



Paper Proficiency Testing
Collaborative Testing Services



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TESTING QUESTIONS

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QUOTE REQUESTS & ORDER INQUIRIES

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Collaborative Testing Services, Inc.

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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

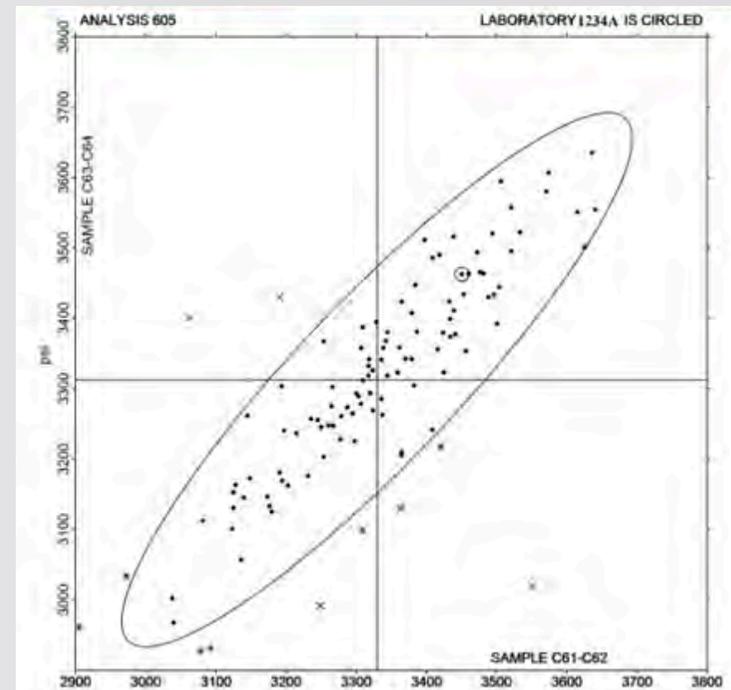
In keeping with the principles of quality assurance, we use a prepaid subscription model where testing is conducted on a bimonthly schedule to ensure that proficiency testing is a streamlined and consistent process for your laboratory:

- Purchase your testing, noting the type of samples offered, frequency of testing, and other conditions.
- Receive your samples, test at your convenience, and submit your results through our full-service customer portal before the data due date (six weeks after samples ship).
- Receive your in-depth, individualized Performance Analysis Report just three weeks after the data due date, which uses bimodal consensus statistics to provide you with insight on what is actionable, what is diagnostic, and what is predictive.

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.

- Trend charts visually present your historical performance over time, where continuous and consistent enrollment reaps the most benefits.
- Data tables provide a Comparative Performance Value (CPV), a ratio that represents how well your laboratory's results agree with the other participants. Our graphs provide this information in a visual format to pinpoint your lab's performance.
- Data flags and comments can be used to predict or diagnose potential issues before they escalate.



Paper Program Schedule

We offer rolling enrollment for participation in our paper program. Samples ship every other month for a total of six shipments beginning with the earliest available cycle of testing. Example tables of four cycles are included below; visit our [program page](#) for full scheduling information.

Odd month tests occur in odd-numbered months (January, March, May, July, September, and November), and even month tests occur in even-numbered months (February, April, June, August, October, and December). Samples for each cycle ship the month prior to testing.

Odd Month Testing (Tests 3100-3499 and Autoline 3800)

Enroll Between:	Samples Ship:	Data Due Date:	Reports Issued:
January 6th – March 5th	third week of April	last week of May	third week of June
March 6th – May 5th	third week of June	last week of July	third week of August

Even Month Testing (Tests 3500-3799)

Enroll Between:	Samples Ship:	Data Due Date:	Reports Issued:
February 6th – April 5th	third week of May	last week of June	third week of July
April 6th – June 5th	third week of July	last week of August	third week of September

Test Listings and Methods

Test 3101: Thickness (Caliper), Print

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of paper.

Test Methods: TAPPI T411.

Test 3111: Bursting Strength - Print

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of printing paper.

Test Methods: TAPPI T403.

Test Listings and Methods (cont.)

Test 3113: Tearing Strength - Print

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing pre-conditioned 4" by 11" sheets of printing paper.

Test Methods: TAPPI T414.

Test 3115: Tensile Breaking Strength - Print

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4" by 11" sheets of 3.0–8.0 kN/m (17–46 lb/in.) printing paper.en 5" by 7" corrugated blanks.

Test Methods: TAPPI T494.

Test Listings and Methods (cont.)

Test 3121: Air Resistance, Gurley Oil

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of paper.

Test Methods: TAPPI T460.

Test 3131: Roughness - Print Surf 2.5–6.5 Microns

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 11" sheets of uncoated printing paper.

Test Methods: TAPPI T555.

Test Listings and Methods (cont.)

Test 3133: Roughness, Sheffield

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of paper. Samples range from 50–300 Sheffield units throughout the year. one packet of randomized, pre-conditioned linerboard, with five sheets per packet.

Test Methods: TAPPI T538.

Test 3135: Grammage - Basis Weight

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 13" by 20" sheets of paper. Samples range from 70–110 g/m².

Test Methods: TAPPI T410.

Test Listings and Methods (cont.)

Test 3141: Opacity (89% Backing) 82 to 95%

Participants will test samples using 15 degree/diffuse geometry, illuminant A/2 degree instruments, and 89% reflectance backing.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of printing paper. Samples are selected from a variety of papers within the opacity range.

Test Methods: TAPPI T425.

Test 3145: Directional Brightness - Fluorescent

Participants will measure directional brightness in Analysis 3145, then calculate the fluorescent component of the same samples for Analysis 3146 according to appendix C of the listed method.

Each test shipment includes two similar samples, each containing eight pre-conditioned 4.25" by 5.5" sheets of fluorescently-brightened papers.

Test Methods: TAPPI T452.

Test Listings and Methods (cont.)

Test 3201: Bending Resistance, 0 to 10 Taber

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of paper. linerboard, with five sheets per packet.

Test Methods: TAPPI T566.

Test 3203: Bending Resistance, 10 to 100 Taber

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of paper. linerboard, with five sheets per packet.

Test Methods: TAPPI T489.

Test Listings and Methods (cont.)

Test 3205: Bending Resistance, 50 to 500 Taber

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of recycled paperboard.

Test Methods: TAPPI T849.

Test 3207: ZDT - Recycled Paperboard

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing five pre-conditioned 4.25" by 5.5" sheets of recycled paperboard.

Test Methods: TAPPI T541.

Test Listings and Methods (cont.)

Test 3209: Z-Directional Tensile Test

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing five pre-conditioned 4.25" by 5.5" sheets of either coated or uncoated paper.

Test Methods: TAPPI T541.

Test 3211: Modified Scott Bond

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing five pre-conditioned 4" by 11" sheets of paper.

Additional Information:

Laboratories are grouped according to instrument type for both Test 3211 and Tests 3213. This test is specific to instruments with modified mechanics.

Test Methods: TAPPI T569.

Test Listings and Methods (cont.)

Test 3213: Scott Bond Mechanics

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing five pre-conditioned 4" by 11" sheets of paper.

Additional Information: Laboratories are grouped according to instrument type for both Test 3211 and Tests 3213. This test is specific to instruments with classical mechanics.

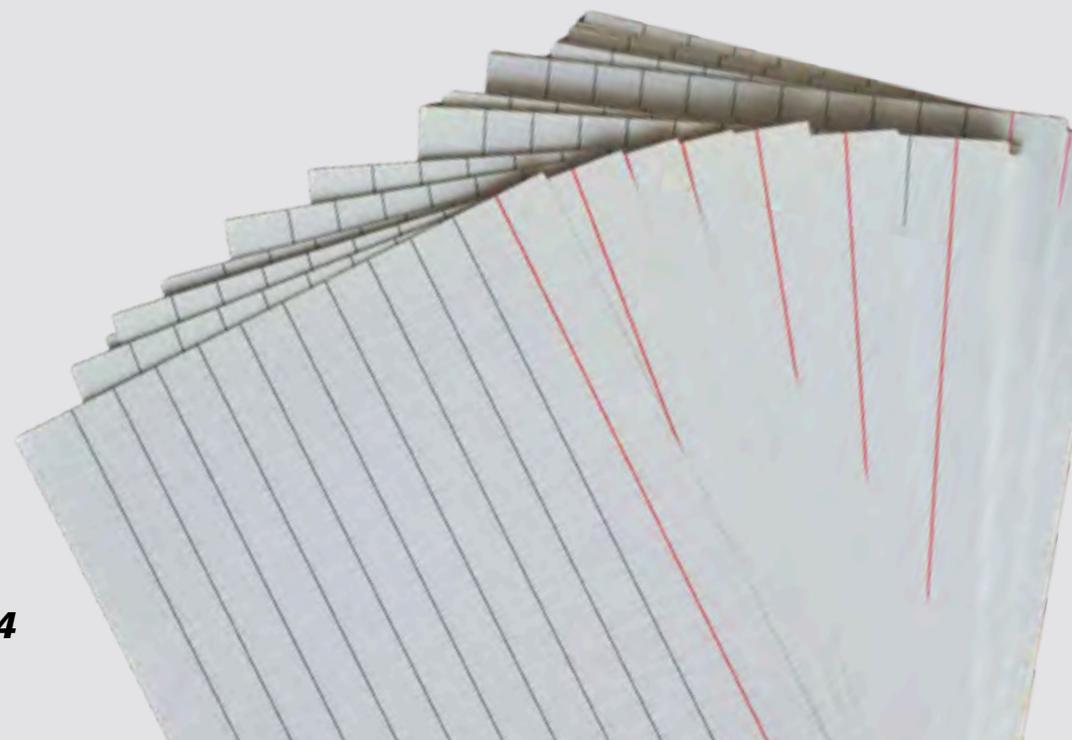
Test Methods: TAPPI T569.

Test 3501: Thickness (Caliper), Packaging

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of paper.

Test Methods: TAPPI T411.



Test Listings and Methods (cont.)

Test 3511: Bursting Strength - Packaging

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of heavyweight printing and packaging papers.

Test Methods: TAPPI T403.

Test 3513: Tearing Strength - Packaging

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4" by 11" sheets of heavyweight printing and packaging papers.

Test Methods: TAPPI T414.

Test Listings and Methods (cont.)

Test 3515: Tensile Breaking Strength - Packaging

Participants will test samples using the listed method. Laboratories may also report results for tensile energy absorption, elongation to break, or both.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4" by 11" sheets of 6.0–16.0 kN/m (34–91 lb/in.) heavyweight printing and packaging papers.

Test Methods: TAPPI T494.

Test 3531: Roughness - Print Surf 0.5–4.0 Microns

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 11" sheets of coated printing papers.

Test Methods: TAPPI T555.

Test Listings and Methods (cont.)

Test 3545: Brightness - Directional

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of nominally non-fluorescent printing papers that contain less than 0.2% fluorescent component.

Test Methods: TAPPI T452.

Test 3547: Brightness - Diffuse

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of nominally non-fluorescent printing papers that contain less than 0.2% fluorescent component.

Test Methods: TAPPI T525.

Test Listings and Methods (cont.)

Test 3549: Color and Color Difference C/2 Degree

Participants will test samples using TAPPI T524 if using a directional geometry instrument or TAPPI T527 if using a diffuse geometry instrument and report results as Hunter L a b.

Each test shipment includes two similar samples, each containing eight pre-conditioned 4.25" by 5.5" sheets of paper that have a low amount of fluorescent whitening agents (FWA).

Test Methods: TAPPI T524, TAPPI T527.

Test 3551: Color and Color Difference C65/10

Participants will test samples using TAPPI T524 if using a directional geometry instrument or TAPPI T527 if using a diffuse geometry instrument and report results as Hunter L a b.

Each test shipment includes two similar samples, each containing eight pre-conditioned 4.25" by 5.5" sheets of paper that have a low amount of fluorescent whitening agents (FWA).

Test Methods: TAPPI T524, TAPPI T527.

Test Listings and Methods (cont.)

Test 3553: Specular Gloss 75 Degree, 50–95 Units

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of glossy coated papers in the range of 50–95 gloss units.

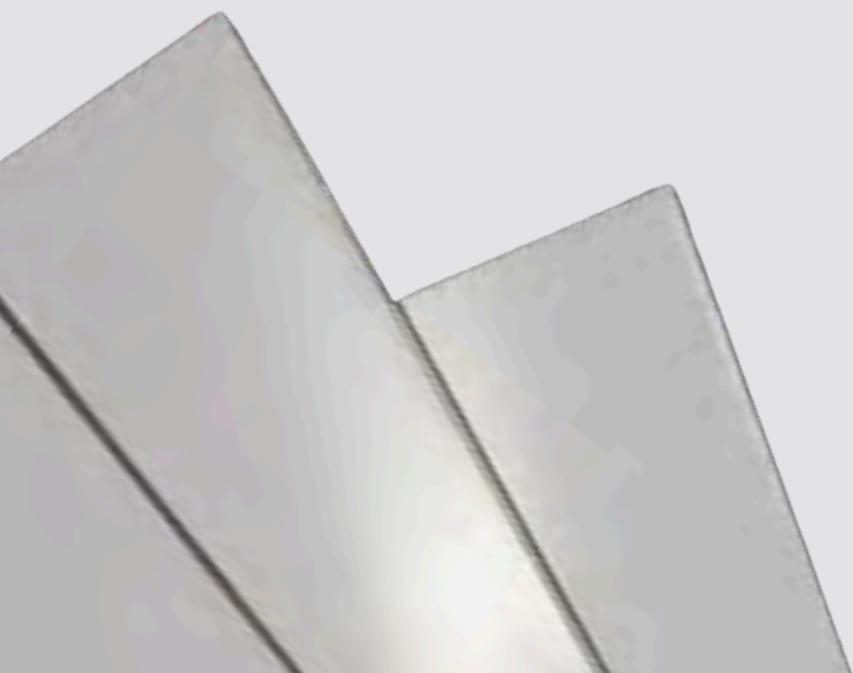
Test Methods: TAPPI T480.

Test 3555: Specular Gloss 75 Degree, 20–65 Units

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of matte or dull-coated papers in the range of 20–65 gloss units.

Test Methods: TAPPI T480.



Test Listings and Methods (cont.)

Test 3601: Folding Endurance, MIT

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4" by 11" sheets of paper. Samples range from 25–300 double folds throughout the year.

Test Methods: TAPPI T511 (for MIT-type testers).

Test 3603: Bending Resistance, Gurley

Participants will test samples using the listed method.

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of printing paper. Samples range from 100–400 Gurley Units throughout the year.

Test Methods: TAPPI T543.

Test Listings and Methods (cont.)

Test 3611: Coefficient of Friction

Participants will cut two specimens from each sheet of paper and test the five specimen pair. A 63.5 mm by 63.5 mm (2.5" by 2.5"), 200 g sled is recommended for this test as indicated in the test method.

Each test shipment includes two similar samples for static and kinetic testing, each containing five pre-conditioned 8" by 11" sheets of paper.

Test Methods: TAPPI T549.

Test 3613: Moisture Content

Participants will test samples using TAPPI T412 if using a drying oven or manufacturer's instructions if using a microwave-type oven. Either technique may be used for this test.

Each test shipment includes two similar samples, each containing enough 8" by 11" sheets of paper to provide two large specimens of approximately 50 grams each or several smaller specimens.

Test Methods: TAPPI T412.

Test Listings and Methods (cont.)

Test 3615: Hercules Sizing Test

Participants will prepare a test ink composed of a 1.25% solution of Naphtol Green B dye and 1.0% formic acid ink and test samples to an 80% reflectance endpoint

Each test shipment includes two similar samples, each containing ten pre-conditioned 4.25" by 5.5" sheets of paper.

Test Methods: TAPPI T530.

Test 3800: Autoline

Participants will submit data for any or all of the following properties for analysis and organization in reports alongside participants in the standalone tests: Thickness, Bursting Strength, Tearing Strength, Tensile Breaking Strength, Air Resistance Gurley, Sheffield Roughness, and Directional Brightness.

Each test shipment includes two sample sets, each containing ten 24" MD by 12" CD print material sheets, taken from the same lots used in standalone tests.

Test Methods: TAPPI T411, TAPPI T403, TAPPI T414, TAPPI T494, TAPPI T460, TAPPI T538, TAPPI T452.



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