



**Cost of Ink Per Page Analysis  
Mexico**

**March 2010**

Includes ink cartridge pricing provided by



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## Summary and Scope of Analysis

For more than 23 years, QualityLogic Inc. has been a premier developer and provider of essential testing solutions to companies that design, build, or purchase printers and printing technology. Our products and services help our customers understand how the products they make or buy conform to specifications, or compare to reference implementations or competing products. We are active members of international standards organizations including ISO and ECMA International, and we provide testing assistance to leading technology publications who publish printer reviews.

At the request of Eastman Kodak Company, QualityLogic calculated and compared the Cost of Ink Per Page (CoIPP) of the ESP series of All-in-One Printers to 13 competing printers selected by Kodak. Kodak's intent was to select printers with significant market share from leading manufacturers.

Monochrome and color cartridge yields for all printers were determined following ISO yield standards, and photo yields were determined using QualityLogic's photo yield methodology\*.

Ink prices for printers in the test were provided to QualityLogic by Gap Intelligence\*\*, a premier global provider of market intelligence. Gap provided the manufacturer's suggested retail price (MSRP) for each of the cartridges in the test based on information collected through Q4 2009. If the cartridge price wasn't available on the manufacturer's website, Gap Intelligence provided an average of three reseller street prices. For this report, only standard as-shipped-in-box cartridges or the standard-yield ink cartridges in single quantity pricing (i.e. no multi-packs, high yield, combo packs, value packs or special promotions) were evaluated for the purpose of making like-basis comparisons between all printers.

Although there are many factors in total cost of ownership, Cost of Ink Per Page (CoIPP) is an important factor when evaluating total cost of ownership with printer systems.

Cost of Ink Per Page was calculated by dividing these cartridge prices by the yield of each cartridge in the test.

\* All references of 'photo' in this report refer to 4x6 inch (approximately 10 x 15 cm) borderless photos.

\*\* Gap believes that the list pricing information provided is accurate; however, it is not responsible for any errors, inaccuracies, or variances caused by changes made outside of its defined survey period (Q4 2009).

The following printers and corresponding ink cartridges were included in this Cost of Ink Per Page analysis:

Company	Printer	Cartridges
Kodak	ESP 3250 ESP 5250 ESP-7 ESP-9	Black Ink Cartridge 10, Color Ink Cartridge 10 Black Ink Cartridge 10, Color Ink Cartridge 10 Black Ink Cartridge 10, Color Ink Cartridge 10 Black Ink Cartridge 10, Color Ink Cartridge 10
Brother	MFC-5490cn	LC1100BK, LC1100C, LC1100M, LC1100Y
Canon	PIXMA MP470 PIXMA MP510 PIXMA MP620  PIXMA MX330 PIXMA MX700	PG-40, CL-41 PGI-5BK, CLI-8C, CLI-8M, CLI-8Y PGI-220BK, CLI-221C, CLI-221M, CLI-221Y, CLI-221BK PG-210, CL-211 PGI-5BK, CLI-8C, CLI-8M, CLI-8Y
Epson	Stylus CX8300	T0731, T0732, T0733, T0734
Hewlett-Packard	Photosmart C3180 Photosmart C4480 Photosmart C4780 Photosmart C6280	HP92, HP93 HP74, HP75 HP60 - CC640WN, CC643WN <sup>1</sup> HP02 - C8721WN, C8771WN, C8772WN, C8773WN, C8774WN, C8775WN <sup>1</sup>
Lexmark	Prevail Pro705 X5470	100 Black, Cyan, Magenta Yellow 32, 33

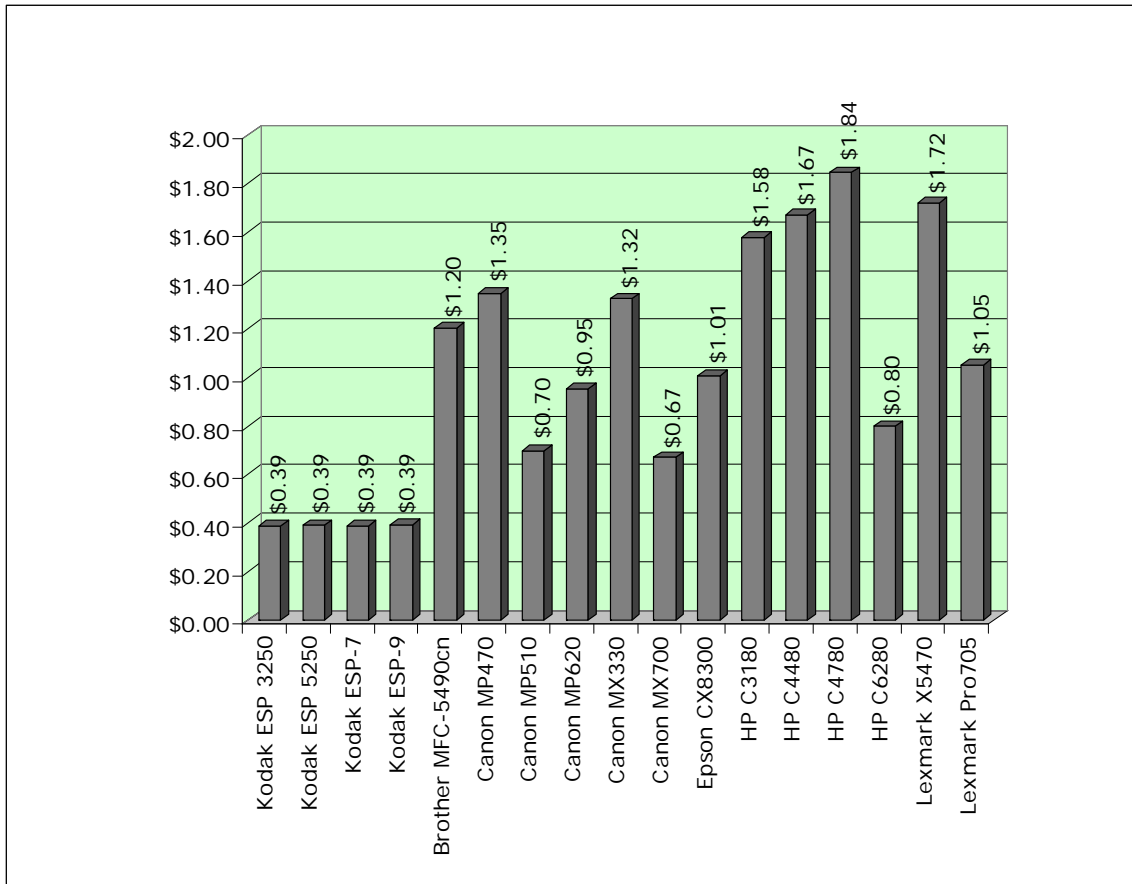
<sup>1</sup> The HP C4780 and C6280 were tested with cartridges from the U.S. with the designation ending in WN, while pricing in this report is for the cartridges ending in WL.

## Cost of Ink Per Page

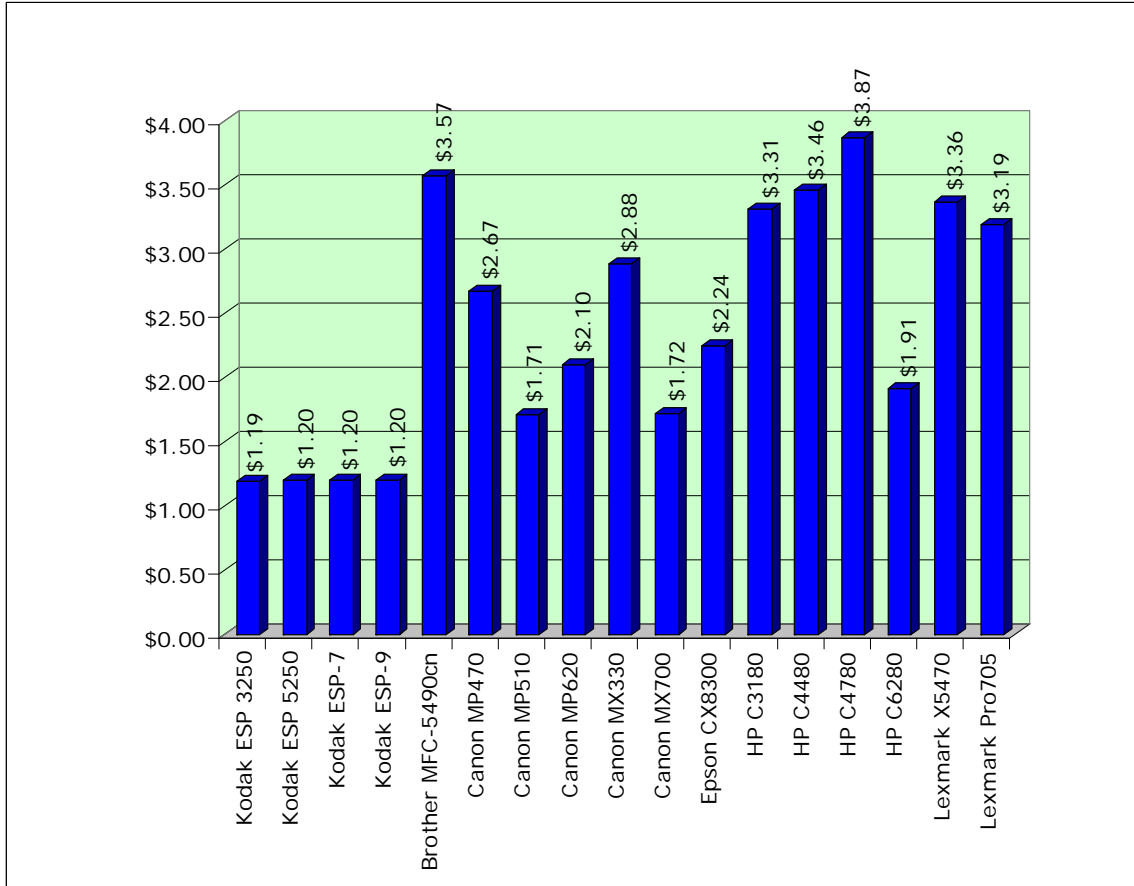
The following charts summarize the Cost of Ink Per Page for the printers tested using cartridge prices from Mexico. There are three charts presented: separate charts for monochrome, color and photo printing. Details of how these costs were calculated can be found in the "Methodology for Calculation of Cost of Ink Per Page" following these graphs.

### Mexico: Mono - Cost of Ink Per Page

(Mexican Pesos)

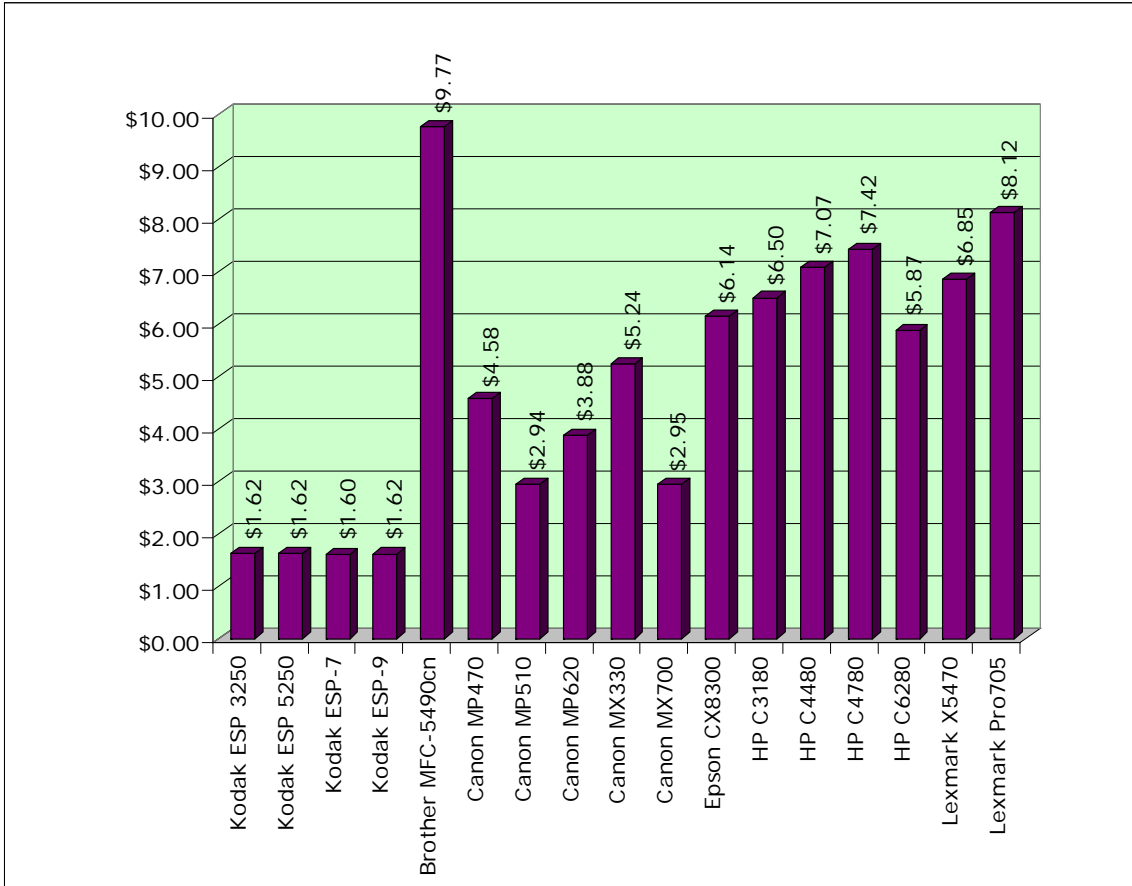


## Mexico: Color - Cost of Ink Per Page (Mexican Pesos)



Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "as-is," "as available," and all warranties, expressed or implied, are hereby disclaimed. Users of the information contained herein assume full responsibility and risk of loss resulting from usage thereof.

## Mexico: Photo - Cost of Ink Per Page (Mexican Pesos)



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## Methodology for Calculation of Cost of Ink Per Page

The following is a step-by-step outline of how QualityLogic, using standardized yield testing methodologies and standard pricing information provided by Gap, executed this 'Cost of Ink Per Page' test for Kodak.

### A. QualityLogic Yield Declarations

Yield testing is a process by which the target printers are operated with their ink or toner cartridges to exhaust the amount of ink/toner, and then pages printed are counted to determine the number of pages each cartridge yields. The requirements and operating conditions of such testing are determined by a standard set of testing criteria that will provide an objective and repeatable result.

QualityLogic is a leader worldwide in providing yield testing services. We support and follow the ISO (International Standards Organization) standards for mono and color testing. Use of the ISO standards for yield testing is also supported by leading manufacturers, including Canon, Dell, Epson, HP, IBM, Kodak, Lexmark, Oki Data, Pitney Bowes, Ricoh, Toshiba, Xerox, and others.

ISO is currently working on a standard for photo ink. Until this standard is released, QualityLogic uses a methodology we developed that closely follows the current ISO standards approach.

Key provisions of these standards include:

- Standard test suites
- Minimum of nine cartridges across three printers representative of products in open market
- Clear, objective end-of-life criteria
- Controlled test environment – temperature, humidity, continuous printing
- Yield reporting requirement well defined

The following pages contain tables that relate to yield testing results. The tables show the number of pages per cartridge that can be expected with 90 percent confidence based on our testing. Numbers in black indicate primary cartridges – any cartridge where a minimum of nine cartridges across three printers could be exhausted. Supplemental cartridges are indicated by red numbers and represent those cartridges that are secondary to the purpose of the test. Although supplemental cartridges are not the key focus in the tests as shown, they are included in the test reports to ensure we get a complete understanding of the ink being used.

Generally, the 'primary' cartridges for each category of testing are:

- Mono ink – the black cartridge
- Color ink – all full density cartridges containing cyan, magenta, or yellow
- Photo ink – color cartridges or others where nine cartridges were exhausted

QualityLogic performed yield tests and provided yield test reports for all cartridges for models listed below (with some of the same models also available in Europe and in North America). Each table has abbreviated sub-headings that represent the specific ink cartridge types as follows:

- CMY = A single cartridge containing cyan, magenta and yellow \*
- C = Cyan
- M = Magenta
- Y = Yellow
- K1 = Black
- K2 = A second black cartridge
- LC = Light or photo cyan
- LM = Light or photo magenta

These yield numbers apply to printers included in this analysis. Yields of primary and supplemental cartridges are reported, and the details of these results can be found in Appendix A.

	Mono Ink yield							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 3250	4225				546			
Kodak ESP 5250	4233				543			
Kodak ESP-7	4332				542			
Kodak ESP-9	4357				539			
Brother MFC-5490cn		8059	11730	8867	535			
Canon MP470	2588				358			
Canon MP510		6680	6360	8584	521			
Canon MP620		3228	3498	4551	366	6866		
Canon MX330	2738				286			
Canon MX700		7768	7161	9551	533			
Epson CX8300		1465	2114	2312	247			
HP C3180	1881				218			
HP C4480	1575				211			
HP C4780	1178				202			
HP C6280		1402	813	1323	1504		15204	13302
Lexmark X5470	2504				287			
Lexmark Pro705		2826	2903	2906	260			

\* Note: Kodak's color cartridge includes black and protective inks.

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	Color Ink yield							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 3250	388				340			
Kodak ESP 5250	386				340			
Kodak ESP-7	385				342			
Kodak ESP-9	385				342			
Brother MFC-5490cn		433	360	314	531			
Canon MP470	333				346			
Canon MP510		874	713	666	490			
Canon MP620		565	539	546	344	5141		
Canon MX330	265				288			
Canon MX700		873	676	691	488			
Epson CX8300		390	289	411	245			
HP C3180	210				203			
HP C4480	180				205			
HP C4780	158				196			
HP C6280		411	393	488	728		11956	11827
Lexmark X5470	272				274			
Lexmark Pro705		286	237	269	239			

Note: Kodak's color cartridge includes black and protective inks.

	Photo Ink yield							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 3250	173				1421			
Kodak ESP 5250	172				1555			
Kodak ESP-7	174				1546			
Kodak ESP-9	174				1405			
Brother MFC-5490cn		87	101	88	8649			
Canon MP470	113				1637			
Canon MP510		354	252	269	2979			
Canon MP620		201	217	213	1952	610		
Canon MX330	92				1336			
Canon MX700		348	248	276	2809			
Epson CX8300		85	86	114	468			
HP C3180	61				1599			
HP C4480	52				1249			
HP C4780	50				1451			
HP C6280		289	323	146	892		142	133
Lexmark X5470	71				4378			
Lexmark Pro705		67	80	87	584			

Note: Kodak's color cartridge includes black and protective inks.

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## B. Ink Cartridge Pricing

Cartridge prices used in this Cost of Ink Per Page analysis were researched and provided to QualityLogic by Gap as of Q4 2009. Gap's methodology for data collection used the manufacturer's website for Mexico. Only standard as-shipped-in-box cartridges or the standard-yield ink cartridges in single quantity pricing (i.e., no multi-packs, high yield, combo packs, value packs or special promotions) were evaluated for the purpose of making like-basis comparisons between all printers. Below is the summary of the ink cartridges and their individual prices.

Ink Cartridge Pricing								
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 3250	\$259.00				\$179.00			
Kodak ESP 5250	\$259.00				\$179.00			
Kodak ESP-7	\$259.00				\$179.00			
Kodak ESP-9	\$259.00				\$179.00			
Brother MFC-5490cn		\$296.00	\$296.00	\$296.00	\$593.00			
Canon MP470	\$489.09				\$414.96			
Canon MP510		\$269.00	\$269.30	\$270.47	\$303.85			
Canon MP620		\$235.01	\$235.01	\$235.01	\$265.83	\$235.01		
Canon MX330	\$459.00				\$330.80			
Canon MX700		\$269.00	\$269.30	\$270.47	\$303.85			
Epson CX8300		\$179.00	\$179.00	\$179.00	\$179.00			
HP C3180	\$385.00				\$299.00			
HP C4480	\$355.00				\$305.00			
HP C4780	\$360.33				\$310.81			
HP C6280		\$195.00	\$195.00	\$195.00	\$369.00		\$195.00	\$195.00
Lexmark X5470	\$479.00				\$439.00			
Lexmark Pro705		\$199.00	\$199.00	\$199.00	\$219.00			

Mexican Pesos

Source: Gap

### C. Cost of Ink Per Page – Per Cartridge

QualityLogic then calculated the Cost of Ink Per Page per cartridge by dividing the price of each cartridge (as defined by Gap’s localized cartridge price, noted above in Section B) by the yield for each cartridge in each model (as defined above in Section A). This calculation results in the Cost of Ink Per Page per cartridge for each test mode: mono, color and photo.

$$\frac{\text{Price per cartridge}}{\text{Ink yield (in number of pages/photos)}} = \text{Cost of Ink Per Page – per cartridge}$$

#### Mono Cost of Ink Per Individual Cartridge per Page (Mexican Pesos)

	Mono Ink Cost							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 3250	\$0.06				\$0.33			
Kodak ESP 5250	\$0.06				\$0.33			
Kodak ESP-7	\$0.06				\$0.33			
Kodak ESP-9	\$0.06				\$0.33			
Brother MFC-5490cn		\$0.04	\$0.03	\$0.03	\$1.11			
Canon MP470	\$0.19				\$1.16			
Canon MP510		\$0.04	\$0.04	\$0.03	\$0.58			
Canon MP620		\$0.07	\$0.07	\$0.05	\$0.73	\$0.03		
Canon MX330	\$0.17				\$1.16			
Canon MX700		\$0.03	\$0.04	\$0.03	\$0.57			
Epson CX8300		\$0.12	\$0.08	\$0.08	\$0.72			
HP C3180	\$0.20				\$1.37			
HP C4480	\$0.23				\$1.45			
HP C4780	\$0.31				\$1.54			
HP C6280		\$0.14	\$0.24	\$0.15	\$0.25		\$0.01	\$0.01
Lexmark X5470	\$0.19				\$1.53			
Lexmark Pro705		\$0.07	\$0.07	\$0.07	\$0.84			

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**Color Cost of Ink Per Individual Cartridge per Page**  
(Mexican Pesos)

	Color Ink cost							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 3250	\$0.67				\$0.53			
Kodak ESP 5250	\$0.67				\$0.53			
Kodak ESP-7	\$0.67				\$0.52			
Kodak ESP-9	\$0.67				\$0.52			
Brother MFC-5490cn		\$0.68	\$0.82	\$0.94	\$1.12			
Canon MP470	\$1.47				\$1.20			
Canon MP510		\$0.31	\$0.38	\$0.41	\$0.62			
Canon MP620		\$0.42	\$0.44	\$0.43	\$0.77	\$0.05		
Canon MX330	\$1.73				\$1.15			
Canon MX700		\$0.31	\$0.40	\$0.39	\$0.62			
Epson CX8300		\$0.46	\$0.62	\$0.44	\$0.73			
HP C3180	\$1.83				\$1.47			
HP C4480	\$1.97				\$1.49			
HP C4780	\$2.28				\$1.59			
HP C6280		\$0.47	\$0.50	\$0.40	\$0.51		\$0.02	\$0.02
Lexmark X5470	\$1.76				\$1.60			
Lexmark Pro705		\$0.70	\$0.84	\$0.74	\$0.92			

**Photo Cost of Ink Per Individual Cartridge per Page**  
(Mexican Pesos)

	Photo Ink Cost							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 3250	\$1.50				\$0.13			
Kodak ESP 5250	\$1.51				\$0.12			
Kodak ESP-7	\$1.49				\$0.12			
Kodak ESP-9	\$1.49				\$0.13			
Brother MFC-5490cn		\$3.40	\$2.93	\$3.36	\$0.07			
Canon MP470	\$4.33				\$0.25			
Canon MP510		\$0.76	\$1.07	\$1.01	\$0.10			
Canon MP620		\$1.17	\$1.08	\$1.10	\$0.14	\$0.39		
Canon MX330	\$4.99				\$0.25			
Canon MX700		\$0.77	\$1.09	\$0.98	\$0.11			
Epson CX8300		\$2.11	\$2.08	\$1.57	\$0.38			
HP C3180	\$6.31				\$0.19			
HP C4480	\$6.83				\$0.24			
HP C4780	\$7.21				\$0.21			
HP C6280		\$0.67	\$0.60	\$1.34	\$0.41		\$1.37	\$1.47
Lexmark X5470	\$6.75				\$0.10			
Lexmark Pro705		\$2.97	\$2.49	\$2.29	\$0.38			

Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "as-is," "as available," and all warranties, expressed or implied, are hereby disclaimed. Users of the information contained herein assume full responsibility and risk of loss resulting from usage thereof.

## D. Cost of Ink Per Page

Cost of Ink Per Page for each printer is calculated by summing the Cost of Ink Per Page per cartridge for each cartridge tested in a given printer model (as determined above in Section C).

$$\text{Cost of Ink Per Page} = \text{CMY} + \text{C} + \text{M} + \text{Y} + \text{K1} + \text{K2} + \text{LC} + \text{LM}$$

The Cost of Ink Per Page per printer is reflected below. Note that, due to rounding, the total CoIPP may not match the individual ink cartridge costs.

### Mono Cost of Ink Per Individual Cartridge and Total Cost of Ink Per Page (Mexican Pesos)

	Mono Ink Cost								Mono
	CMY	C	M	Y	K1	K2	LC	LM	CoIPP
Kodak ESP 3250	\$0.06				\$0.33				\$0.39
Kodak ESP 5250	\$0.06				\$0.33				\$0.39
Kodak ESP-7	\$0.06				\$0.33				\$0.39
Kodak ESP-9	\$0.06				\$0.33				\$0.39
Brother MFC-5490cn		\$0.04	\$0.03	\$0.03	\$1.11				\$1.20
Canon MP470	\$0.19				\$1.16				\$1.35
Canon MP510		\$0.04	\$0.04	\$0.03	\$0.58				\$0.70
Canon MP620		\$0.07	\$0.07	\$0.05	\$0.73	\$0.03			\$0.95
Canon MX330	\$0.17				\$1.16				\$1.32
Canon MX700		\$0.03	\$0.04	\$0.03	\$0.57				\$0.67
Epson CX8300		\$0.12	\$0.08	\$0.08	\$0.72				\$1.01
HP C3180	\$0.20				\$1.37				\$1.58
HP C4480	\$0.23				\$1.45				\$1.67
HP C4780	\$0.31				\$1.54				\$1.84
HP C6280		\$0.14	\$0.24	\$0.15	\$0.25		\$0.01	\$0.01	\$0.80
Lexmark X5470	\$0.19				\$1.53				\$1.72
Lexmark Pro705		\$0.07	\$0.07	\$0.07	\$0.84				\$1.05

**Color Cost of Ink Per Individual Cartridge and Total Cost of Ink Per Page**  
(Mexican Pesos)

	Color Ink cost								Color
	CMY	C	M	Y	K1	K2	LC	LM	CoIPP
Kodak ESP 3250	\$0.67				\$0.53				\$1.19
Kodak ESP 5250	\$0.67				\$0.53				\$1.20
Kodak ESP-7	\$0.67				\$0.52				\$1.20
Kodak ESP-9	\$0.67				\$0.52				\$1.20
Brother MFC-5490cn		\$0.68	\$0.82	\$0.94	\$1.12				\$3.57
Canon MP470	\$1.47				\$1.20				\$2.67
Canon MP510		\$0.31	\$0.38	\$0.41	\$0.62				\$1.71
Canon MP620		\$0.42	\$0.44	\$0.43	\$0.77	\$0.05			\$2.10
Canon MX330	\$1.73				\$1.15				\$2.88
Canon MX700		\$0.31	\$0.40	\$0.39	\$0.62				\$1.72
Epson CX8300		\$0.46	\$0.62	\$0.44	\$0.73				\$2.24
HP C3180	\$1.83				\$1.47				\$3.31
HP C4480	\$1.97				\$1.49				\$3.46
HP C4780	\$2.28				\$1.59				\$3.87
HP C6280		\$0.47	\$0.50	\$0.40	\$0.51		\$0.02	\$0.02	\$1.91
Lexmark X5470	\$1.76				\$1.60				\$3.36
Lexmark Pro705		\$0.70	\$0.84	\$0.74	\$0.92				\$3.19

**Photo Cost of Ink Per Individual Cartridge and Total Cost of Ink Per Page**  
(Mexican Pesos)

	Photo Ink Cost								Photo
	CMY	C	M	Y	K1	K2	LC	LM	CoIPP
Kodak ESP 3250	\$1.50				\$0.13				\$1.62
Kodak ESP 5250	\$1.51				\$0.12				\$1.62
Kodak ESP-7	\$1.49				\$0.12				\$1.60
Kodak ESP-9	\$1.49				\$0.13				\$1.62
Brother MFC-5490cn		\$3.40	\$2.93	\$3.36	\$0.07				\$9.77
Canon MP470	\$4.33				\$0.25				\$4.58
Canon MP510		\$0.76	\$1.07	\$1.01	\$0.10				\$2.94
Canon MP620		\$1.17	\$1.08	\$1.10	\$0.14	\$0.39			\$3.88
Canon MX330	\$4.99				\$0.25				\$5.24
Canon MX700		\$0.77	\$1.09	\$0.98	\$0.11				\$2.95
Epson CX8300		\$2.11	\$2.08	\$1.57	\$0.38				\$6.14
HP C3180	\$6.31				\$0.19				\$6.50
HP C4480	\$6.83				\$0.24				\$7.07
HP C4780	\$7.21				\$0.21				\$7.42
HP C6280		\$0.67	\$0.60	\$1.34	\$0.41		\$1.37	\$1.47	\$5.87
Lexmark X5470	\$6.75				\$0.10				\$6.85
Lexmark Pro705		\$2.97	\$2.49	\$2.29	\$0.38				\$8.12

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## Contact Information

For information regarding this Cost of Ink Per Page Analysis, please contact the following person/s:

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### Gap Intelligence - Company Overview

Gap Intelligence is a global leader in providing timely, actionable competitive intelligence solutions to help manufacturers in the digital imaging space stay ahead of the competition. Our printer hardware and supplies databases are updated on a weekly basis with street pricing and promotional data. Dedicated industry analysts publish insightful, analytical reports and tools to help clients make smarter decisions and respond to market changes faster.

## **Appendix A: QualityLogic Declared Yield Test Results**

The following data was extracted from the Yield Reports for each product tested. Complete reports are available from QualityLogic upon request.

# ISO Test Results - Summary

## Test Methodology

In order to obtain these yield results, two different methodologies were used in combination with three test suites. This section will detail the common areas between the methodologies, the differences between them, and highlight some key terms from ISO/IEC 24711, 24712, and 19752 that are particularly important to understand when reviewing these yield claims.

### Common Methodology and Definitions

Number of Printers Tested	Minimum of three
Number of Cartridges Tested	Minimum of nine of each color
Temperature	Testing room average 23.0°C ± 2°C with all running average temperatures between 20.0°C and 26.0°C
Fade	Phenomenon in which a significant reduction in uniformity occurs due to ink depletion
Ink Out	Signal generated by the printing system when the usable ink in the system is depleted and the printer stops printing
End of Life (EOL)	A condition determined by one of two mechanisms: fade or ink out (only if ink out stops printing)
Semi-Continuous Printing	Printing in a continuous manner, pausing only for intra-job servicing, printer calibrations, paper changes, breaks, and end of work days
Declared Cartridge Yield	Cartridge Yield (in pages) that is at or below the lower 90% confidence bound of the average yield
Estimated Supplemental Cartridge Yield	Estimated yield for a supplemental cartridge (real or estimated with use of a proxy) calculated with at least three cartridges
Average Supplemental Cartridge Yield	Average yield for a supplemental cartridge where EOL was reached on at least nine cartridges (three per printer)
Proxy Cartridge	A primary cartridge of the same physical size as a supplemental cartridge which had a starting weight within +/- 10% of the supplemental cartridge starting weight

**Mono Ink Methodology and Definitions –  
In accordance with ISO/IEC 24711, ISO/IEC 19752**

Test Suite	ISO/IEC 19752
Driver Set-up	See Color Ink Methodology. In addition, if a “Black Only” or “Text Only” mode was available in the driver, it was enabled.
Paper	A4 or 8 ½" x 11" (see individual test reports)
Semi-Continuous Printing	Each copy of the test suite was printed as a separate one-page print job allowing for some intra-job servicing and calibration to take place
Primary Cartridge	The black cartridge or, if no black cartridge was present, the color cartridges that were used to develop composite black
Supplemental Cartridge	Any installed cartridge except the full density black cartridge, including the full density Cyan, Magenta, and Yellow cartridges, as well as any photo cartridges
Individual Cartridge Yield	The number of test pages printed between cartridge installation and end of life

**Color Ink Methodology and Definitions –  
In accordance with ISO/IEC 24711, ISO IEC 24712**

Test Suite	ISO/IEC 24712
Driver Set-up	All image and print quality modifiers were set to their factory pre-set configuration for the printer and default installed condition for the driver. If auto media detection was available on the printer, it was disabled and media-type set to plain paper.
Paper	A4 or 8 ½" by 11" (see individual test reports)
Semi-Continuous Printing	Each copy of the test suite was printed as a separate five-page print job allowing for some intra-job servicing and calibration to take place
Primary Cartridge	Cartridge containing full density black, cyan, magenta, or yellow, or a combination of full density cyan, magenta and yellow
Supplemental Cartridge	Cartridge other than the full density cyan, magenta, yellow and black cartridges
Individual Cartridge Yield	Value determined by counting the number of diagnostic pages (last page of the test page suite) printed between cartridge installation and end of life, and multiplying by five

**Photo Ink Methodology and Definitions –  
In accordance with QualityLogic Color Photo Cartridge Yield Test  
Methodology**

Test Suite	QualityLogic Color Photo Suite.
Driver Set-up	The highest print quality mode readily available in the driver was used
Paper	The best photo paper recommended by each manufacturer. A4 or 8 ½" x 11" papers were used to print a borderless 4" x 6" (approximately 10 x 15 cm) photo. (See individual test reports).
Semi-Continuous Printing	Each copy of the test suite was printed as a separate 10-page print job allowing for some intra-job servicing and calibration to take place
Primary Cartridge	Cyan, Magenta, Yellow and Photo cartridges or any cartridges containing these colors were considered as primary cartridges. In addition, any other cartridge that exhausted nine or more cartridges during the execution of nine of the above cartridges was considered as primary.
Supplemental Cartridge	Any cartridge installed in the printer while printing photos that did not meet the definition of a primary cartridge was considered a supplemental cartridge
Individual Cartridge Yield	The number of test pages printed between cartridge installation and end of life

The following data was extracted from the Yield Reports for each product tested – complete reports are available upon request.

<b>Printer Identifier</b>	<b>Kodak ESP 3250</b>
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10 & Color Ink Cartridge 10
Cartridge Type	Separate ink supply and print head
Date Tested	October 23, 2009 to October 29, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness, 20lb. weight
Driver version	Driver Version = 07/31/2009, 4.2.7.3 The following driver settings were changed from default: Color Ink Test: Paper type = Changed to Plain Paper from Auto Select Mono Ink test: Paper type = Changed to Plain Paper from Auto Select Color Printing = Changed to Black and White from Color

**Declaration of Yield**

**Inkjet Cartridge Yield when tested in Kodak ESP 3250:**

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield – Up to 340 standard pages

Average Color Cartridge Yield – Up to 388 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield – Up to 546 standard pages

Estimated supplemental Color Cartridge Yield – Up to 4,225 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

**Using 24712 Test Suite**

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Black Ink Cartridge 10	K (Black)	345	8	340	9/15	Primary
Color Ink Cartridge 10	Color	395	11	388	9/12	Primary

**Using 19752 Test Page**

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Black Ink Cartridge 10	K (Black)	547	2	546	21/24	Primary
Color Ink Cartridge 10	Color	4,232	5	4,225	3/3	Supplemental

Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "as-is," "as available," and all warranties, expressed or implied, are hereby disclaimed. Users of the information contained herein assume full responsibility and risk of loss resulting from usage thereof.

<b>Printer Identifier</b>	<b>Kodak ESP 3250</b>
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10 & Color Ink Cartridge 10
Cartridge Type	Separate ink supply and print head
Date Tested	October 29, 2009 to October 30, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 1/2" x 11" photo paper
Media used	Kodak Ultra Premium Photo Paper High Gloss
Driver version	Driver Version = 07/31/2009, 4.2.7.3 The following driver settings were changed from default: Paper Type = Changed to KODAK ULTRA Premium Photo – High Gloss from Auto Select

**Declaration of Yield**

**Inkjet Cartridge Yield when tested in Kodak ESP 3250:**

Using the QualityLogic Color Photo test suite provides the following results:

Average Color Cartridge Yield – Up to 173 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,421 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Color Ink Cartridge 10	Color	173	1	173	9/9	Primary
Black Ink Cartridge 10	K (Black)	1,547	74	1,421	3/3	Supplemental

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<b>Printer Identifier</b>	<b>Kodak ESP 5250</b>
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10 & Color Ink Cartridge 10
Cartridge Type	Separate ink supply and print head
Date Tested	November 4, 2009 to November 12, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness, 20lb. weight
Driver version	Driver Version = 07/31/2009, 4.2.7.3 The following driver settings were changed from default: Color Ink Test: Paper type = Changed to Plain Paper from Auto Select Mono Ink test: Paper type = Changed to Plain Paper from Auto Select Color Printing = Changed to Black and White from Color

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Kodak ESP 5250:

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield – Up to 340 standard pages

Average Color Cartridge Yield – Up to 386 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield – Up to 543 standard pages

Estimated supplemental Color Cartridge Yield – Up to 4,233 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

#### Using 24712 Test Suite

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Black Ink Cartridge 10	K (Black)	345	8	340	9/15	Primary
Color Ink Cartridge 10	Color	394	12	386	9/12	Primary

#### Using 19752 Test Page

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Black Ink Cartridge 10	K (Black)	544	2	543	21/24	Primary
Color Ink Cartridge 10	Color	4,243	6	4,233	3/3	Supplemental

<b>Printer Identifier</b>	<b>Kodak ESP 5250</b>
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10 & Color Ink Cartridge 10
Cartridge Type	Separate ink supply and print head
Date Tested	November 13, 2009 to November 17, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 1/2" x 11" photo paper
Media used	Kodak Ultra Premium Photo Paper High Gloss
Driver version	Driver Version = 07/31/2009, 4.2.7.3 The following driver settings were changed from default: Paper Type = Changed to KODAK ULTRA Premium Photo – High Gloss from Auto Select

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Kodak ESP 5250:

Using the QualityLogic Color Photo test suite provides the following results:

Average Color Cartridge Yield – Up to 172 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,555 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Color Ink Cartridge 10	Color	173	1	172	9/10	Primary
Black Ink Cartridge 10	K (Black)	1,598	26	1,555	3/4	Supplemental

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<b>Printer Identifier</b>	<b>Kodak ESP-7</b>
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10 & Color Ink Cartridge 10
Cartridge Type	Separate ink supply and print head
Date Tested	March 19, 2009 to April 9, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness, 20lb. weight
Driver version	Driver Version = 07/18/2008, 2.07.151.0 Mono Ink Test: Print colors as (Advanced Tab) = Changed to Black and White from Color

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Kodak ESP-7:

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield – Up to 342 standard pages

Average Color Cartridge Yield – Up to 385 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield – Up to 542 standard pages

Estimated supplemental Color Cartridge Yield – Up to 4,332 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Black Ink Cartridge 10	K (Black)	347	8	342	9/13	Primary
Color Ink Cartridge 10	Color	390	9	385	9/10	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Black Ink Cartridge 10	K (Black)	548	18	542	23/25	Primary
Color Ink Cartridge 10	Color	4,358	15	4,332	3/4	Supplemental

<b>Printer Identifier</b>	<b>Kodak ESP-7</b>
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10 & Color Ink Cartridge 10
Cartridge Type	Separate ink supply and print head
Date Tested	March 19, 2009 to April 10, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	Kodak Ultra Premium Photo Paper High Gloss
Driver version	Driver Version = 07/18/2008, 2.07.151.0

**Declaration of Yield**

**Inkjet Cartridge Yield when tested in Kodak ESP-7:**

Using the QualityLogic Color Photo test suite provides the following results:

Average Color Cartridge Yield – Up to 174 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,546 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Color Ink Cartridge 10	Color	174	1	174	9/10	Primary
Black Ink Cartridge 10	K (Black)	1,591	26	1,546	3/4	Supplemental

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<b>Printer Identifier</b>	<b>Kodak ESP-9</b>
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10 & Color Ink Cartridge 10
Cartridge Type	Separate ink supply and print head
Date Tested	April 13, 2009 to April 24, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness, 20lb. weight
Driver version	Driver Version = 08/21/2008,3.1.3.0 Mono Ink Test: Print colors as (Advanced Tab) = Changed to Black and White from Color

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Kodak ESP-9:

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield – Up to 342 standard pages

Average Color Cartridge Yield – Up to 385 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield – Up to 539 standard pages

Estimated supplemental Color Cartridge Yield – Up to 4,357 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

#### Using 24712 Test Suite

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Black Ink Cartridge 10	K (Black)	346	7	342	9/15	Primary
Color Ink Cartridge 10	Color	392	11	385	9/12	Primary

#### Using 19752 Test Page

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Black Ink Cartridge 10	K (Black)	546	19	539	24/24	Primary
Color Ink Cartridge 10	Color	4,365	5	4,357	3/3	Supplemental

<b>Printer Identifier</b>	<b>Kodak ESP-9</b>
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10 & Color Ink Cartridge 10
Cartridge Type	Separate ink supply and print head
Date Tested	April 24, 2009 to April 28, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	Kodak Ultra Premium Photo Paper High Gloss
Driver version	Driver Version = 08/21/2008,3.1.3.0

**Declaration of Yield**

**Inkjet Cartridge Yield when tested in Kodak ESP-9:**

Using the QualityLogic Color Photo test suite provides the following results:

Average Color Cartridge Yield – Up to 174 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,405 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
Color Ink Cartridge 10	Color	175	2	174	9/9	Primary
Black Ink Cartridge 10	K (Black)	1,718	185	1,405	3/3	Supplemental

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<b>Printer Identifier</b>	<b>Brother MFC-5490cn</b>
Printer Manufacturer	Brother
Cartridge Identifier	LC1100BK, LC1100C, LC1100M, LC1100Y
Cartridge Type	Separate ink supply and print head
Date Tested	April 29, 2009 to May 7, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	A4
Media used	Hammermill Fore Multi-Purpose, 96 Brightness 20lb. weight
Driver version	Driver Version= Brother MFC-5490CN Printer Version 5.02/Version 5.1 (Build 2600 Service pack 3) Paper Size = Changed to A4 from Letter

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Brother MFC-5490cn:

Using the test suite defined in ISO/IEC 24712 provides the following results:

- Average K (Black) Cartridge Yield – Up to 531 standard pages
- Average Cyan Cartridge Yield – Up to 433 standard pages
- Average Magenta Cartridge Yield – Up to 360 standard pages
- Average Yellow Cartridge Yield – Up to 314 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

- Average K (Black) Cartridge Yield – Up to 535 standard pages
- Estimated supplemental Cyan Cartridge Yield – Up to 8,059 standard pages
- Estimated supplemental Magenta Cartridge Yield – Up to 11,730 standard pages
- Estimated supplemental Yellow Cartridge Yield – Up to 8,867 standard pages

Values obtained by continuous printing. Declared yield value in accordance with ISO/IEC 24711.

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
LC1100BK	K (Black)	543	20	531	9/12	Primary
LC1100C	Cyan	449	25	433	9/15	Primary
LC1100M	Magenta	375	27	360	12/18	Primary
LC1100Y	Yellow	321	14	314	14/20	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
LC1100BK	K (Black)	559	40	535	9/9	Primary
LC1100C	Cyan	9,355	769	8,059	3/3	Supplemental
LC1100M	Magenta	13,700	1,169	11,730	3/3	Supplemental
LC1100Y	Yellow	11,351	1,473	8,867	3/3	Supplemental

Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "as-is," "as available," and all warranties, expressed or implied, are hereby disclaimed. Users of the information contained herein assume full responsibility and risk of loss resulting from usage thereof.

<b>Printer Identifier</b>	<b>Brother MFC-5490cn</b>
Printer Manufacturer	Brother
Cartridge Identifier	LC1100BK, LC1100C, LC1100M, LC1100Y
Cartridge Type	Separate ink supply and print head
Date Tested	May 7, 2009 to May 12, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 210 x 297 mm photo paper
Media used	Brother Premium Glossy Photo Paper (BP61GLA )
Driver version	Driver Version = Brother MFC-5490CN Printer Version 5.02/Version 5.1 (Build 2600 Service pack 3)  The following driver settings were changed from default: Media Type = Changed to Brother BP61 Photo Paper from Plain Paper Paper Size = Changed to A4 from Letter

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Brother MFC-5490cn:

Using the QualityLogic Color Photo test suite provides the following results:

- Average Cyan Cartridge Yield – Up to 87 standard pages
- Average Magenta Cartridge Yield – Up to 101 standard pages
- Average Yellow Cartridge Yield – Up to 88 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 8,649 standard pages

Values obtained by continuous printing. Declared yield value in accordance with QualityLogic Color Photo Cartridge Yield Test Methodology.

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
LC1100C	Cyan	90	5	87	9/12	Primary
LC1100M	Magenta	105	6	101	9/9	Primary
LC1100Y	Yellow	93	8	88	9/12	Primary
LC1100BK	K (Black)	11,572	1,734	8,649	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MP470</b>
Printer Manufacturer	Canon
Cartridge Identifier	PG-40, CL-41
Cartridge Type	Integral ink supply and print head
Date Tested	October 16, 2007 to October 18, 2007
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 04/02/2007, 2.10.2.30 The driver default settings were used for testing.

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Canon PIXMA MP470:

Using the test suite defined in ISO/IEC 24712 provides the following results:

- Average K (Black) Cartridge Yield – Up to 346 standard pages
- Average Tri-color Cartridge Yield – Up to 333 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

- Average K (Black) Cartridge Yield – Up to 358 standard pages
- Estimated supplemental Tri-color Cartridge Yield – Up to 2,588 standard pages

Values obtained by continuous printing. Declared yield value in accordance with ISO/IEC 24711.

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PG-40	K (Black)	351	8	346	9/12	Primary
CL-41	Tri-color	339	10	333	9/15	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PG-40	K (Black)	364	10	358	9/9	Primary
CL-41	Tri-color	2,763	104	2,588	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MP470</b>
Printer Manufacturer	Canon
Cartridge Identifier	PG-40, CL-41
Cartridge Type	Integral ink supply and print head
Date Tested	October 18, 2007 to October 19, 2007
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo
Media used	Canon Photo Paper Plus Glossy, PP-101
Driver version	Driver Version = 04/02/2007, 2.10.2.30 The following driver settings were changed from default: Media Type = Changed to Photo Paper Plus Glossy from Plain Paper Print Quality = Changed to High from Standard

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Canon PIXMA MP470:

Using the QualityLogic Color Photo test suite provides the following results:

Average Tri-color Cartridge Yield – Up to 113 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,637 standard pages

Values obtained by continuous printing. Declared yield value in accordance with QualityLogic Color Photo Cartridge Yield Test Methodology.

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
CL-41	Tri-color	115	3	113	9/9	Primary
PG-40	K (Black)	1,697	35	1,637	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MP510</b>
Printer Manufacturer	Canon
Cartridge Identifier	PGI-5BK, CLI-8C, CLI-8M, CLI-8Y
Cartridge Type	Separate ink supply and print head
Date Tested	January 31, 2007 to February 12, 2007
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 04/24/2006, 1.95.2.60

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Canon PIXMA MP510:

Using the test suite defined in ISO/IEC 24712 provides the following results:

- Average K ( Black) Cartridge Yield – Up to 490 standard pages
- Average Cyan Cartridge Yield – Up to 874 standard pages
- Average Magenta Cartridge Yield – Up to 713 standard pages
- Average Yellow Cartridge Yield – Up to 666 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

- Average K (Black) Cartridge Yield – Up to 521 standard pages
- Estimated supplemental Cyan Cartridge Yield – Up to 6,680 standard pages
- Estimated supplemental Magenta Cartridge Yield – Up to 6,360 standard pages
- Estimated supplemental Yellow Cartridge Yield – Up to 8,584 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PGI-5BK	K (Black)	504	23	490	9/12	Primary
CLI-8C	Cyan	903	47	874	9/12	Primary
CLI-8M	Magenta	724	18	713	9/12	Primary
CLI-8Y	Yellow	706	63	666	9/12	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PGI-5BK	K (Black)	532	17	521	9/9	Primary
CLI-8C	Cyan	7,059	225	6,680	3/3	Supplemental
CLI-8M	Magenta	6,699	201	6,360	3/3	Supplemental
CLI-8Y	Yellow	8,924	202	8,584	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MP510</b>
Printer Manufacturer	Canon
Cartridge Identifier	PGI-5BK, CLI-8C, CLI-8M, CLI-8Y
Cartridge Type	Separate ink supply and print head
Date Tested	February 6, 2007 to February 9, 2007
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	Canon Photo Paper Plus Glossy, (PP-101)
Driver version	Driver Version = 04/24/2006, 1.95.2.60 The following settings were used: Print Quality = High Media Type = Photo Paper Plus Glossy

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Canon PIXMA MP510:

Using the QualityLogic Color Photo test suite provides the following results:

- Average Cyan Cartridge Yield – Up to 354 standard pages
- Average Magenta Cartridge Yield – Up to 252 standard pages
- Average Yellow Cartridge Yield – Up to 269 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 2,979 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
CLI-8C	Cyan	363	14	354	9/9	Primary
CLI-8M	Magenta	256	9	252	12/15	Primary
CLI-8Y	Yellow	273	8	269	11/14	Primary
PGI-5BK	Black	3,050	42	2,979	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MP620</b>
Printer Manufacturer	Canon
Cartridge Identifier	PGI-220BK, CLI-221C, CLI-221M, CLI-221Y, CLI-221BK
Cartridge Type	Separate ink supply and print head
Date Tested	October 8, 2008 to October 14, 2008
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 06/12/2008, 2.21.2.20

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Canon PIXMA MP620:

Using the test suite defined in ISO/IEC 24712 provides the following results:

- Average K (Pigment Black) Cartridge Yield – Up to 344 standard pages
- Average Cyan Cartridge Yield – Up to 565 standard pages
- Average Magenta Cartridge Yield – Up to 539 standard pages
- Average Yellow Cartridge Yield – Up to 546 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 5,141 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

- Average K (Pigment Black) Cartridge Yield – Up to 366 standard pages
- Estimated supplemental Cyan Cartridge Yield – Up to 3,228 standard pages
- Estimated supplemental Magenta Cartridge Yield – Up to 3,498 standard pages
- Estimated supplemental Yellow Cartridge Yield – Up to 4,551 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 6,866 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

#### Using 24712 Test Suite

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PGI-220BK	K (Pigment Black)	348	7	344	13/19	Primary
CLI-221C	Cyan	583	30	565	9/12	Primary
CLI-221M	Magenta	549	16	539	9/15	Primary
CLI-221Y	Yellow	558	19	546	9/15	Primary
CLI-221BK	K (Black)	5,986	501	5,141	3/6	Supplemental

#### Using 19752 Test Page

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PGI-220BK	K (Pigment Black)	374	12	366	9/9	Primary
CLI-221C	Cyan	3,289	36	3,228	3/3	Supplemental
CLI-221M	Magenta	3,597	59	3,498	3/3	Supplemental
CLI-221Y	Yellow	4,726	104	4,551	3/3	Supplemental
CLI-221BK	K (Black)	7,115	148	6,866	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MP620</b>
Printer Manufacturer	Canon
Cartridge Identifier	PGI-220BK, CLI-221C, CLI-221M, CLI-221Y, CLI-221BK
Cartridge Type	Separate ink supply and print head
Date Tested	October 15, 2008 to October 17, 2008
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	Canon Photo Paper Plus Glossy II, (PP-201)
Driver version	Driver Version = 06/12/2008, 2.21.2.20 The following driver settings were changed from default: Media Type = Changed to Photo Paper Plus Glossy II from Plain Paper Print Quality = Changed to High from Standard

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Canon PIXMA MP620:

Using the QualityLogic Color Photo test suite provides the following results:

- Average Cyan Cartridge Yield – Up to 201 standard pages
- Average Magenta Cartridge Yield – Up to 217 standard pages
- Average Yellow Cartridge Yield – Up to 213 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 610 standard pages
- Estimated supplemental K (Pigment Black) Cartridge Yield – Up to 1,952 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
CLI-221C	Cyan	204	6	201	9/12	Primary
CLI-221M	Magenta	222	8	217	9/10	Primary
CLI-221Y	Yellow	219	9	213	9/11	Primary
CLI-221BK	K (Black)	658	29	610	3/4	Supplemental
PGI-220BK	K (Pigment Black)	2,015	37	1,952	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MX330</b>
Printer Manufacturer	Canon
Cartridge Identifier	PG-210, CL-211
Cartridge Type	Integral ink supply and print head
Date Tested	October 15, 2009 to October 22, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 04/25/2009, 2.27.2.10

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Canon PIXMA MX330:

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield: Up to 288 standard pages

Average Tri-color Cartridge Yield: Up to 265 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield: Up to 286 standard pages

Estimated supplemental Tri-color Cartridge Yield: Up to 2,738 standard pages

Values obtained by continuous printing. Declared yield value in accordance with ISO/IEC 24711.

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PG-210	K (Black)	297	14	288	9/12	Primary
CL-211	Tri-color	268	6	265	9/15	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PG-210	K (Black)	296	15	286	9/9	Primary
CL-211	Tri-color	2,868	77	2,738	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MX330</b>
Printer Manufacturer	Canon
Cartridge Identifier	PG-210, CL-211
Cartridge Type	Integral ink supply and print head
Date Tested	October 23, 2009 to October 26, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 1/2" x 11" photo paper
Media used	Canon Photo Paper Plus Glossy II, High Gloss (PP-201).
Driver version	Driver Version = 04/25/2009, 2.27.2.10 The following driver settings were changed from default: Media Type = Changed to Photo Paper Plus Glossy II from Plain Paper Print Quality = Changed to High from Standard

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Canon PIXMA MX330:

Using the QualityLogic Color Photo test suite provides the following results:

Average Tri-color Cartridge Yield: Up to 92 standard pages

Estimated supplemental K (Black) Cartridge Yield: Up to 1,336 standard pages

Values obtained by continuous printing. Declared yield value in accordance with QualityLogic Color Photo Cartridge Yield Test Methodology.

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
CL-211	Tri-color	92	1	92	9/9	Primary
PG-210	K (Black)	1,506	101	1,336	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MX700</b>
Printer Manufacturer	Canon
Cartridge Identifier	PGI-5BK, CLI-8C, CLI-8M, CLI-8Y
Cartridge Type	Separate ink supply and print head
Date Tested	March 6, 2009 to March 18, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 05/22/2007, 2.11.2.20

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Canon PIXMA MX700:

Using the test suite defined in ISO/IEC 24712 provides the following results:

- Average K (Black) Cartridge Yield – Up to 488 standard pages
- Average Cyan Cartridge Yield – Up to 873 standard pages
- Average Magenta Cartridge Yield – Up to 676 standard pages
- Average Yellow Cartridge Yield – Up to 691 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

- Average K (Black) Cartridge Yield – Up to 533 standard pages
- Estimated supplemental Cyan Cartridge Yield – Up to 7,768 standard pages
- Estimated supplemental Magenta Cartridge Yield – Up to 7,161 standard pages
- Estimated supplemental Yellow Cartridge Yield – Up to 9,551 standard pages

Values obtained by continuous printing. Declared yield value in accordance with ISO/IEC 24711.

#### Using 24712 Test Suite

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PGI-5BK	K (Black)	493	11	488	15/21	Primary
CLI-8C	Cyan	897	38	873	9/12	Primary
CLI-8M	Magenta	688	20	676	9/15	Primary
CLI-8Y	Yellow	699	14	691	9/15	Primary

#### Using 19752 Test Page

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
PGI-5BK	K (Black)	541	12	533	9/9	Primary
CLI-8C	Cyan	8,143	223	7,768	3/3	Supplemental
CLI-8M	Magenta	7,228	40	7,161	3/3	Supplemental
CLI-8Y	Yellow	9,792	143	9,551	3/3	Supplemental

<b>Printer Identifier</b>	<b>Canon PIXMA MX700</b>
Printer Manufacturer	Canon
Cartridge Identifier	PGI-5BK, CLI-8C, CLI-8M, CLI-8Y
Cartridge Type	Separate ink supply and print head
Date Tested	March 18, 2009 to March 25, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	Canon Photo Paper Plus Glossy II, (PP-201)
Driver version	Driver Version = 05/22/2007, 2.11.2.20 The following driver settings were changed from default: Media Type = Changed to Photo Paper Plus Glossy II from Plain Paper. Paper Source = Changed to Rear Tray from Paper Feed Switch. Print Quality = Changed to High from Standard.

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Canon PIXMA MX700:

Using the QualityLogic Color Photo test suite provides the following results:

- Average Cyan Cartridge Yield – Up to 348 standard pages
- Average Magenta Cartridge Yield – Up to 248 standard pages
- Average Yellow Cartridge Yield – Up to 276 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 2,809 standard pages

Values obtained by continuous printing. Declared yield value in accordance with QualityLogic Color Photo Cartridge Yield Test Methodology.

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
CLI-8C	Cyan	354	10	348	9/9	Primary
CLI-8M	Magenta	252	7	248	12/15	Primary
CLI-8Y	Yellow	280	6	276	9/12	Primary
PGI-5BK	K (Black)	2,901	55	2,809	3/3	Supplemental

<b>Printer Identifier</b>	<b>Epson Stylus CX8300</b>
Printer Manufacturer	Epson
Cartridge Identifier	T0731, T0732, T0733, T0734
Cartridge Type	Separate ink supply and print head
Date Tested	April 3, 2008 to April 7, 2008
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 5/11/2007, 6.50.00.00 The following driver settings were changed from default: Color Ink Test: The drivers default settings were used for testing. Mono Ink Test: Calidad de impresion = Changed to Texto from Texto e imagenes. The "Solo tinta negra" option was enabled in the Avanzado tab.

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Epson Stylus CX8300:

Using the test suite defined in ISO/IEC 24712 provides the following results:

- Average K (Black) Cartridge Yield – Up to 245 standard pages
- Average Cyan Cartridge Yield – Up to 390 standard pages
- Average Magenta Cartridge Yield – Up to 289 standard pages
- Average Yellow Cartridge Yield – Up to 411 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

- Average K (Black) Cartridge Yield – Up to 247 standard pages
- Estimated supplemental Cyan Cartridge Yield – Up to 1,465 standard pages
- Estimated supplemental Magenta Cartridge Yield – Up to 2,114 standard pages
- Estimated supplemental Yellow Cartridge Yield – Up to 2,312 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
T0731	K (Black)	249	10	245	15/20	Primary
T0732	Cyan	399	15	390	9/15	Primary
T0733	Magenta	297	15	289	12/18	Primary
T0734	Yellow	422	18	411	9/12	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
T0731	K (Black)	254	12	247	9/9	Primary
T0732	Cyan	1,713	147	1,465	3/3	Supplemental
T0733	Magenta	2,526	245	2,114	3/3	Supplemental
T0734	Yellow	2,536	133	2,312	3/3	Supplemental

<b>Printer Identifier</b>	<b>Epson Stylus CX8300</b>
Printer Manufacturer	Epson
Cartridge Identifier	T0731, T0732, T0733, T0734
Cartridge Type	Separate ink supply and print head
Date Tested	April 8, 2008 to April 11, 2008
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	Epson Premium Photo Paper Glossy (S041286)
Driver version	Driver Version = 5/11/2007, 6.50.00.00 The following driver settings were changed from default: Calidad de impresion = Changed to Foto superior from Texto e imagenes. Papel = Changed to Premium Photo Paper Glossy from Papel normal / Bright White paper. Opciones de papel y calidad de impresion = Changed to Photo RPM from Normal.

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Epson Stylus CX8300:

Using the QualityLogic Color Photo test suite provides the following results:

- Average Cyan Cartridge Yield – Up to 85 standard pages
- Average Magenta Cartridge Yield – Up to 86 standard pages
- Average Yellow Cartridge Yield – Up to 114 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 468 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
T0731	Cyan	88	4	85	11/13	Primary
T0732	Magenta	88	3	86	10/12	Primary
T0733	Yellow	118	5	114	9/9	Primary
T0734	K (Black)	535	40	468	3/3	Supplemental

<b>Printer Identifier</b>	<b>HP Photosmart C3180</b>
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP92, HP93
Cartridge Type	Integral ink supply and print head
Date Tested	January 30, 2007 to February 1, 2007
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 60.54.44.0

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in HP Photosmart C3180:

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield – Up to 203 standard pages

Average Tri-color Cartridge Yield – Up to 210 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield – Up to 218 standard pages

Estimated supplemental Tri-color Cartridge Yield – Up to 1,881 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP92	K (Black)	211	12	203	9/12	Primary
HP93	Tri-color	216	10	210	9/12	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP92	K (Black)	222	7	218	9/9	Primary
HP93	Tri-color	2,020	83	1,881	3/3	Supplemental

Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "as-is," "as available," and all warranties, expressed or implied, are hereby disclaimed. Users of the information contained herein assume full responsibility and risk of loss resulting from usage thereof.

<b>Printer Identifier</b>	<b>HP Photosmart C3180</b>
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP92, HP93
Cartridge Type	Integral ink supply and print head
Date Tested	February 1, 2007 to February 2, 2007
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	HP Premium Plus Photo Paper, High Gloss (Q1785A)
Driver version	Driver Version = 60.54.44.0 The following settings were used: Photo printing-with white borders Print Quality = Best Paper Type = HP Premium Plus Photo Papers

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in HP Photosmart C3180:

Using the QualityLogic Color Photo test suite provides the following results:

Average Tri-color Cartridge Yield – Up to 61 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,599 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP93	Tri-color	63	2	61	9/9	Primary
HP92	K (Black)	1,643	26	1,599	3/3	Supplemental

<b>Printer Identifier</b>	<b>HP Photosmart C4480</b>
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP74, HP75
Cartridge Type	Integral ink supply and print head
Date Tested	April 13, 2009 to April 16, 2009
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 61.73.245.0 The following driver settings were changed from default: Mono Ink test = "Print All Text as Black" was enabled on the Advanced tab

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in HP Photosmart C4480:

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield – Up to 205 standard pages

Average Tri-color Cartridge Yield – Up to 180 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield – Up to 211 standard pages

Estimated supplemental Tri-color Cartridge Yield – Up to 1,575 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP74	K (Black)	210	8	205	9/12	Primary
HP75	Tri-color	183	4	180	9/15	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP74	K (Black)	216	7	211	9/9	Primary
HP75	Tri-color	1,699	74	1,575	3/3	Supplemental

<b>Printer Identifier</b>	<b>HP Photosmart C4480</b>
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP74, HP75
Cartridge Type	Integral ink supply and print head
Date Tested	April 16, 2009 to April 17, 2009
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	HP Premium Plus Photo Paper, High Gloss (Q1785A)
Driver version	Driver Version = 61.73.245.0 The following driver settings were changed from default: Paper type = Changed to HP Premium Plus Photo papers from Plain paper

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in HP Photosmart C4480:

Using the QualityLogic Color Photo test suite provides the following results:

Average Tri-color Cartridge Yield – Up to 52 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,249 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP75	Tri-color	53	1	52	9/9	Primary
HP74	K (Black)	1,332	49	1,249	3/3	Supplemental

<b>Printer Identifier</b>	<b>HP Photosmart C4780</b>
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP60 - CC640WN, CC643WN
Cartridge Type	Integral ink supply and print head
Date Tested	October 15, 2009 to October 21, 2009
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 70.91.312.0

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in HP Photosmart C4780:

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield – Up to 196 standard pages

Average Tri-color Cartridge Yield – Up to 158 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield – Up to 202 standard pages

Estimated supplemental Tri-color Cartridge Yield – Up to 1,178 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP 60 (CC640WN)	K (Black)	198	4	196	9/12	Primary
HP 60 (CC643WN)	Tri-color	163	7	158	9/15	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP 60 (CC640WN)	K (Black)	204	4	202	9/9	Primary
HP 60 (CC643WN)	Tri-color	1,215	22	1,178	3/3	Supplemental

<b>Printer Identifier</b>	<b>HP Photosmart C4780</b>
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP60 - CC640WN, CC643WN
Cartridge Type	Integral ink supply and print head
Date Tested	October 22, 2009 to October 23, 2009
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	HP Premium Plus Photo Paper, High Gloss (Q1785A)
Driver version	Driver Version = 70.91.312.0 The following driver settings were changed from default: Paper type = Changed to HP Premium Plus Photo Papers from Plain paper

**Declaration of Yield**

**Inkjet Cartridge Yield when tested in HP Photosmart C4780:**

Using the QualityLogic Color Photo test suite provides the following results:

Average Tri-color Cartridge Yield – Up to 50 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,451 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP 60 (CC643WN)	Tri-color	51	1	50	9/9	Primary
HP 60 (CC640WN)	K (Black)	1,505	32	1,451	3/3	Supplemental

Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "as-is," "as available," and all warranties, expressed or implied, are hereby disclaimed. Users of the information contained herein assume full responsibility and risk of loss resulting from usage thereof.

<b>Printer Identifier</b>	<b>HP Photosmart C6280</b>
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP02 - C8721WN, C8771WN, C8772WN, C8773WN, C8774WN, C8775WN
Cartridge Type	Separate ink supply and print head
Date Tested	September 21, 2007 to November 2, 2007
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version=61.071.244.00 The following driver settings were changed from default: Paper Type = Changed to Plain paper from Automatic

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in HP Photosmart C6280:

Using the test suite defined in ISO/IEC 24712 provides the following results:

- Average K (Black) Cartridge Yield – Up to 728 standard pages
- Average Cyan Cartridge Yield – Up to 411 standard pages
- Average Magenta Cartridge Yield – Up to 393 standard pages
- Average Yellow Cartridge Yield – Up to 488 standard pages
- Estimated supplemental Light Cyan Cartridge Yield – Up to 11,956 standard pages
- Estimated supplemental Light Magenta Cartridge Yield – Up to 11,827 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

- Average K (Black) Cartridge Yield – Up to 1,504 standard pages
- Average supplemental Cyan Cartridge Yield – Up to 1,402 standard pages
- Average supplemental Magenta Cartridge Yield – Up to 813 standard pages
- Average supplemental Yellow Cartridge Yield – Up to 1,323 standard pages
- Estimated supplemental Light Cyan Cartridge Yield – Up to 15,204 standard pages
- Estimated supplemental Light Magenta Cartridge Yield – Up to 13,302 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP02 C8721WN	K (Black)	738	33	728	30/33	Primary
HP02 C8771WN	Cyan	424	52	411	51/57	Primary
HP02 C8772WN	Magenta	404	47	393	53/59	Primary
HP02 C8773WN	Yellow	502	54	488	42/48	Primary
HP02 C8774WN	Light Cyan	13,512	923	11,956	3/6	Supplemental
HP02 C8775WN	Light Magenta	12,547	427	11,827	3/6	Supplemental

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Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP02 C8721WN	K (Black)	1,534	86	1,504	23/25	Primary
HP02 C8771WN	Cyan	1,501	271	1,402	22/26	Supplemental
HP02 C8772WN	Magenta	843	113	813	41/45	Supplemental
HP02 C8773WN	Yellow	1,388	184	1,323	24/28	Supplemental
HP02 C8774WN	Light Cyan	17,167	1,164	15,204	3/4	Supplemental
HP02 C8775WN	Light Magenta	15,433	1,264	13,302	3/4	Supplemental

Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "as-is," "as available," and all warranties, expressed or implied, are hereby disclaimed. Users of the information contained herein assume full responsibility and risk of loss resulting from usage thereof.

<b>Printer Identifier</b>	<b>HP Photosmart C6280</b>
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP02 - C8721WN, C8771WN, C8772WN, C8773WN, C8774WN, C8775WN
Cartridge Type	Separate ink supply and print head
Date Tested	October 23, 2007 to November 2, 2007
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo
Media used	HP Premium Plus Photo Paper, High Gloss (Q1785A)
Driver version	Driver Version=61.071.244.00 The following driver settings were changed from default: Paper Type = Changed to HP Premium Plus Photo Papers from Automatic Print Quality = Changed to Best from Automatic

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in HP Photosmart C6280:

Using the QualityLogic Color Photo test suite provides the following results:

- Average Cyan Cartridge Yield – Up to 289 standard pages
- Average Magenta Cartridge Yield – Up to 323 standard pages
- Average Yellow Cartridge Yield – Up to 146 standard pages
- Average Light Cyan Cartridge Yield – Up to 142 standard pages
- Average Light Magenta Cartridge Yield – Up to 133 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 892 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP02 C8771WN	Cyan	333	72	289	9/13	Primary
HP02 C8772WN	Magenta	365	67	323	9/10	Primary
HP02 C8773WN	Yellow	158	30	146	19/23	Primary
HP02 C8774WN	Light Cyan	150	22	142	21/25	Primary
HP02 C8775WN	Light Magenta	141	22	133	21/25	Primary
HP02 C8721WN	K (Black)	895	2	892	3/7	Supplemental

<b>Printer Identifier</b>	<b>Lexmark X5470</b>
Printer Manufacturer	Lexmark
Cartridge Identifier	32, 33
Cartridge Type	Integral ink supply and print head
Date Tested	October 22, 2007 to October 29, 2007
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 3.117.0.0 The following driver settings were changed from default: Paper Type = Changed to Plain from Sensed

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Lexmark X5470:

Using the test suite defined in ISO/IEC 24712 provides the following results:

Average K (Black) Cartridge Yield – Up to 274 standard pages

Average Tri-Color Cartridge Yield – Up to 272 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

Average K (Black) Cartridge Yield – Up to 287 standard pages

Estimated supplemental Tri-Color Cartridge Yield – Up to 2,504 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
32 (18C0032)	K (Black)	287	20	274	9/15	Primary
33 (18C0033)	Tri-color	287	24	272	9/14	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
32 (18C0032)	K (Black)	300	20	287	9/10	Primary
33 (18C0033)	Tri-color	2,684	107	2,504	3/3	Supplemental

<b>Printer Identifier</b>	<b>Lexmark X5470</b>
Printer Manufacturer	Lexmark
Cartridge Identifier	32, 33
Cartridge Type	Integral ink supply and print head
Date Tested	October 30, 2007 to November 5, 2007
EOL Criteria	Fade was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	Lexmark Premium Photo Paper (21G1740)
Driver version	Driver Version = 3.117.0.0 The following driver settings were changed from default: Quality = Changed to Photo from Automatic Type = Changed to Lexmark Premium Photo Paper from Sensed

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Lexmark X5470:

Using the QualityLogic Color Photo test suite provides the following results:

Average Tri-color Cartridge Yield – Up to 71 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 4,378 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
33 (18C0033)	Tri-color	73	6	71	26/28	Primary
32 (18C0032)	K (Black)	5,420	618	4,378	3/3	Supplemental

<b>Printer Identifier</b>	<b>Lexmark Prevail Pro705</b>
Printer Manufacturer	Lexmark
Cartridge Identifier	100 series
Cartridge Type	Separate ink supply and print head
Date Tested	October 28, 2009 to November 6, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	Letter
Media used	Xerox Business 4200, 92 Brightness 20lb. weight
Driver version	Driver Version = 1.2.0.0 The following driver settings were changed from default: Color Ink: Paper Type = Changed to Plain Paper from Automatic Mono Ink: Paper Type = Changed to Plain Paper from Automatic Print using black ink only was enabled under Ink Use

## Declaration of Yield

### Inkjet Cartridge Yield when tested in Lexmark Prevail Pro705:

Using the test suite defined in ISO/IEC 24712 provides the following results:

- Average K (Black) Cartridge Yield – Up to 239 standard pages
- Average Cyan Cartridge Yield – Up to 286 standard pages
- Average Magenta Cartridge Yield – Up to 237 standard pages
- Average Yellow Cartridge Yield – Up to 269 standard pages

Using the test page defined in ISO/IEC 19752 provides the following results:

- Average K (Black) Cartridge Yield – Up to 260 standard pages
- Estimated supplemental Cyan Cartridge Yield – Up to 2,826 standard pages
- Estimated supplemental Magenta Cartridge Yield – Up to 2,903 standard pages
- Estimated supplemental Yellow Cartridge Yield – Up to 2,906 standard pages

Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
100 Black	K (Black)	246	12	239	9/15	Primary
100 Cyan	Cyan	291	9	286	9/12	Primary
100 Magenta	Magenta	244	12	237	9/15	Primary
100 Yellow	Yellow	272	4	269	9/15	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
100 Black	K (Black)	264	7	260	9/9	Primary
100 Cyan	Cyan	3,119	174	2,826	3/3	Supplemental
100 Magenta	Magenta	3,250	206	2,903	3/3	Supplemental
100 Yellow	Yellow	3,327	250	2,906	3/3	Supplemental

Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "as-is," "as available," and all warranties, expressed or implied, are hereby disclaimed. Users of the information contained herein assume full responsibility and risk of loss resulting from usage thereof.

<b>Printer Identifier</b>	<b>Lexmark Prevail Pro705</b>
Printer Manufacturer	Lexmark
Cartridge Identifier	100 series
Cartridge Type	Separate ink supply and print head
Date Tested	November 6, 2009 to November 10, 2009
EOL Criteria	This printer has Ink Out which stops printing. Whichever came first, either Ink Out or Fade, was used as the EOL criteria.
Print mode used	Continuous
Paper Size	4" x 6" borderless photo on 8 ½" x 11" photo paper
Media used	Lexmark PerfectFinish Photo Paper, High Gloss (19Y0170)
Driver version	Driver Version = 1.2.0.0 The following driver settings were changed from default: Paper Type = Changed to Lexmark Perfectfinish Photo Paper from Automatic Print Setup = Changed to Best from Automatic

### Declaration of Yield

#### Inkjet Cartridge Yield when tested in Lexmark Prevail Pro705:

Using the QualityLogic Color Photo test suite provides the following results:

- Average Cyan Cartridge Yield – Up to 67 standard pages
- Average Magenta Cartridge Yield – Up to 80 standard pages
- Average Yellow Cartridge Yield – Up to 87 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 584 standard pages

Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
100 Cyan	Cyan	69	3	67	10/12	Primary
100 Magenta	Magenta	83	5	80	9/12	Primary
100 Yellow	Yellow	91	6	87	9/9	Primary
100 Black	K (Black)	633	29	584	3/3	Supplemental

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## Sub-Appendix A1 – Test Pages

### ISO/ ISO/IEC 24712 Test Suite



### ISO/IEC 19752 Test Page



## QualityLogic Photo Test Suite

