



OpTest Equipment Inc.

## ***Large Sheet In-speck-tor – A4 Visible Hole Analysis for Tissue***

The Large Sheet In-speck-tor - A4 (LSI-A4) measures holes in Tissue. Employs similar routines as for visible dirt according to ISO/CEN 5350-4, TAPPI T563 & Paptac D35 standard methods. The LSI measures the number, size and equivalent black area (EBA) of visible holes far more precisely than the human eye. Operating on flat and smooth sheets, with ISO Brightness >40%, it measures holes in sheets in a single scan. The LSI provides the information you need to assure a high quality product.



### **A certified sheet scanner:**

- High precision industrial scanner with serviceable parts, custom black backing, and precise mechanics compared to consumer-type scanners
- Certified and calibrated at OpTest, it scans an A4 sheet in 30 s, or less, at an optical resolution 16  $\mu\text{m}$ /pixel (1600 dots per inch)

### **ADVANTAGES:**

- No need to precisely place the sample
- Rapid pre-scan with "click and drag" sheet imaging boundary location for both round and rectangular sheets
- Retrievable "sheet imaging boundary" templates
- Allows viewing of the full-resolution image exactly as recorded by the scanner
- Pans and zooms around the image to view individual "holes"
- ISO Level 2 traceable EBA calibration standards

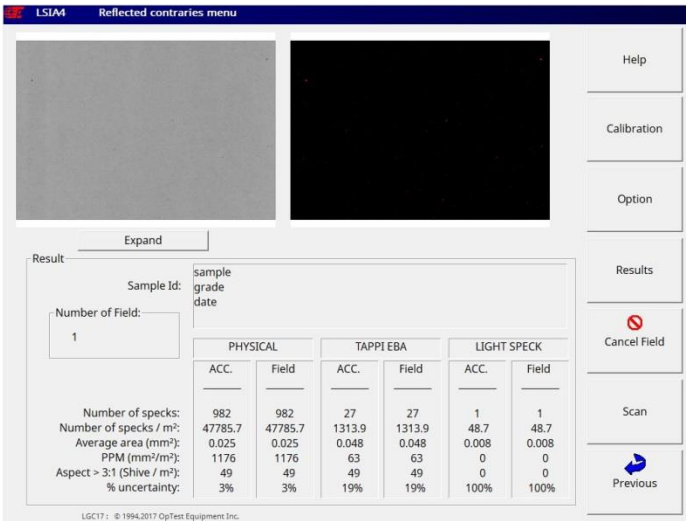


Figure 1: Typical LSI-A4 results window

OpTest provides a set of traceable calibration standards that meet the requirements of the standard methods.

The LSI-A4 software runs in the Windows™ computer environment. It processes images acquired by the certified scanner. It coexists with other applications.

## RESULTS AND REPORTS

The LSI-A4 provides the most important dirt results in the Operation Viewer, Figure 1. These include:

- Physical and EBA hole count / m<sup>2</sup> and PPM (mm<sup>2</sup> / m<sup>2</sup>) with %-counting Uncertainty
- Size distribution histograms with adjustable upper and lower limits
- Images of the sheet & individual holes

All data can be viewed and manipulated by Microsoft Excel™. An Excel template and auto-load macro is provided with the LSI-A4 software, Figure 2.

## SYSTEM REQUIREMENTS

- Computer with two available USB 2.0 ports, and a minimum 8GB of RAM
- Latest Versions Windows™
- Microsoft Office™ (2010 or higher).

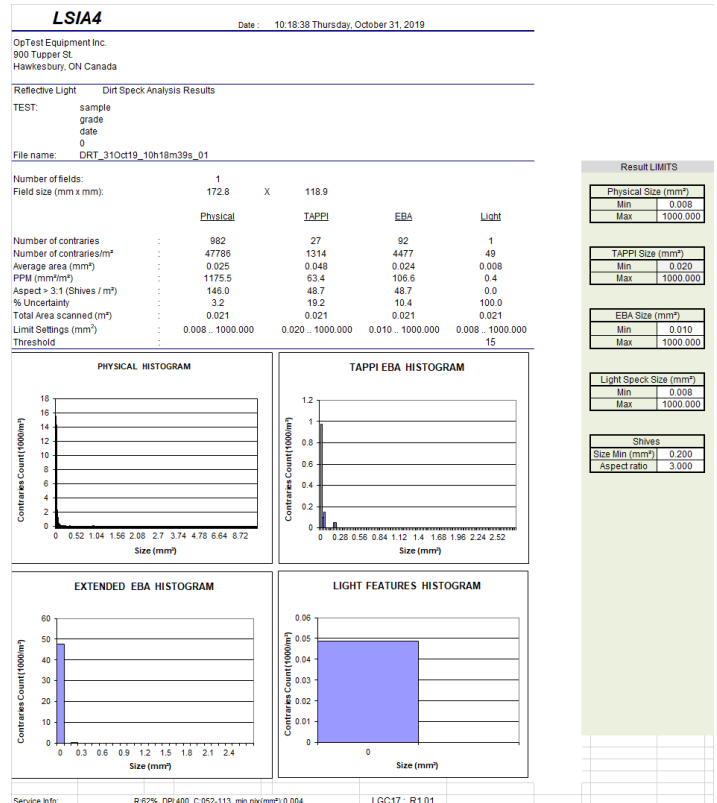


Figure 2: Excel™ opens automatically with reports that can be customized by the user.

## DIMENSIONS

- LSI-A4 Scanner:  
60 cm L x 35 cm W x 14 cm H  
(23" L x 14" W x 5" H)
- Computer (optional)  
80 cm L x 70 cm W x 45 cm H  
(32" L x 28" W x 18" H)

## CONNECTIONS

- 120V/60HZ or 240V/50Hz, 1 phase, 750 W min. The power must be stable, within 3%, and transients below ± 10 %.



**OpTest Equipment Inc.**  
 900 Tupper St.  
 Hawkesbury, ON Canada  
 K6A 3S3  
 P: 613-632-5169  
 F: 613-632-3744  
 E-mail: sales@optest.com