

# SNAP Certificate Program

The purpose of this press test is to determine if the printing process is compliant with SNAP specifications. The way of measurement is not the typical pretty picture contest. The SNAP certificate program is set up so that the printed copy will be measured with instrumentation. In order to achieve the SNAP certificate, the printer will need to have a good understanding of the process and how to control the printing conditions. The goal from the SNAP committee is for all printers entering to achieve the SNAP Certificate. Achieving a total score of 85 - 100 points will result in being awarded the SNAP Certificate. **CAUTION: Do not change page size. Image reading are done with a scanning measurement device. Changing the page size may cause incorrect areas to be read by the scanning measurement device.** The calculation sheet is available so that the printer may be able to calculate the results before submitting print-test sheets for grading. An illustration of the test forms are available on this web site which will display areas which will be measured. This is at the bottom of the web page under “links”.

## Page 1 Test Guidelines

### Section 1: Dot Gain Control

**Total Max. Points: 36**

The dot gain control patch is a separate PDF called “dotgainsteps.pdf” and should be placed on page 1 in the box marked “place 4.5 X 4.5 dot gain palette file here”. The dot gain palette has four patches of each color (cyan, magenta, yellow, and black) so that the resulting patches exhibit 25%, 50%, 75% and solid. The key here is to properly compensate in pre-press for dot gain on the press. The solid patch is provided to properly read dot gain.

To achieve the full 3 points for each patch (25%, 50% and 75%) The dot gain should be +/-4% at the 50% patch for each color (cyan, magenta, yellow and black) and +/-3% for the 25% and 75% patch for each color (cyan, magenta, yellow and black).

2 points will be awarded for each patch if the 50% is +/- 5% and +/-4% for the 25% and 75% patch for each color (cyan, magenta, yellow and black).

Zero points will be awarded for variations higher than +/- 5% in the 50% patch for each color and for variations higher than +/- 4% in the 25% and 75% patch for each color. A total of 36 points can be achieved in this section. Results here will show an understanding of dot gain in the process. Remember: know dot gain in the process and correct for it. Proper calibration will also be critical.

### Section 2: Density Control and Color Gamut

**Total Max. Points: 16**

**Density control:** Maximum 8 points. The goal here is to achieve SNAP density of the primary colors plus black. 6 locations will be read across the page. The locations of the readings are identified by vertical lines just above the solid cyan. These vertical lines identify “columns” which are marked 1 through 8. Density will be measured by reading “Columns” 2 through 7 across the page for: solid cyan, magenta, yellow and black.

2 points will be awarded for each row if readings are within +/- .05 density of the SNAP target values.

1 point will be awarded for each row if readings are within +/- .10 density of the SNAP target values.

Zero points will result where readings in each row are greater than +/- .10 density of the SNAP target values.

This will demonstrate that SNAP densities can be achieved and instrumentation is properly calibrated.

SNAP Target Density Values:

Dry Solid Ink Density (SID)	Offset Newspapers	Offset Commercial	Flexography	Letterpress
Cyan	.90	.95	.95	.90
Magenta	.90	.95	.97	.90
Yellow	.85	.90	.79	.85
Black	1.05	1.10	1.05	1.00
Tolerances	+/- 0.05	+/- 0.10	+/- 0.04	+/- 0.05

**Color Gamut:** Maximum 8 points. The goal here is to achieve SNAP L\*, a\*, b\* values for cyan, magenta, yellow, black, red, green, blue overprints and paper. 6 locations will be read across the page. The locations of the readings are identified by vertical lines just above the solid cyan. These vertical lines identify “columns” which are marked 1 through 8. Measurements for color gamut will be taken at “columns” 2 through 7 across the page for each solid cyan, magenta, yellow, black, red, green, blue overprints and paper. Paper will be measured outside the plate area.

1 point will be awarded for each color if the deviation of L\* a\* b\* values for each color are within the required Delta E units (as defined by ISO 12647-3) from the SNAP aim values.

Zero points will be awarded for each color if the deviation of L\* a\* b\* values is greater than the required Delta E units (as defined by ISO 12647-3) from the SNAP aim values.

SNAP L\* a\* b\* aim values for ink:

	L*	a*	b*
Cyan	57	-23	-27
Magenta	53	48	0
Yellow	79	-5	60
Black	40	1	4
Cyan+Yellow	53	-34	18
Cyan+Magenta	41	7	-22
Magenta+Yellow	52	41	25

SNAP L\* a\* b\* aim values for paper are derived from ISO 12647-3.

### **Section 5: Press dot gain (informational only)      Total Max. Points: 0**

The collection of data in this section will be for historical purposes while tracking industry trends for reference and future evaluation of SNAP specifications.

## **Page 2 Test Guidelines**

### **Section 3: Gray Bar Variation      Total Max. Points: 30**

Maintaining gray balance is critical to consistent quality reproduction. Since 10 consecutive copies must be measured for a grade in this section, please be sure to submit at least ten consecutively printed copies that contain the gray bar on page 2 of the SNAP Test Form. The Gray Bar will be evaluated by the following criteria:

**Gray Bar Density Variation:** Maximum 12 points. Gray bar density variation will be measured by reading the cyan, magenta and yellow densities on 8 locations across the page over 10 consecutively printed copies. Results here will show the ability to control density within SNAP specifications. It is understood that the absolute units will vary per press due to dot gain variation, but the variability should be controlled.

12 points will be awarded if the total variation of the cyan, magenta and yellow readings are within .10 density units (4 points awarded for each color).

6 points will be awarded if the total variation of the cyan, magenta and yellow readings are within .15 density units (2 points awarded for each color).

Zero points will be awarded for variations higher than .15 density units.

**Gray Bar Density Control:** Maximum 10 points. Density readings of cyan, magenta and yellow on the gray bar should have a density value no greater than +/- .03 difference from each other. Gray bar density control will be measured by reading the cyan, magenta and yellow densities on 8 locations across the page over 10 consecutively printed copies. Results here will show the printer has a good understanding of gray balance and how critical it is to consistent reproduction.

10 points will be awarded if cyan, magenta and yellow densities on 8 locations across 10 consecutively printed copies are no greater than +/- .03 difference from each other.

A weighted scale will be used to award points up to a difference of .09 density units.

**Gray Bar Neutrality:** Maximum 8 points. If the gray bar is indeed gray, the average  $a^*$ ,  $b^*$  values will be 0,0 over the newsprint. (Example: if your newsprint has an  $a^*$ ,  $b^*$  of 0,3, the resulting printed gray should have the same 0,3  $a^*$ ,  $b^*$  value.

8 points will be awarded if the chroma difference from the newsprint is less than 4.

A weighted scale will be used for chroma difference from newsprint between 4 and 8.

Zero points will be awarded if the chroma difference is over 8.

#### **Section 4: Registration**

**Total Max. Points: 18**

To determine registration, cross hair patches will be measured on page 2. All points will be awarded if registration is within SNAP guidelines listed below and on page 42 of the SNAP document.

18 Points will be rewarded if registration does not exceed 0.012" in any direction, lateral, circumferential or skewed, as referenced to the black printer, and must not exceed 0.015" maximum between any two colors in any direction.

10 Points will be rewarded if registration does not exceed 0.015" in any direction, lateral, circumferential or skewed, as referenced to the black printer, and must not exceed 0.020" maximum between any two colors in any direction.

Zero points will be awarded if registration exceeds 0.015" in any direction, lateral, circumferential or skewed, as referenced to the black printer, or exceeds 0.020" between any two colors in any direction.