

# SIMPALAB

## DIRT LABORATORY ANALYSER

### ACCURATE MEASUREMENT OF INK, DIRT, SHIVES AND STICKIES

SIMPALAB is a laboratory sensor dedicated to an accurate dirt counting on:

- a sheet of paper (by reflected light)
- a handsheet (by reflected or transmitted\* light)

**ISO 5350  
CEN/TC 172  
TAPPI T563  
INGEDE 2 & 4**

### A RELIABLE and POWERFUL TOOL

Quick measurement and calculation (less than 10 minutes needed for a 10 samples range).



PC + scanner

Calibration of the measuring system according to the EFGP standard (CEN/TC 172).

Número	Type	Surface	Contraste	Classe	Cont. Max
1	Buch	0.087	25	0.040 / 0.150	
2	Buch	0.404	19	0.400 / 1.000	
3	Buch	0.202	20	0.150 / 0.400	
4	Buch	0.037	17	0.040 / 0.150	
5	PB	0.060	24	0.040 / 0.150	
6	PB	0.056	21	0.040 / 0.150	
7	PB	0.056	25	0.040 / 0.150	
8	PB	0.056	21	0.040 / 0.150	
9	PN	0.056	20	0.040 / 0.150	
10	PN	0.056	17	0.040 / 0.150	

03	0.010 / 0.040	0.040 / 0.150	0.150 / 0.400	0.400 / 1.000	1.000 / 5.000	5.000 / ...	Somme	Erreur
Black Dots Area	3	112	5				120	18
Black Dots Numb	146	1771	18				1935	18
buchettes	37	18	18				73	100

Somme	0.010 / 0.040	0.040 / 0.150	0.150 / 0.400	0.400 / 1.000	1.000 / 5.000	5.000 / ...	Somme	Erreur
Black Dots Area	3	106	6				115	11
Black Dots Numb	116	1649	24				1789	11
buchettes	85	37	6				128	44

### Detected objects

- Black spots (63µm)
- Grey spots
- Shives, Stickies

### A friendly software

- 1 MEASUREMENT WINDOW
- Individual investigation of each detected spot
- Results table (configurable)

### 1 CONFIGURATION WINDOW

- ISO classes



# SIMPALAB

## MEETS ALL THE CRITERIA OF THE DIRT CALCULATION STANDARDS









The adjustment of the future ISO standard with regard to dirt counting has exposed some flows in existing counting equipment. Samples of paper recently tested with 6 different pieces of equipment gave widely varying results (see table here under : 5 samples A, B, C, D and E have been tested with 6 well known classical dirt counters available on the market). The standard imposes a set of recommendations aiming at avoiding any fluctuation due to measurement equipment. The standard stipulates among others :

- Sampling management and information about the validity and relevance of the measurement.
- Individual examination of the calculated points must be possible.


- Calibration of the system via the EPPG chart.
- The detection contrast must vary with regard to the area of detected spots.

The detection contrast must be compared to the local contrast of the spot (1 cm ring around the spot).

## ALL THESE PARAMETERS ARE INTEGRATED IN SIMPALAB.

1		5 mm <sup>2</sup> / 100%
2		.04 mm <sup>2</sup> / 100%
3		5 mm <sup>2</sup> / 80%
4		.04 mm <sup>2</sup> / 80%
5		5 mm <sup>2</sup> / 50%
6		.15 mm <sup>2</sup> / 50%
7		5 mm <sup>2</sup> / 30%
8		.4 mm <sup>2</sup> / 30%

Calibration sheet based on EPPG Chart (According to ISO 5350 - 1&2)  
Rev: 001- 20101005- SIMPALAB



## CERTIFIED & TRACEABLE STANDARD CALIBRATION CHART

### TECHNICAL CHARACTERISTICS OF THE SIMPALAB

Resolution	400 dpi (63 microns)
Number of classes	11 entirely configurable
Sampling	Minimum number of spots to validate the trial or minimum analysed area
Detected spots (colour)	Black, grey, white
Detected spots (shape)	Shives, spots
Results display	In mm <sup>2</sup> / m <sup>2</sup> , number / m <sup>2</sup> , ppm, inch <sup>2</sup> / inch <sup>2</sup> , number / inch <sup>2</sup> , a.s.o. Possible display in EBA (Equivalent Black Area of each spot)
Data exporting	.txt defined format
Software and operating system	Software running under WINDOWS