



Cost of Ink Per Page Analysis

Brazil

August 2010

Includes ink cartridge pricing provided by



TABLE OF CONTENTS

Summary and Scope of Analysis	3
Cost of Ink Per Page.....	5
Brazil: Mono - Cost of Ink Per Page.....	5
Brazil: Color - Cost of Ink Per Page	6
Brazil: Photo - Cost of Ink Per Page	7
Methodology for Calculation of Cost of Ink Per Page	8
A. QualityLogic Yield Declarations	8
B. Ink Cartridge Pricing	11
C. Cost of Ink Per Page – Per Cartridge	12
D. Cost of Ink Per Page	14
Appendix A: Test Methodology Summary	17
Appendix B: QualityLogic Declared Yield Test Results	20
Appendix C: Test Pages	60

Summary and Scope of Analysis

For more than 24 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 16 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 Intelligence provided the manufacturer's suggested retail price (MSRP) for each of the cartridges in the test based on information collected through Q2 2010. 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, complete sets of standard as-shipped-in-box cartridges or the standard-yield ink cartridges were evaluated for the purpose of making like-basis comparisons between all printers. For printers where a complete set of standard cartridges was not available, a complete set of high-yield cartridges was evaluated. Ink cost comparisons are made using single quantity cartridge pricing (i.e., no multi-packs, combo packs, value packs or special promotions.)

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 Intelligence 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 (Q2 2010).

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

Company	Printer	Cartridges
Kodak	ESP 6150 ESP 7250	Black Ink 10B, Color Ink 10C Black Ink 10B, Color Ink 10C
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 TX600FW	T0731, T0732, T0733, T0734 T1031, T1032, T1033, T1034
Hewlett-Packard	Deskjet F4580 Photosmart C3180 Photosmart C4480 Photosmart C4780 Photosmart C6280 Photosmart C6380 Photosmart Premium	HP60 - CC640WN, CC643WN ¹ HP92, HP93 HP74, HP75 HP60 - CC640WN, CC643WN ¹ HP02 - C8721WN, C8771WN, C8772WN, C8773WN, C8774WN, C8775WN ¹ HP 564 - CB316WN, CB317WN, CB318WN, CB319WN, CB320WN ¹ HP 564 - CB316WN, CB317WN, CB318WN, CB319WN, CB320WN ¹
Lexmark	X5470	32, 33

¹ The HP F4580, C4780, C6280, C6380 and Premium printers 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.

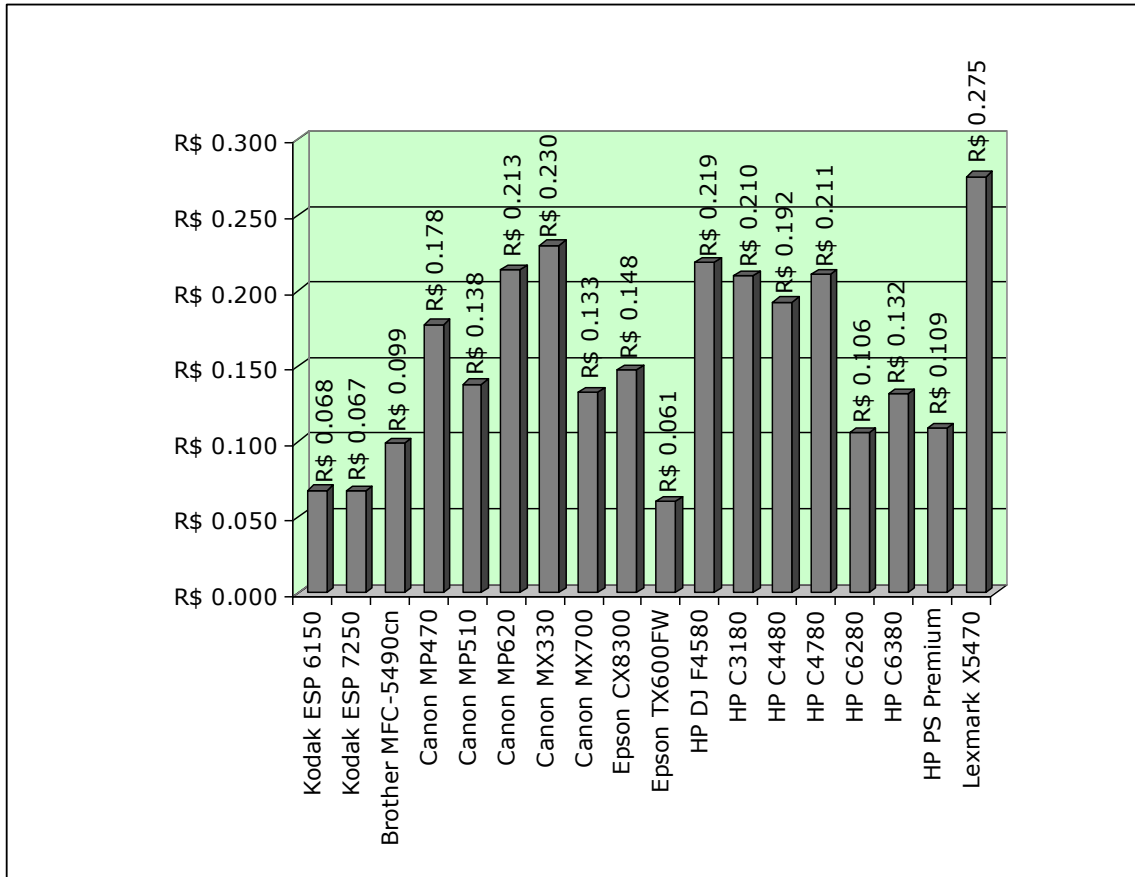
Test results and cost information provided by QualityLogic. Tests were performed under laboratory conditions and end-user's results may vary. Test results, ink cartridge pricing and cost per page pricing subject to change without notice by QualityLogic. All test results and cost information are provided "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.

Cost of Ink Per Page

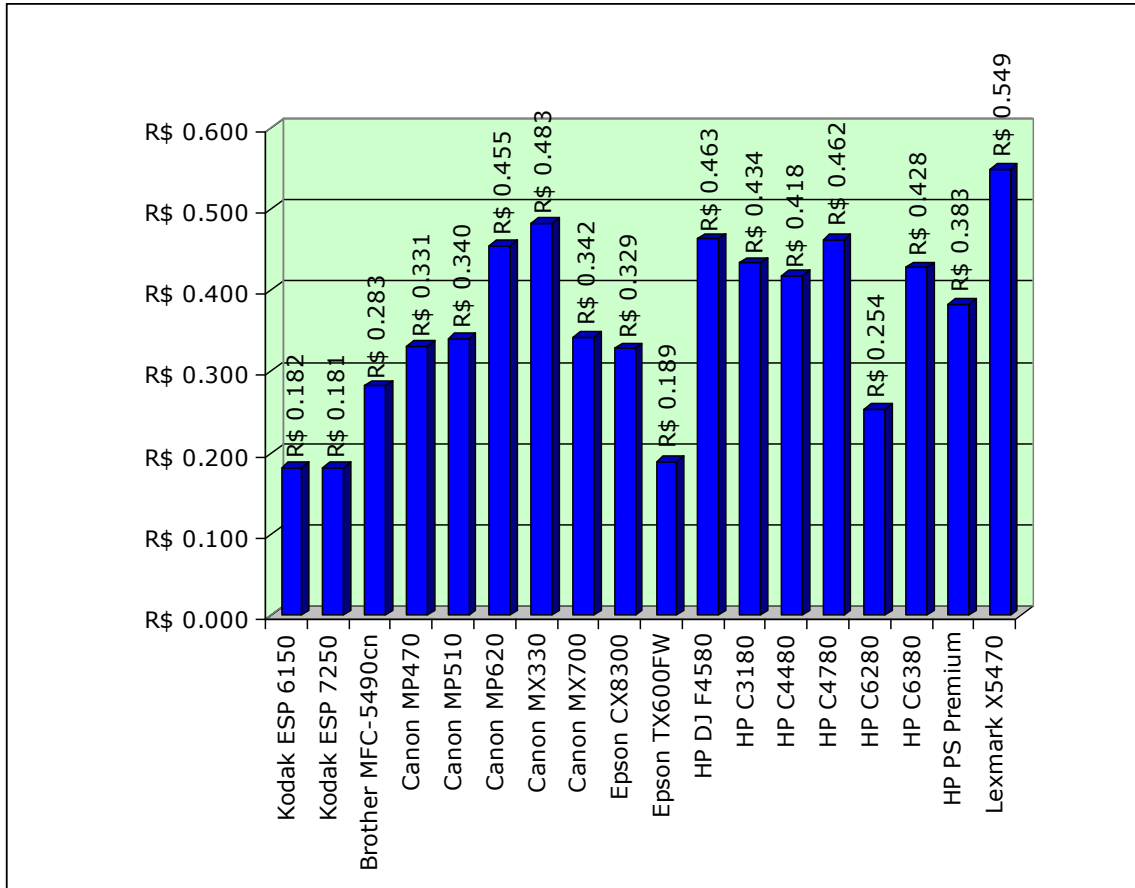
The following charts summarize the Cost of Ink Per Page for the printers tested using cartridge prices from Brazil. There are three charts presented: separate charts for monochrome, color and photo printing. Details of how these costs were calculated can be found in the "Methodology for Calculation of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

Brazil: Mono - Cost of Ink Per Page

(Brazilian Reais)

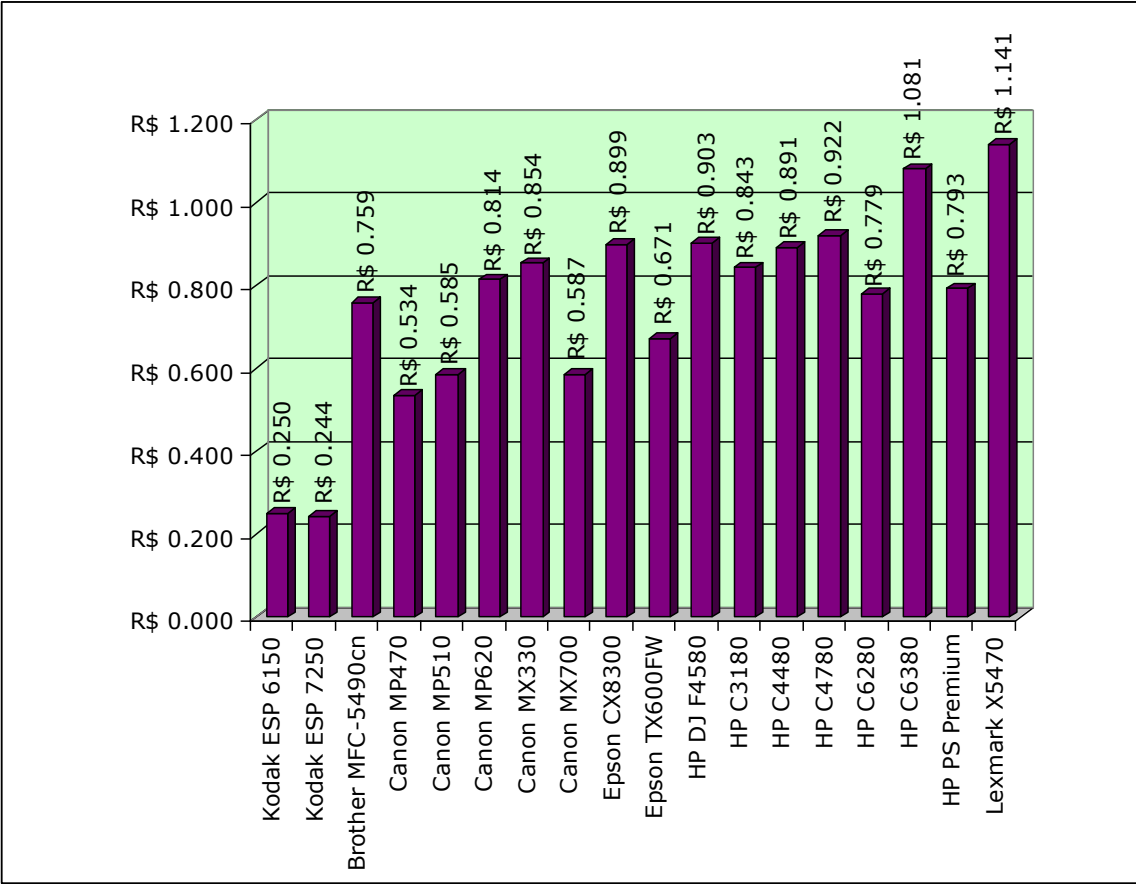


Brazil: Color - Cost of Ink Per Page (Brazilian Reais)



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.

Brazil: Photo - Cost of Ink Per Page
(Brazilian Reais)



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.

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 Intelligence, 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 cartridges to exhaust the amount of ink, and the 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, 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 B.

	Mono Ink yield							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 6150	3511				440			
Kodak ESP 7250	3546				444			
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			
Epson Stylus TX600FW		11163	15778	11149	1130			
HP DJ F4580	1160				194			
HP C3180	1881				218			
HP C4480	1575				211			
HP C4780	1178				202			
HP C6280		1402	813	1323	1504		15204	13302
HP C6380		2411	2445	2520	294	3031		
HP PS Premium		2513	2924	3239	344	6593		
Lexmark X5470	2504				287			

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

	Color Ink yield							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 6150	424				283			
Kodak ESP 7250	426				284			
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			
Epson Stylus TX600FW		970	672	1043	1050			
HP DJ F4580	157				197			
HP C3180	210				203			
HP C4480	180				205			
HP C4780	158				196			
HP C6280		411	393	488	728		11956	11827
HP C6380		291	268	231	268	867		
HP PS Premium		278	278	278	298	1894		
Lexmark X5470	272				274			

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

	Photo Ink yield							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 6150	173				1275			
Kodak ESP 7250	179				1205			
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			
Epson Stylus TX600FW		223	194	259	380			
HP DJ F4580	51				1512			
HP C3180	61				1599			
HP C4480	52				1249			
HP C4780	50				1451			
HP C6280		289	323	146	892		142	133
HP C6380		94	130	98	723	85		
HP PS Premium		97	185	132	1999	147		
Lexmark X5470	71				4378			

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

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. Ink Cartridge Pricing

Cartridge prices used in this Cost of Ink Per Page analysis were researched and provided to QualityLogic by Gap Intelligence as of Q2 2010. Gap Intelligence's methodology for data collection used the manufacturer's website for Brazil. For this report, complete sets of standard as-shipped-in-box cartridges or the standard-yield ink cartridges were evaluated for the purpose of making like-basis comparisons between all printers. For printers where a complete set of standard cartridges was not available, a complete set of high-yield cartridges was evaluated. Ink cost comparisons are made using single quantity cartridge pricing (i.e., no multi-packs, combo packs, value packs or special promotions.) 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 6150	R\$ 39.90				R\$ 24.90			
Kodak ESP 7250	R\$ 39.90				R\$ 24.90			
Brother MFC-5490cn		R\$ 23.00	R\$ 23.00	R\$ 23.00	R\$ 49.00			
Canon MP470	R\$ 56.50				R\$ 55.79			
Canon MP510		R\$ 53.40	R\$ 53.40	R\$ 54.24	R\$ 60.18			
Canon MP620		R\$ 49.23	R\$ 49.23	R\$ 49.23	R\$ 60.82	R\$ 48.87		
Canon MX330	R\$ 74.59				R\$ 58.04			
Canon MX700		R\$ 53.40	R\$ 53.40	R\$ 54.24	R\$ 60.18			
Epson CX8300		R\$ 26.21	R\$ 26.21	R\$ 26.21	R\$ 26.20			
Epson Stylus TX600FW		R\$ 38.38	R\$ 38.38	R\$ 38.38	R\$ 58.26			
HP DJ F4580	R\$ 44.90				R\$ 34.90			
HP C3180	R\$ 49.90				R\$ 39.90			
HP C4480	R\$ 44.90				R\$ 34.57			
HP C4780	R\$ 44.90				R\$ 34.90			
HP C6280		R\$ 25.90	R\$ 25.90	R\$ 25.90	R\$ 48.90		R\$ 25.90	R\$ 25.90
HP C6380		R\$ 25.90	R\$ 25.90	R\$ 25.90	R\$ 26.90	R\$ 25.90		
HP PS Premium		R\$ 25.90	R\$ 25.90	R\$ 25.90	R\$ 26.90	R\$ 25.90		
Lexmark X5470	R\$ 79.90				R\$ 69.90			

Brazilian Reais

Source: Gap Intelligence

C. Cost of Ink Per Page – Per Cartridge

QualityLogic calculated the Cost of Ink Per Page per cartridge by dividing the price of each cartridge (as defined by the Gap Intelligence 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 (Brazilian Reais)

	Mono Ink Cost							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 6150	R\$ 0.011				R\$ 0.057			
Kodak ESP 7250	R\$ 0.011				R\$ 0.056			
Brother MFC-5490cn		R\$ 0.003	R\$ 0.002	R\$ 0.003	R\$ 0.092			
Canon MP470	R\$ 0.022				R\$ 0.156			
Canon MP510		R\$ 0.008	R\$ 0.008	R\$ 0.006	R\$ 0.115			
Canon MP620		R\$ 0.015	R\$ 0.014	R\$ 0.011	R\$ 0.166	R\$ 0.007		
Canon MX330	R\$ 0.027				R\$ 0.203			
Canon MX700		R\$ 0.007	R\$ 0.007	R\$ 0.006	R\$ 0.113			
Epson CX8300		R\$ 0.018	R\$ 0.012	R\$ 0.011	R\$ 0.106			
Epson Stylus TX600FW		R\$ 0.003	R\$ 0.002	R\$ 0.003	R\$ 0.052			
HP DJ F4580	R\$ 0.039				R\$ 0.180			
HP C3180	R\$ 0.027				R\$ 0.183			
HP C4480	R\$ 0.029				R\$ 0.164			
HP C4780	R\$ 0.038				R\$ 0.173			
HP C6280		R\$ 0.018	R\$ 0.032	R\$ 0.020	R\$ 0.033		R\$ 0.002	R\$ 0.002
HP C6380		R\$ 0.011	R\$ 0.011	R\$ 0.010	R\$ 0.091	R\$ 0.009		
HP PS Premium		R\$ 0.010	R\$ 0.009	R\$ 0.008	R\$ 0.078	R\$ 0.004		
Lexmark X5470	R\$ 0.032				R\$ 0.244			

Color Cost of Ink Per Individual Cartridge per Page
(Brazilian Reais)

	Color Ink cost							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 6150	R\$ 0.094				R\$ 0.088			
Kodak ESP 7250	R\$ 0.094				R\$ 0.088			
Brother MFC-5490cn		R\$ 0.053	R\$ 0.064	R\$ 0.073	R\$ 0.092			
Canon MP470	R\$ 0.170				R\$ 0.161			
Canon MP510		R\$ 0.061	R\$ 0.075	R\$ 0.081	R\$ 0.123			
Canon MP620		R\$ 0.087	R\$ 0.091	R\$ 0.090	R\$ 0.177	R\$ 0.010		
Canon MX330	R\$ 0.281				R\$ 0.202			
Canon MX700		R\$ 0.061	R\$ 0.079	R\$ 0.078	R\$ 0.123			
Epson CX8300		R\$ 0.067	R\$ 0.091	R\$ 0.064	R\$ 0.107			
Epson Stylus TX600FW		R\$ 0.040	R\$ 0.057	R\$ 0.037	R\$ 0.055			
HP DJ F4580	R\$ 0.286				R\$ 0.177			
HP C3180	R\$ 0.238				R\$ 0.197			
HP C4480	R\$ 0.249				R\$ 0.169			
HP C4780	R\$ 0.284				R\$ 0.178			
HP C6280		R\$ 0.063	R\$ 0.066	R\$ 0.053	R\$ 0.067		R\$ 0.002	R\$ 0.002
HP C6380		R\$ 0.089	R\$ 0.097	R\$ 0.112	R\$ 0.100	R\$ 0.030		
HP PS Premium		R\$ 0.093	R\$ 0.093	R\$ 0.093	R\$ 0.090	R\$ 0.014		
Lexmark X5470	R\$ 0.294				R\$ 0.255			

Photo Cost of Ink Per Individual Cartridge per Page
(Brazilian Reais)

	Photo Ink Cost							
	CMY	C	M	Y	K1	K2	LC	LM
Kodak ESP 6150	R\$ 0.231				R\$ 0.020			
Kodak ESP 7250	R\$ 0.223				R\$ 0.021			
Brother MFC-5490cn		R\$ 0.264	R\$ 0.228	R\$ 0.261	R\$ 0.006			
Canon MP470	R\$ 0.500				R\$ 0.034			
Canon MP510		R\$ 0.151	R\$ 0.212	R\$ 0.202	R\$ 0.020			
Canon MP620		R\$ 0.245	R\$ 0.227	R\$ 0.231	R\$ 0.031	R\$ 0.080		
Canon MX330	R\$ 0.811				R\$ 0.043			
Canon MX700		R\$ 0.153	R\$ 0.215	R\$ 0.197	R\$ 0.021			
Epson CX8300		R\$ 0.308	R\$ 0.305	R\$ 0.230	R\$ 0.056			
Epson Stylus TX600FW		R\$ 0.172	R\$ 0.198	R\$ 0.148	R\$ 0.153			
HP DJ F4580	R\$ 0.880				R\$ 0.023			
HP C3180	R\$ 0.818				R\$ 0.025			
HP C4480	R\$ 0.863				R\$ 0.028			
HP C4780	R\$ 0.898				R\$ 0.024			
HP C6280		R\$ 0.090	R\$ 0.080	R\$ 0.177	R\$ 0.055		R\$ 0.182	R\$ 0.195
HP C6380		R\$ 0.276	R\$ 0.199	R\$ 0.264	R\$ 0.037	R\$ 0.305		
HP PS Premium		R\$ 0.267	R\$ 0.140	R\$ 0.196	R\$ 0.013	R\$ 0.176		
Lexmark X5470	R\$ 1.125				R\$ 0.016			

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
(Brazilian Reais)

	Mono Ink Cost								Mono CoIPP
	CMY	C	M	Y	K1	K2	LC	LM	
Kodak ESP 6150	R\$ 0.011				R\$ 0.057				R\$ 0.068
Kodak ESP 7250	R\$ 0.011				R\$ 0.056				R\$ 0.067
Brother MFC-5490cn		R\$ 0.003	R\$ 0.002	R\$ 0.003	R\$ 0.092				R\$ 0.099
Canon MP470	R\$ 0.022				R\$ 0.156				R\$ 0.178
Canon MP510		R\$ 0.008	R\$ 0.008	R\$ 0.006	R\$ 0.115				R\$ 0.138
Canon MP620		R\$ 0.015	R\$ 0.014	R\$ 0.011	R\$ 0.166	R\$ 0.007			R\$ 0.213
Canon MX330	R\$ 0.027				R\$ 0.203				R\$ 0.230
Canon MX700		R\$ 0.007	R\$ 0.007	R\$ 0.006	R\$ 0.113				R\$ 0.133
Epson CX8300		R\$ 0.018	R\$ 0.012	R\$ 0.011	R\$ 0.106				R\$ 0.148
Epson Stylus TX600FW		R\$ 0.003	R\$ 0.002	R\$ 0.003	R\$ 0.052				R\$ 0.061
HP DJ F4580	R\$ 0.039				R\$ 0.180				R\$ 0.219
HP C3180	R\$ 0.027				R\$ 0.183				R\$ 0.210
HP C4480	R\$ 0.029				R\$ 0.164				R\$ 0.192
HP C4780	R\$ 0.038				R\$ 0.173				R\$ 0.211
HP C6280		R\$ 0.018	R\$ 0.032	R\$ 0.020	R\$ 0.033		R\$ 0.002	R\$ 0.002	R\$ 0.106
HP C6380		R\$ 0.011	R\$ 0.011	R\$ 0.010	R\$ 0.091	R\$ 0.009			R\$ 0.132
HP PS Premium		R\$ 0.010	R\$ 0.009	R\$ 0.008	R\$ 0.078	R\$ 0.004			R\$ 0.109
Lexmark X5470	R\$ 0.032				R\$ 0.244				R\$ 0.275

Color Cost of Ink Per Individual Cartridge and Total Cost of Ink Per Page
(Brazilian Reais)

	Color Ink cost								Color CoIPP
	CMY	C	M	Y	K1	K2	LC	LM	
Kodak ESP 6150	R\$ 0.094				R\$ 0.088				R\$ 0.182
Kodak ESP 7250	R\$ 0.094				R\$ 0.088				R\$ 0.181
Brother MFC-5490cn		R\$ 0.053	R\$ 0.064	R\$ 0.073	R\$ 0.092				R\$ 0.283
Canon MP470	R\$ 0.170				R\$ 0.161				R\$ 0.331
Canon MP510		R\$ 0.061	R\$ 0.075	R\$ 0.081	R\$ 0.123				R\$ 0.340
Canon MP620		R\$ 0.087	R\$ 0.091	R\$ 0.090	R\$ 0.177	R\$ 0.010			R\$ 0.455
Canon MX330	R\$ 0.281				R\$ 0.202				R\$ 0.483
Canon MX700		R\$ 0.061	R\$ 0.079	R\$ 0.078	R\$ 0.123				R\$ 0.342
Epson CX8300		R\$ 0.067	R\$ 0.091	R\$ 0.064	R\$ 0.107				R\$ 0.329
Epson Stylus TX600FW		R\$ 0.040	R\$ 0.057	R\$ 0.037	R\$ 0.055				R\$ 0.189
HP DJ F4580	R\$ 0.286				R\$ 0.177				R\$ 0.463
HP C3180	R\$ 0.238				R\$ 0.197				R\$ 0.434
HP C4480	R\$ 0.249				R\$ 0.169				R\$ 0.418
HP C4780	R\$ 0.284				R\$ 0.178				R\$ 0.462
HP C6280		R\$ 0.063	R\$ 0.066	R\$ 0.053	R\$ 0.067		R\$ 0.002	R\$ 0.002	R\$ 0.254
HP C6380		R\$ 0.089	R\$ 0.097	R\$ 0.112	R\$ 0.100	R\$ 0.030			R\$ 0.428
HP PS Premium		R\$ 0.093	R\$ 0.093	R\$ 0.093	R\$ 0.090	R\$ 0.014			R\$ 0.383
Lexmark X5470	R\$ 0.294				R\$ 0.255				R\$ 0.549

Photo Cost of Ink Per Individual Cartridge and Total Cost of Ink Per Page
(Brazilian Reais)

	Photo Ink Cost								Photo CoIPP
	CMY	C	M	Y	K1	K2	LC	LM	
Kodak ESP 6150	R\$ 0.231				R\$ 0.020				R\$ 0.250
Kodak ESP 7250	R\$ 0.223				R\$ 0.021				R\$ 0.244
Brother MFC-5490cn		R\$ 0.264	R\$ 0.228	R\$ 0.261	R\$ 0.006				R\$ 0.759
Canon MP470	R\$ 0.500				R\$ 0.034				R\$ 0.534
Canon MP510		R\$ 0.151	R\$ 0.212	R\$ 0.202	R\$ 0.020				R\$ 0.585
Canon MP620		R\$ 0.245	R\$ 0.227	R\$ 0.231	R\$ 0.031	R\$ 0.080			R\$ 0.814
Canon MX330	R\$ 0.811				R\$ 0.043				R\$ 0.854
Canon MX700		R\$ 0.153	R\$ 0.215	R\$ 0.197	R\$ 0.021				R\$ 0.587
Epson CX8300		R\$ 0.308	R\$ 0.305	R\$ 0.230	R\$ 0.056				R\$ 0.899
Epson Stylus TX600FW		R\$ 0.172	R\$ 0.198	R\$ 0.148	R\$ 0.153				R\$ 0.671
HP DJ F4580	R\$ 0.880				R\$ 0.023				R\$ 0.903
HP C3180	R\$ 0.818				R\$ 0.025				R\$ 0.843
HP C4480	R\$ 0.863				R\$ 0.028				R\$ 0.891
HP C4780	R\$ 0.898				R\$ 0.024				R\$ 0.922
HP C6280		R\$ 0.090	R\$ 0.080	R\$ 0.177	R\$ 0.055		R\$ 0.182	R\$ 0.195	R\$ 0.779
HP C6380		R\$ 0.276	R\$ 0.199	R\$ 0.264	R\$ 0.037	R\$ 0.305			R\$ 1.081
HP PS Premium		R\$ 0.267	R\$ 0.140	R\$ 0.196	R\$ 0.013	R\$ 0.176			R\$ 0.793
Lexmark X5470	R\$ 1.125				R\$ 0.016				R\$ 1.141

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.

Contact Information

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

QualityLogic:



QualityLogic

Dave Jollota
President & CEO
Phone: +1-805-531-9030 x122
djollota@qualitylogic.com

Gary James
General Manager, Testing Services Group
Phone: +1-805-531-9030 x151
gjames@qualitylogic.com

Gap Intelligence:



gap intelligence

Tom Foster
Director Sales and Marketing
Phone: +1-760 434-7222
Fax: +1-619-574-6600
tfoster@gapintelligence.com
Address: 701 C Street, San Diego, CA 92101

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. Gap Intelligence 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: Test Methodology Summary

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

Appendix B: QualityLogic Declared Yield Test Results

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

Printer Identifier	Kodak ESP 6150
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10B & Color Ink Cartridge 10C
Cartridge Type	Separate ink supply and print head
Date Tested	5/4/2010 – 5/19/2010
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 = 5.1.6.0 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 Office 6150:

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

Average K (Black) Cartridge Yield – Up to 283 standard pages

Average Color Cartridge Yield – Up to 424 standard pages

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

Average K (Black) Cartridge Yield – Up to 440 standard pages

Estimated supplemental Color Cartridge Yield – Up to 3,511 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
10B	K (Black)	285	3	283	12/17	Primary
10C	Color	427	4	424	9/11	Primary

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
10B	K (Black)	441	2	440	24/24	Primary
10C	Color	3,526	9	3,511	3/3	Supplemental

Printer Identifier	Kodak ESP 6150
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10B & Color Ink Cartridge 10C
Cartridge Type	Separate ink supply and print head
Date Tested	5/21/2010 - 5/24/2010
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 = 5.1.6.0 The following driver settings were changed from default: Paper type = Changed to KODAK ULTRA Premium Photo - High Gloss from Auto Select

Declaration of Yield

<p>Inkjet Cartridge Yield when tested in Kodak ESP 6150:</p> <p>Using the QualityLogic Color Photo test suite provides the following results: Average Color Cartridge Yield - Up to 173 standard pages Estimated Average K (Black) Cartridge Yield - Up to 1,275 standard pages</p> <p>Values obtained by continuous printing. Declared yield values in accordance with QualityLogic Color Photo Yield Test Methodology</p>
--

Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
10C	Color	176	5	173	9/9	Primary
10B	K (Black)	1,310	21	1,275	3/3	Supplemental

Printer Identifier	Kodak ESP 7250
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10B & Color Ink Cartridge 10C
Cartridge Type	Separate ink supply and print head
Date Tested	4/1/2010 – 4/13/2010
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 = 5.1.6.0 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 7250:

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

Average K (Black) Cartridge Yield – Up to 284 standard pages

Average Color Cartridge Yield – Up to 426 standard pages

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

Average K (Black) Cartridge Yield – Up to 444 standard pages

Estimated supplemental Color Cartridge Yield – Up to 3,546 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
10B	K (Black)	285	1	284	12/18	Primary
10C	Color	428	3	426	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
10B	K (Black)	445	2	444	24/24	Primary
10C	Color	3,556	6	3,546	3/3	Supplemental

Printer Identifier	Kodak ESP 7250
Printer Manufacturer	Kodak
Cartridge Identifier	Black Ink Cartridge 10B & Color Ink Cartridge 10C
Cartridge Type	Separate ink supply and print head
Date Tested	4/5/2010 - 4/6/2010
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 = 5.1.6.0 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 7250:

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

Average Color Cartridge Yield - Up to 179 standard pages

Estimated supplemental K (Black) Cartridge Yield - Up to 1,205 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
10C	Color	180	1	179	9/9	Primary
10B	K (Black)	1,256	31	1,205	3/3	Supplemental

Printer Identifier	Brother MFC-5490cn
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.

Printer Identifier	Brother MFC-5490cn
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

Printer Identifier	Canon PIXMA MP470
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

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.

Printer Identifier	Canon PIXMA MP470
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

Printer Identifier	Canon PIXMA MP510
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

Printer Identifier	Canon PIXMA MP510
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 1/2" 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

Printer Identifier	Canon PIXMA MP620
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

Printer Identifier	Canon PIXMA MP620
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

Printer Identifier	Canon PIXMA MX330
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

Printer Identifier	Canon PIXMA MX330
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

Printer Identifier	Canon PIXMA MX700
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

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.

Printer Identifier	Canon PIXMA MX700
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 1/2" 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

Printer Identifier	Epson Stylus CX8300
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

Printer Identifier	Epson Stylus CX8300
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 1/2" 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

Printer Identifier	Epson Stylus Office TX600FW
Printer Manufacturer	Epson
Cartridge Identifier	T1031, T1032, T1033, T1034
Cartridge Type	Separate ink supply and print head
Date Tested	5/6/2010 – 5/13/2010
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 = Epson Color Printing System Version 6.64 The following driver settings were changed from default: Color Ink Test: None Mono Ink Test: Opciones de impresion = The "Negro/Escala de grises" setting was enabled.

Declaration of Yield

<p>Inkjet Cartridge Yield when tested in Epson Stylus Office TX600FW:</p> <p>Using the test suite defined in ISO/IEC 24712 provides the following results: Average K (Black) Cartridge Yield – Up to 1,050 standard pages Average Cyan Cartridge Yield – Up to 970 standard pages Average Magenta Cartridge Yield – Up to 672 standard pages Average Yellow Cartridge Yield – Up to 1,043 standard pages</p> <p>Using the test page defined in ISO/IEC 19752 provides the following results: Average K (Black) Cartridge Yield – Up to 1,130 standard pages Estimated supplemental Cyan Cartridge Yield – Up to 11,163 standard pages Estimated supplemental Magenta Cartridge Yield – Up to 15,778 standard pages Estimated supplemental Yellow Cartridge Yield – Up to 11,149 standard pages</p> <p>Values obtained by continuous printing. Declared yield values in accordance with ISO/IEC 24711</p>

Using 24712 Test Suite						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
T1031	K (Black)	1,062	20	1,050	9/12	Primary
T1032	Cyan	991	34	970	9/15	Primary
T1033	Magenta	682	18	672	12/18	Primary
T1034	Yellow	1,054	18	1,043	9/14	Primary

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.

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
T1031	K (Black)	1,138	12	1,130	9/9	Primary
T1032	Cyan	11,637	281	11,163	3/3	Supplemental
T1033	Magenta	19,421	2,161	15,778	3/3	Supplemental
T1034	Yellow	11,585	259	11,149	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.

Printer Identifier	Epson Stylus Office TX600FW
Printer Manufacturer	Epson
Cartridge Identifier	T1031, T1032, T1033, T1034
Cartridge Type	Separate ink supply and print head
Date Tested	5/14/2010 – 5/25/2010
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 Ultra Premium Photo Paper Glossy (S042175)
Driver version	Driver Version = Epson Color Printing System Version 6.64 The following driver settings were changed from default: Calidad de impresion = Changed to Foto superior from Texto Papel = Changed to Ultra Premium Photo Paper Glossy from Papel normal /Bright White Paper

Declaration of Yield

Inkjet Cartridge Yield when tested in Epson Stylus Office TX600FW:

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

Average Cyan Cartridge Yield – Up to 223 standard pages

Average Magenta Cartridge Yield – Up to 194 standard pages

Average Yellow Cartridge Yield – Up to 259 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 380 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
T1032	Cyan	239	27	223	9/12	Primary
T1033	Magenta	210	30	194	11/13	Primary
T1034	Yellow	279	31	259	9/9	Primary
T1031	K (Black)	546	98	380	3/6	Supplemental

Printer Identifier	HP Deskjet F4580
Printer Manufacturer	Hewlett Packard
Cartridge Identifier	HP 60 – CC640WN, CC643WN
Cartridge Type	Integral ink supply and print head
Date Tested	7/23/2010 – 7/27/2010
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 = 70.91.410.0

Declaration of Yield

Inkjet Cartridge Yield when tested in HP Deskjet F4580:

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

Average K (Black) Cartridge Yield – Up to 197 standard pages

Average Tri-color Cartridge Yield – Up to 157 standard pages

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

Average K (Black) Cartridge Yield – Up to 194 standard pages

Estimated supplemental Tri-color Cartridge Yield – Up to 1,160 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)	199	3	197	9/12	Primary
HP 60 (CC643WN)	Tri-color	161	5	157	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)	198	6	194	9/9	Primary
HP 60 (CC643WN)	Tri-color	1,230	41	1,160	3/3	Supplemental

Printer Identifier	HP Deskjet F4580
Printer Manufacturer	Hewlett Packard
Cartridge Identifier	HP 60 – CC640WN, CC643WN
Cartridge Type	Integral ink supply and print head
Date Tested	7/27/2010 – 7/28/2010
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 = 70.91.410.0 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 Deskjet F4580:

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

Average Tri-Color Cartridge Yield – Up to 51 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,512 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	52	2	51	9/9	Primary
HP 60 (CC640WN)	K (Black)	1,577	38	1,512	3/3	Supplemental

Printer Identifier	HP Photosmart C3180
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

Printer Identifier	HP Photosmart C3180
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

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.

Printer Identifier	HP Photosmart C4480
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

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.

Printer Identifier	HP Photosmart C4480
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

Printer Identifier	HP Photosmart C4780
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP 60 - 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

Printer Identifier	HP Photosmart C4780
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP 60 - 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.

Printer Identifier	HP Photosmart C6280
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP 02 - 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

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.

Printer Identifier	HP Photosmart C6280
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP 02 - 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 1/2" 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

Printer Identifier	HP Photosmart C6380
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP564 - CB316WN, CB317WN, CB318WN, CB319WN, CB320WN
Cartridge Type	Separate ink supply and print head
Date Tested	September 11, 2008 to September 22, 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 = 61.81.2311.0 The following driver settings were changed from default: Color Ink Test: Paper type = Changed to Plain paper from Automatic Mono Ink Test: Paper type = Changed to Plain paper from Automatic Print all text as black was enabled in the Advanced tab

Declaration of Yield

Inkjet Cartridge Yield when tested in HP Photosmart C6380:

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

- Average K (Black) Cartridge Yield – Up to 268 standard pages
- Average Cyan Cartridge Yield – Up to 291 standard pages
- Average Magenta Cartridge Yield – Up to 268 standard pages
- Average Yellow Cartridge Yield – Up to 231 standard pages
- Estimated supplemental K (Photo Black) Cartridge Yield – Up to 867 standard pages

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

- Average K (Black) Cartridge Yield – Up to 294 standard pages
- Estimated supplemental Cyan Cartridge Yield – Up to 2,411 standard pages
- Estimated supplemental Magenta Cartridge Yield – Up to 2,445 standard pages
- Estimated supplemental Yellow Cartridge Yield – Up to 2,520 standard pages
- Estimated supplemental K (Photo Black) Cartridge Yield – Up to 3,031 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 564 (CB316WN)	K (Black)	286	29	268	9/14	Primary
HP 564 (CB318WN)	Cyan	297	9	291	9/14	Primary
HP 564 (CB319WN)	Magenta	269	2	268	9/15	Primary
HP 564 (CB320WN)	Yellow	238	11	231	10/16	Primary
HP 564 (CB317WN)	K (Photo Black)	902	21	867	3/7	Supplemental

Using 19752 Test Page						
Cartridge Identifier	Color	Average (pages)	Standard Deviation (pages)	90% Lower Confidence (pages)	Number used in calculations/test	Primary/ Supplemental
HP 564 (CB316WN)	K (Black)	312	28	294	9/9	Primary
HP 564 (CB318WN)	Cyan	2,508	57	2,411	3/3	Supplemental
HP 564 (CB319WN)	Magenta	2,526	47	2,445	3/3	Supplemental
HP 564 (CB320WN)	Yellow	2,621	59	2,520	3/3	Supplemental
HP 564 (CB317WN)	K (Photo Black)	3,148	70	3,031	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.

Printer Identifier	HP Photosmart C6380
Printer Manufacturer	Hewlett-Packard
Cartridge Identifier	HP564 - CB316WN, CB317WN, CB318WN, CB319WN, CB320WN
Cartridge Type	Separate ink supply and print head
Date Tested	September 23, 2008 to September 26, 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 1/2" x 11" photo
Media used	HP Premium Plus Photo Paper, High Gloss (Q1785A)
Driver version	Driver Version = 61.81.2311.0 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 C6380:

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

- Average Cyan Cartridge Yield – Up to 94 standard pages
- Average Magenta Cartridge Yield – Up to 130 standard pages
- Average Yellow Cartridge Yield – Up to 98 standard pages
- Average K (Photo Black) Cartridge Yield – Up to 85 standard pages
- Estimated supplemental K (Black) Cartridge Yield – Up to 723 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 564 (CB318WN)	Cyan	96	4	94	12/15	Primary
HP 564 (CB319WN)	Magenta	134	7	130	9/9	Primary
HP 564 (CB320WN)	Yellow	99	2	98	12/15	Primary
HP 564 (CB317WN)	K (Photo Black)	89	8	85	12/15	Primary
HP 564 (CB316WN)	K (Black)	784	36	723	3/3	Supplemental

Printer Identifier	HP Photosmart Premium
Printer Manufacturer	Hewlett Packard
Cartridge Identifier	HP 564 – CB316WN, CB318WN, CB319WN, CB320WN, CB317WN
Cartridge Type	Separate ink supply and print head
Date Tested	3/26/2010 – 3/30/2010
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 = 70.101.203.0 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 Premium:

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

- Average K (Black) Cartridge Yield – Up to 298 standard pages
- Average Cyan Cartridge Yield – Up to 278 standard pages
- Average Magenta Cartridge Yield – Up to 278 standard pages
- Average Yellow Cartridge Yield – Up to 278 standard pages
- Estimated supplemental K (Photo Black) Cartridge Yield – Up to 1,894 standard pages

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

- Average K (Black) Cartridge Yield – Up to 344 standard pages
- Estimated supplemental Cyan Cartridge Yield – Up to 2,513 standard pages
- Estimated supplemental Magenta Cartridge Yield – Up to 2,924 standard pages
- Estimated supplemental Yellow Cartridge Yield – Up to 3,239 standard pages
- Estimated supplemental K (Photo Black) Cartridge Yield – Up to 6,593 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 564 (CB316WN)	K (Black)	313	24	298	9/12	Primary
HP 564 (CB318WN)	Cyan	285	11	278	9/15	Primary
HP 564 (CB319WN)	Magenta	285	11	278	9/15	Primary
HP 564 (CB320WN)	Yellow	285	11	278	9/15	Primary
HP 564 (CB317WN)	K (Photo Black)	2,092	117	1,894	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
HP 564 (CB316WN)	K (Black)	355	19	344	9/9	Primary
HP 564 (CB318WN)	Cyan	2,629	69	2,513	3/3	Supplemental
HP 564 (CB319WN)	Magenta	3,039	68	2,924	3/3	Supplemental
HP 564 (CB320WN)	Yellow	3,502	156	3,239	3/3	Supplemental
HP 564 (CB317WN)	K (Photo Black)	7,266	399	6,593	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.

Printer Identifier	HP Photosmart Premium
Printer Manufacturer	Hewlett Packard
Cartridge Identifier	HP 564 – CB316WN, CB318WN, CB319WN, CB320WN, CB317WN
Cartridge Type	Separate ink supply and print head
Date Tested	3/31/2010 – 4/2/2010
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 = 70.101.203.0 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 Premium:

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

Average Cyan Cartridge Yield – Up to 97 standard pages

Average Magenta Cartridge Yield – Up to 185 standard pages

Average Yellow Cartridge Yield – Up to 132 standard pages

Average K (Photo Black) Cartridge Yield – Up to 147 standard pages

Estimated supplemental K (Black) Cartridge Yield – Up to 1,999 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 564 (CB318WN)	Cyan	103	12	97	15/18	Primary
HP 564 (CB319WN)	Magenta	194	15	185	9/9	Primary
HP 564 (CB320WN)	Yellow	138	12	132	12/15	Primary
HP 564 (CB317WN)	K (Photo Black)	161	22	147	9/12	Primary
HP 564 (CB316WN)	K (Black)	2,197	118	1,999	3/3	Supplemental

Printer Identifier	Lexmark X5470
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	K (Black)	287	20	274	9/15	Primary
33	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	K (Black)	300	20	287	9/10	Primary
33	Tri-color	2,684	107	2,504	3/3	Supplemental

Printer Identifier	Lexmark X5470
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	Tri-color	73	6	71	26/28	Primary
32	K (Black)	5,420	618	4,378	3/3	Supplemental

Appendix C: Test Pages

ISO/IEC 24712 Test Suite



ISO/IEC 19752 Test Page



QualityLogic Photo Test Suite

