



***Digital & Multimedia Evidence  
Proficiency Testing***  
*Collaborative Testing Services*



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## ***TESTING QUESTIONS***

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## ***Collaborative Testing Services, Inc.***

[collaborative-testing.com](http://collaborative-testing.com) | 571-434-1925

## **About Us**

Founded in 1971, Collaborative Testing Services (CTS) is a leading proficiency testing provider that serves the evolving quality assurance needs of several industries with innovative interlaboratory proficiency testing. With worldwide clients in both the public and private sectors, we aim to create and administer sustainable and meaningful testing schemes in both our industry and forensic programs.

CTS is ANAB-accredited to ISO/IEC 17043. Certificate Number: AP-1884.

## **Our Testing Process**

In keeping with the principles of quality assurance, we use a prepaid subscription model where testing is conducted on a reliable annual schedule to ensure that proficiency testing is a streamlined and consistent process for your laboratory:

- Purchase your testing, noting the type of samples offered, timing of testing, and other conditions.
- Receive your test samples and submit your results through our full-service customer portal before the data due date included in the shipment or digital release notice.
- Receive your in-depth individual report, which uses consensus statistics to provide you actionable, diagnostic, and predictive insight. View Manufacturer's Information and a detailed summary report on our website, which will provide you with information about your performance compared to other laboratories worldwide.

# Our Reports

Our reports are generated through a comprehensive analysis by our technical staff, with several features designed to provide data that is both insightful and easy to navigate.

- **Manufacturer's Information** provides transparency about how samples were prepared and verified by predistribution laboratories.
- **Summary Reports** compile all participants' results and comments for a comprehensive overview of the test.
- **Individual Reports** go beyond a pass/fail analysis to organize submitted data and assess performance in comparison to other participants.

**Collaborative Testing Services, Inc.**  
**FORENSIC TESTING PROGRAM**

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### Manufacturer's Information

#### Test No. 24-5550: Mobile Digital Evidence - Android Analysis

The Mobile Digital Evidence - Android Analysis test consisted of evidence data acquired from a smartphone. Participants were asked to examine the extracted data pertaining to a simulated scenario using their own tools and methods.

**SAMPLE PREPARATION/VALIDATION**  
A scripted scenario based upon a death investigation case was created to generate user data on the evidence Android device. The execution of the scripted crime took place between 25 November 2023 and 14 January 2024. A Google Pixel 5 smartphone was used to perform the activities and generate the intended artifacts.

The phone data was acquired via a file system extraction of the smartphone using Cellebrite software and compiled into a zip archive. This file was uploaded to the CTS Portal for participants to download. A MD5 checksum was calculated for the file to generate a unique hash value that allows participants to validate the successful download of the file.

The validation stage consisted of the examination of the phone data using various tools including Cellebrite PA 7.66, Android debug bridge 34.0.5, Autopsy 4.21.0, 7-zip 19, Exiftool 12.05, Windows Powershell 5.1.19041.3930 and DB Browser for SQLite version 3.12.2.

**VERIFICATION:** Results from the predistribution laboratories were reviewed and certain questions were rephrased as necessary. Several forensic software tools were utilized during the validation of this test. CTS does not endorse any particular tools.

**PLEASE NOTE:** Questions marked with asterisks (\*) did not show a clear consensus during preliminary review of the participants' responses. Further information and discussion will be available in the final summary report.

**SCENARIO PROVIDED TO PARTICIPANTS**  
The subject phone was discovered near the body of an unidentified woman found deceased at the bottom of a staircase. The device was submitted to your lab to determine, to the extent possible, the woman's identity and the events before her death.

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### Computer Hard Drive - Windows Analysis

#### Test No. 22-5561/2 Summary Report

Participants were provided with data yielded from an extraction of a Windows 10 Computer Hard Drive. Additionally, participants in the 5562 test received a physical USB drive. Examiners were asked to analyze the sample material and answer questions utilizing their own tools and methods. Data were returned from 95 participants, 43 of which also returned results associated with the physical USB. These results are compiled in the following tables:

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# Testing Schedule

We aim to make our digital and multimedia evidence testing as case-like as possible and as accessible as the subject matter itself: all tests listed are released only as digitally downloadable files unless otherwise noted.

Data is due approximately eight weeks after test release, and reports are released approximately eight weeks after data is due.

Test Number and Name	Enrollment Deadline	Test Release/Shipment Date
Test 5550: Mobile Digital Evidence - Android Analysis	November 1st of prior year	releases February
Test 5551: Mobile Digital Evidence - iOS Analysis	June 15th of current year	releases August
Test 5561: Computer Hard Drive - Windows Analysis	November 1st of prior year	releases April
Test 5562: Computer Hard Drive - Windows & Removable Media Analysis	November 1st of prior year	releases/ships April
Test 5571: Facial Identification Comparison	November 1st of prior year	releases July
Test 5581: Forensic Video Analysis	March 15th of current year	releases June
Test 5591: Forensic Audio Analysis	June 15th of current year	releases September

# Test Listings and Methods

## **Test 5550: Mobile Digital Evidence – Android Analysis**

Participants will download a mock evidence file and use their own software and methods to examine the evidence and conduct an investigation based on a scripted scenario. Examples of the types of topics covered in these tests include ensuring the integrity of the data, providing phone and network setting information, and analyzing native and third-party applications, communications, browser history, and geo-location information.

## **Test 5551: Mobile Digital Evidence – iOS Analysis**

Participants will download a mock evidence file and use their own software and methods to examine the evidence and conduct an investigation based on a scripted scenario. Examples of the types of topics covered in these tests include ensuring the integrity of the data, providing phone and network setting information, and analyzing native and third-party applications, communications, browser history, and geo-location information.

# Test Listings and Methods (cont.)

## **Test 5561: Computer Hard Drive – Windows Analysis**

Participants will download a forensic hard drive image and use their own software and methods to examine the evidence and conduct an investigation based on a scripted scenario. Examples of the types of topics covered in these tests include ensuring the integrity of the data and providing details about images, settings, native and third-party applications, communications, and browser history.

## **Test 5562: Computer Hard Drive – Windows and Removable Media Analysis**

Participants will download a forensic hard drive image and use their own software and methods to examine the evidence and conduct an investigation based on a scripted scenario. Participants will also use their own software and methods to forensically acquire evidence from the removable storage device, produce a forensic image, and answer additional test questions.

**The first half of this test is identical to Test 5561; reporting aspects are combined. The second half of this test includes a shipped sample.**



# Test Listings and Methods (cont.)



## Test 5571: Facial Identification Comparison

Offered in collaboration with Ideal Innovations, Inc. (I<sup>3</sup>)

Participants will conduct facial comparisons, examining images to determine whether they represent the same source or a different source. Participants are not limited to only on-screen comparisons and may use any other method; however, due to differences in printing technology, CTS cannot guarantee the quality of images printed from digital media.



## Test Listings and Methods (cont.)

### Test 5581: Forensic Video Analysis

Participants will use their own software and methods to examine staged video evidence and conduct an investigation to answer questions based on a scripted scenario. Examples of skills covered in this test include making a copy of original media to the hard drive of an analysis system, making a working copy of the original media, locating and tracking a subject of interest, and extracting images from video evidence.



### Test 5591: Forensic Audio Analysis

Participants will use their own software and methods to examine staged audio evidence and conduct an investigation to answer questions based on a scripted scenario. Examples of skills covered in this test include making a copy of original media to the hard drive of an analysis system, identifying types of interferences to intelligibility in the signal, and applying filters to increase intelligibility.





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