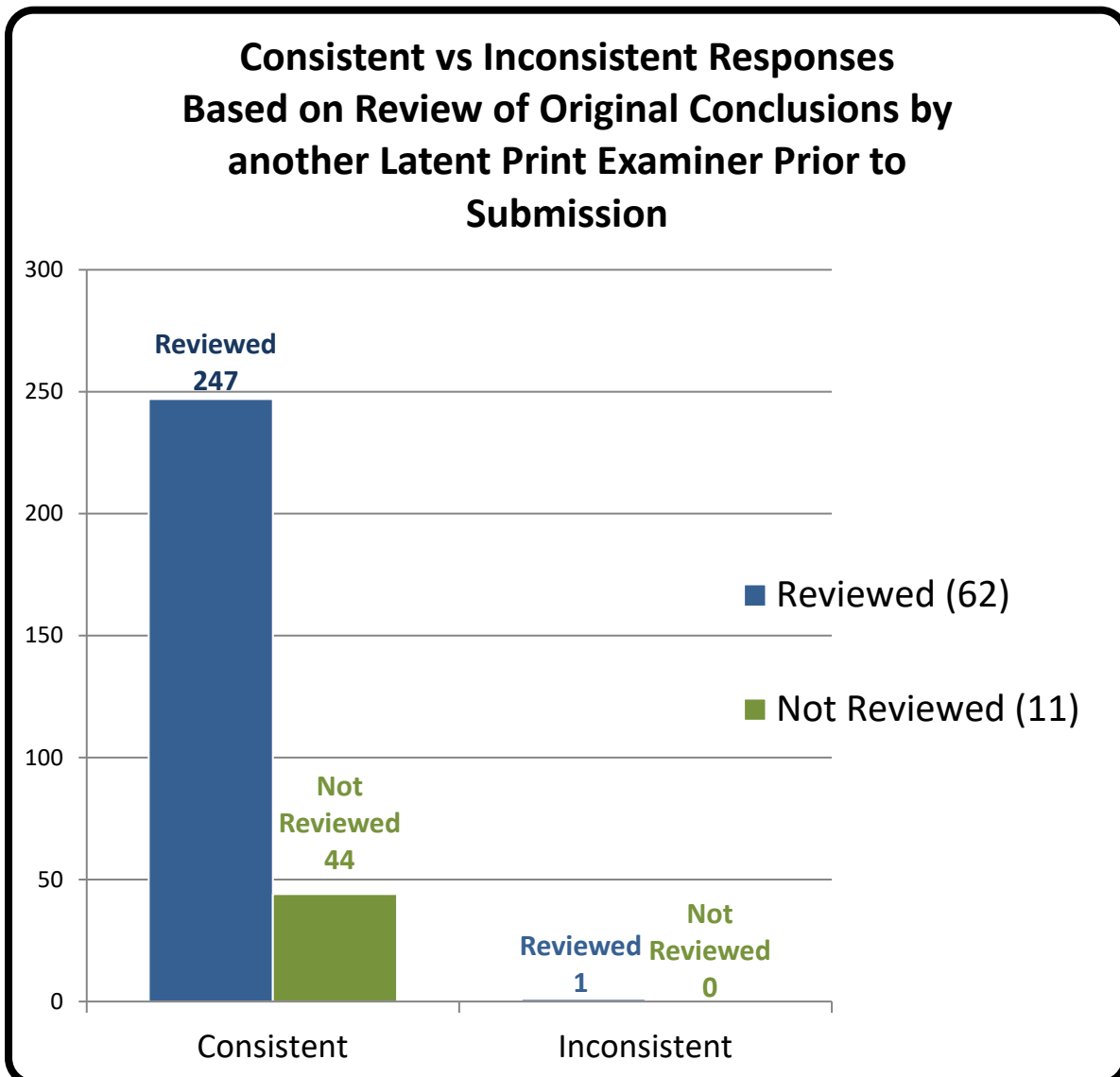
### Consistent vs Inconsistent Responses Based on Highest Level of Education Completed



\*Numerical values shown are based on **73 participant submissions, each with 4 responses, equaling 292 total responses.**

\*For further information, please read ***Manufacturer's Additional Observations*** on the final page of this report.

## Appendix 11



Numerical values shown are based on **73 participant submissions, each with 4 responses, equaling 292 total responses.**

\*For further information, please read *Manufacturer's Additional Observations* on the final page of this report.

## Appendix 12

### Participant Responses Listed by Test Code

| Item #                 | Item #1  | Item #2  | Item #3  | Item #4  |
|------------------------|--|--|--|--|
| <b>Assigned Values</b> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
| <b>Test Code</b>       | 6545V23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 4223Q23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 2477Z23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 5710K23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 9073N23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 4207C23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 2027N23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 9019M23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 5288P23501   | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> | <u>Friction Ridge Detail Was Developed and Supported with photograph</u> |
|                        | 6103G23501   | <u>Friction Ridge Detail Was Developed and Supported with</u>            | <u>Friction Ridge Detail Was Developed and Supported with</u>            | <u>Friction Ridge Detail Was Developed and Supported with</u>            |













|  |            |   |   |   |   |
|--|------------|---|---|---|---|
|  |            | photograph  | photograph  | photograph  | photograph  |
|  | 2545X23501 | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph |
|  | 8908Z23501 | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph |
|  | 9862V23501 | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph |

### Totals

| Item #                                    | Item #1   | Item #2   | Item #3   | Item #4   |
|---|---|---|---|---|
| <b>Assigned Values</b>                    | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph | Friction Ridge Detail Was Developed and Supported with photograph |
| <b>Consistent Responses</b>               | 73  | 73  | 73  | 72  |
| <b>Inconsistent Responses</b>             | 0   | 0   | 0   | 1   |
| <b>Percentage of Consistent Responses</b> | 100%  | 100%  | 100%  | 99%   |

### Participant's Additional Comments

| Test Code  | Comments   |
|------------|--|
| 9073N23501 | Multiple areas of ridge detail were observed on Item 2, however only one was considered of value and was photographed.   |
| 5288P23501 | The files I had were JPEG and TIFF unfortunately they were too big even when I tried compressing them so I converted them into pdf files.  |
| 2985L23501 | Item #1 had treatments: Pre treat, superglue & BY40 dye.<br>Item #2 had treatments: Pre treat, superglue, magna powder & BY40 dye.<br>Item #3 had treatments: Pre treat, white powder suspension & solvent black 3.<br>Item #4 had treatments: Pre treat, DFO & Acid Black 1.<br>ITEM #4 HAD TWO MARKS DEVELOPED AND THE OTHER THREE HAD ONE MARK DEVELOPED. |
| 9246Q23501 | Two impressions were developed on item 4.  |

|            |  |
|------------|--|
| 5243M23501 | Item 4 had 2 areas of friction ridge (laten prints) developed.   |
| 2697M23501 | Item 1 had a lot of overlays and friction ridge detail, took picture on the one latent that seemed to be placed there intentionally.<br>Two latents developed on item 4.   |
| 7620E23501 | Latent prints on the non-porous items are easily visible with the naked eye and oblique lighting. Test items are not wiped down enough before the test print is placed; two items had detectable smudges/swipes or small areas of friction ridge detail (In addition to the clear test prints).  |
| 3618T23501 | There were two latent prints found on item 4   |
| 702R23501  | Item #1 was lifted and photographed, Item #2 was lifted, Item #3 was lifted, Item #4 was photographed.   |
| 2179S23501 | Item 1 impression disclosed at Visual exam using fluorescent crime-lite (blue 472nm)<br>Item 2 - superglue fuming followed by Black Magnetic Powder and then Gel Lift. Also disclosed after superglue fuming 4 - 5 x fragmentary impressions around the neck of the bottle and on the bottle top. Recorded but not submitted as test results.<br>Item 3 superglue fuming + BY40 dye-stain + fluorescent exam using Blue 472nm crime-lite.<br>Item 4 impressions disclosed using Indandione process.<br>All photographs are recorded at 1:3 ratio, and can be printed at 1:1. Minor adjustments / enhancements are made to invert change to black & white for fingerprint comparison purposes.  |
| 8790E23501 | Item 1 - mark did not lift well, re-lift was taken which did not show improvement, mark was still clearly visible and was therefore re-photographed. It is the original visible mark before powder enhancement and then the photograph following Black Powder Suspension and 2 x lift attempts that have been attached was unable to attach images of lift attempts.<br>Item 4 - both images attached showing development with Indandione the followed with Ninhydrin. Indandione performed better on this occasion.<br>Images of original marks with light enhancement and then after development are attached for Items 1 to 3.  |
| 8572T23501 | Item # 2 (hand sanitizer) - bottle lid was slightly ajar within box and some of the fluid had leaked out; this was kept in mind during assessment/treatment for potential contamination fx. This item was also found to have +ve findings (to varying degrees)at every stage of processing. Item # 3 had very distinct differences in FRD appearance/characteristics, particularly during powdering, so item was considered for additional tests not normally utilized for a routine Volume Crime type. Item # 4 had a distinct contaminant visible with light sources (but no FRD) and which became more evident after chemical treatment; again, as the two fingermarks on this item were notably different and the contaminant very obvious, additional exams were considered for this item out with what would be usual for Volume Crime. Had this been a Major Crime, physical developer may have been considered but this was not the case and the item also did not appear to have been wetted. |
| 9206I23501 | On item 4, two prints were developed. I submitted only the DFO photos of each print developed. I have additional photos of the additional development with the use of Ninhydrin. The test did not allow me to submit the additional photos of Ninhydrin due to only allowing two photos to be submitted for each item. Unable to show the multi-level processing on that item.   |
| 6176X23501 | We considered as "friction ridge detail", all the papillary fragments found on the items and not only the usable fingermarks.  |
| 9862V23501 | For item#4 two more fingerprints (light fragments) were developed on the paper bag. We can't upload the images (form limited to 2 images).   |

## **Manufacturer's Additional Observations**

Based upon a review of the submitted responses, the following observations were noted:

1. There are no additional observations.

**Authorized by:** Jon Byrd, CEO

**Date of Issue:** April 28, 2023