

TYPE OF TEST: ISO 19798

When cartridges HP CF350A, HP CF351A, HP CF352A and HP CF353A are used in printer HP Color LJ Pro MFP M176n.

Toner Cartridge yield

Average Continuous Black Cartridge Yield 1850 standard pages

Average Continuous CMY Cartridge Yield 1950 standard pages

Declared Yield value in accordance with ISO/IEC 19798

90% Lower Confidence Black Cartridge 1879 standard pages

90% Lower Confidence Cyan Cartridge 2228 standard pages

90% Lower Confidence Yellow Cartridge 1957 standard pages

90% Lower Confidence Magenta Cartridge 1840 standard pages

Note:

During tests was temperatures and humidity in accordance with the international standard ISO/IEC 19798.

Condition 24 hours before the start of the tests.

Date Tested:

28.4.2016 - 27.5.2016

For questions concerning testing contact

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Number of Cartridges used in testing:

K = 9, C = 9, M = 9, Y = 9

Number of Cartridges used in calculations

K = 9, C = 9, M = 9, Y = 9

Type of Cartridge

HP CF350A, HP CF351A, HP CF352A, HP CF353A

Shake Procedure Used

No

Print mode:

Continuous

Number of engines used in testing:

3

Media Used:

Navigator Universal 80g/m²

Paper Size:

A4

Paper feed orientation:

Short edge feed

Application Software:

Adobe Reader 11.0

Test Page Version

ISO-IEC 24712 2007 Test Pages

Power (off/on) everyday?

Yes

Computer stations and printers:

	Station 1.	Station 2.	Station 3.
Computer Model:	Athlon 64X2 Dual Core 2,09 GHz	Athlon 64X2 Dual Core 2,09 GHz	Athlon 64X2 Dual Core 2,09 GHz
Operating System:	Windows XP Professional	Windows XP Professional	Windows XP Professional
Printer Number	63588	63513	63587
Printer Type	HP Color LJProMFP176n	HP Color LJProMFP176n	HP Color LJProMFP176n
Printer Serial Number	CND7G8BBWF	CNB7G1H3PD	CND7G8BBK5
Printer Firmware Version	20160117	20160117	20140514
Driver Version:	PCLm - 11.21.00.2679	PCLm - 11.21.00.2679	PCLm - 11.21.00.2679

Note:

Page yield of black cartridge rounded to 1850.

It's 550 pages more than OEM.

Page yield of color cartridge rounded to 1950.

It's 950 pages more than OEM.



TEST REPORT

Creation date of report: 31.5.2016

Signature: jelele

TYPE OF TEST: ISO 19798

Cartridges testing data:

Station 1	Color	Cartidge No.	Internal summary	Cartridge yield	Cartridge used in calculation
1st set	K	16120213328832 - K001	PHI_16_I0100	1 925	Y
1st set	C	16116805328833 - C001	PHI_16_I0100	3 040	Y
1st set	Y	16123274528835 - Y001	PHI_16_I0100	2 490	Y
1st set	M	16111815428834 - M001	PHI_16_I0100	2 130	Y
2nd set	K	16120213128832 - K002	PHI_16_I0101	1 995	Y
2nd set	C	16116801528833 - C002	PHI_16_I0101	2 068	Y
2nd set	Y	16123272928835 - Y002	PHI_16_I0101	1 500	Y
2nd set	M	16111814928834 - M002	PHI_16_I0101	2 520	Y
3rd set	K	16120213728832 - K003	PHI_16_I0102	2 130	Y
3rd set	C	16116804028833 - C003	PHI_16_I0102	2 490	Y
3rd set	Y	16123272228835 - Y003	PHI_16_I0102	2 815	Y
3rd set	M	16111815028834 - M003	PHI_16_I0102	1 850	Y
4th set	K				
4th set	C				
4th set	Y				
4th set	M				
5th set	K				
5th set	C				
5th set	Y				
5th set	M				

Color	Total yield	Avg yield	St Dev	90%LCB	Number cartridges used in calculation
K	6 050	2 017	104	1 841	3
C	7 598	2 533	487	1 711	3
Y	6 805	2 268	685	1 114	3
M	6 500	2 167	337	1 599	3

Station 2	Color	Cartidge No.	Internal summary	Cartridge yield	Cartridge used in calculation
1st set	K	16120214028832 - K004	PHI_16_I0103	2 005	Y
1st set	C	16116801628833 - C004	PHI_16_I0103	2 210	Y
1st set	Y	16123274328835 - Y004	PHI_16_I0103	2 575	Y
1st set	M	16111815928834 - M004	PHI_16_I0103	1 735	Y
2nd set	K	16120212028832 - K005	PHI_16_I0104	2 045	Y
2nd set	C	16116802528833 - C005	PHI_16_I0104	2 870	Y
2nd set	Y	16123274128835 - Y005	PHI_16_I0104	2 000	Y
2nd set	M	16111815628834 - M005	PHI_16_I0104	1 755	Y
3rd set	K	16120213528832 - K006	PHI_16_I0105	1 795	Y
3rd set	C	16116801828833 - C006	PHI_16_I0105	2 338	Y
3rd set	Y	16123273128835 - Y006	PHI_16_I0105	2 505	Y
3rd set	M	16111814628834 - M006	PHI_16_I0105	2 245	Y
4th set	K				
4th set	C				
4th set	Y				
4th set	M				
5th set	K				
5th set	C				
5th set	Y				
5th set	M				

Color	Total yield	Avg yield	St Dev	90%LCB	Number cartridges used in calculation
K	5 845	1 948	134	1 722	3
C	7 418	2 473	350	1 883	3
Y	7 080	2 360	314	1 831	3
M	5 735	1 912	289	1 425	3

Station 3	Color	Cartidge No.	Internal summary	Cartridge yield	Cartridge used in calculation
1st set	K	16120212528832 - K007	PHI_16_I0106	2 310	Y
1st set	C	16116802628833 - C007	PHI_16_I0106	2 515	Y
1st set	Y	16123273828835 - Y007	PHI_16_I0106	1 840	Y
1st set	M	16111816528834 - M007	PHI_16_I0106	1 930	Y
2nd set	K	16120213228832 - K008	PHI_16_I0107	1 965	Y
2nd set	C	16116804428833 - C008	PHI_16_I0107	2 555	Y
2nd set	Y	16123273028835 - Y008	PHI_16_I0107	2 280	Y
2nd set	M	16111814328834 - M008	PHI_16_I0107	1 955	Y
3rd set	K	16120211928832 - K009	PHI_16_I0108	1 713	Y
3rd set	C	16116802928833 - C009	PHI_16_I0108	1 950	Y
3rd set	Y	16123272628835 - Y009	PHI_16_I0108	1 955	Y
3rd set	M	16111814428834 - M009	PHI_16_I0108	1 865	Y
4th set	K				
4th set	C				
4th set	Y				
4th set	M				
5th set	K				
5th set	C				
5th set	Y				
5th set	M				

Color	Total yield	Avg yield	St Dev	90%LCB	Number cartridges used in calculation
K	5 988	1 996	300	1 491	3
C	7 020	2 340	338	1 770	3
Y	6 075	2 025	228	1 640	3
M	5 750	1 917	46	1 838	3

Summary	Color	Cartidges No.	Total	Avg	St Dev	90%LCB	Number cartridges
	K	K001 - K010	17 883	1 987	175	1 879	9
	C	C001 - C009	22 036	2 448	355	2 228	9
	Y	Y001 - Y009	19 960	2 218	421	1 957	9
	M	M001 - M009	17 985	1 998	256	1 840	9

Note:

Statement Black OEM 1300 pages.
Statement Cyan OEM 1000 pages.
Statement Yellow OEM 1000 pages.
Statement Magenta OEM 1000 pages.

TYPE OF TEST: ISO 19798

Temperature / Humidity

Thermometer hygrometer data logger
Measuring device Nr.

Comet S3120
12932752 - 12

Date of testing: 27.4.2016 8:00 - 27.5.2016 10:00

Testing Room average temp. [°C]	23,2	Allowed 23
Testing Room - max. running average temp. [°C]	23,9	26
Testing Room - min. running average temp. [°C]	21,5	20

Testing Room average RH. [%]	53,2	Allowed 50
Testing Room - max. running average RH [%]	58,6	65
Testing Room - min. running average RH [%]	39,8	35

Cartridges testing data:

Station 1	Color	Cartridge No.	Internal summary	Temperature			Humidity			Cartridge yield	Cartridge used in calculation
				Avg	Max	Min	Avg	Max	Min		
1st set	K	16120213328832 - K001	PHI_16_I0100	22,8	23,7	21,6	52,1	57,6	41,5	1 925	Y
1st set	C	16116805328833 - C001	PHI_16_I0100	22,9	23,7	21,6	52,5	58,2	41,5	3 040	Y
1st set	Y	16123274528835 - Y001	PHI_16_I0100	22,9	23,7	21,6	52,4	57,9	41,5	2 490	Y
1st set	M	16111815428834 - M001	PHI_16_I0100	22,8	23,7	21,6	52,1	57,6	41,5	2 130	Y
2nd set	K	16120213128832 - K002	PHI_16_I0101	23,2	23,8	22,1	52,4	58,2	40,4	1 995	Y
2nd set	C	16116801528833 - C002	PHI_16_I0101	23,3	24,0	22,1	51,9	57,4	40,4	2 068	Y
2nd set	Y	16123272928835 - Y002	PHI_16_I0101	23,3	23,8	22,1	52,2	58,2	40,4	1 500	Y
2nd set	M	16111814928834 - M002	PHI_16_I0101	23,3	24,0	22,1	52,3	58,2	40,4	2 520	Y
3rd set	K	16120213728832 - K003	PHI_16_I0102	23,4	24,0	22,6	51,7	59,1	40,8	2 130	Y
3rd set	C	16116804028833 - C003	PHI_16_I0102	23,2	23,9	22,3	53,8	59,5	41,3	2 490	Y
3rd set	Y	16123272228835 - Y003	PHI_16_I0102	23,3	24,0	22,3	53,4	59,5	40,8	2 815	Y
3rd set	M	16111815028834 - M003	PHI_16_I0102	23,4	23,9	22,5	53,7	59,5	40,8	1 850	Y
4th set	K										
	C										
	Y										
	M										

Station 2	Color	Cartridge No.	Internal summary	Temperature			Humidity			Cartridge yield	Cartridge used in calculation
				Avg	Max	Min	Avg	Max	Min		
1st set	K	16120214028832 - K004	PHI_16_I0103	22,8	23,7	21,6	52,1	57,6	41,5	2 005	Y
1st set	C	16116801628833 - C004	PHI_16_I0103	22,9	23,7	21,6	52,4	57,9	41,5	2 210	Y
1st set	Y	16123274328835 - Y004	PHI_16_I0103	22,9	23,7	21,6	52,4	58,2	41,5	2 575	Y
1st set	M	16111815928834 - M004	PHI_16_I0103	22,8	23,7	21,6	52,1	57,6	41,5	1 735	Y
2nd set	K	16120212028832 - K005	PHI_16_I0104	23,3	24,0	22,1	51,9	58,2	40,4	2 045	Y
2nd set	C	16116802528833 - C005	PHI_16_I0104	23,3	24,0	22,1	52,0	59,1	40,4	2 870	Y
2nd set	Y	16123274128835 - Y005	PHI_16_I0104	23,4	24,0	22,1	52,2	59,1	40,4	2 000	Y
2nd set	M	16111815628834 - M005	PHI_16_I0104	23,2	24,0	22,1	52,4	58,2	40,4	1 755	Y
3rd set	K	16120213528832 - K006	PHI_16_I0105	23,3	23,9	22,3	54,0	59,5	41,3	1 795	Y
3rd set	C	16116801828833 - C006	PHI_16_I0105	23,0	23,8	22,3	52,7	57,9	40,3	2 338	Y
3rd set	Y	16123273128835 - Y006	PHI_16_I0105	23,1	23,9	22,3	53,8	59,5	40,3	2 505	Y
3rd set	M	16111814628834 - M006	PHI_16_I0105	23,3	23,9	22,3	53,5	59,5	40,8	2 245	Y
4th set	K										
	C										
	Y										
	M										

Station 3	Color	Cartridge No.	Internal summary	Temperature			Humidity			Cartridge yield	Cartridge used in calculation
				Avg	Max	Min	Avg	Max	Min		
1st set	K	16120212528832 - K007	PHI_16_I0106	22,9	23,7	21,6	52,5	58,2	41,5	2 310	Y
1st set	C	16116802628833 - C007	PHI_16_I0106	22,9	23,7	21,6	52,5	58,2	41,5	2 515	Y
1st set	Y	16123273828835 - Y007	PHI_16_I0106	22,8	23,7	21,6	52,1	57,6	41,5	1 840	Y
1st set	M	16111816528834 - M007	PHI_16_I0106	22,8	23,7	21,6	52,1	57,6	41,5	1 930	Y
2nd set	K	16120213228832 - K008	PHI_16_I0107	23,3	24,0	22,1	51,8	57,4	40,4	1 965	Y
2nd set	C	16116804428833 - C008	PHI_16_I0107	23,4	24,0	22,1	53,0	59,5	40,4	2 555	Y
2nd set	Y	16123273028835 - Y008	PHI_16_I0107	23,3	24,0	22,1	52,3	58,2	40,4	2 280	Y
2nd set	M	16111814328834 - M008	PHI_16_I0107	23,3	24,0	22,1	52,2	58,2	40,4	1 955	Y
3rd set	K	16120211928832 - K009	PHI_16_I0108	23,2	23,9	22,3	53,9	59,5	40,3	1 713	Y
3rd set	C	16116802928833 - C009	PHI_16_I0108	23,3	24,1	22,3	52,5	59,5	38,6	1 950	Y
3rd set	Y	16123272628835 - Y009	PHI_16_I0108	23,2	23,9	22,3	53,7	59,5	39,5	1 955	Y
3rd set	M	16111814428834 - M009	PHI_16_I0108	23,2	23,9	22,3	53,7	59,5	40,3	1 865	Y
4th set	K										
	C										
	Y										
	M										