

# X-RiteColor Master File formats for Standard Transfer

## MIF

[FILE INFO]  
VERSION=Version 2000  
TIME=0  
ANGLE=InEx  
SOURCE=X-RiteColor Master  
[COLORANT]  
V=138|1|C|Ink Single Constant  
P=144|1|B|Black|Ink Single Constant  
P=142|1|P|Reflex Blue|Ink Single Constant  
P=139|1|P|Violet|Ink Single Constant  
[CUSTOMER]  
IDNT=1  
COMP=X-Rite Inc.  
ADD1=  
ADD2=  
CITY=  
STAT=  
ZIPC=  
COUN=  
PROV=  
CONT=  
PHON=  
FAXN=  
EMAIL=  
[STANDARD]  
CUST=1  
NAME=Wrist  
DESC=Original Data  
TOLR=In CMC D65/10 2.00 1.00 1.00  
TOLR=Ex CMC D65/10 2.00 1.00 1.00  
NOTE=Standard Notes...  
[MEASUREMENT]  
TIME=6405814  
TYPE=S  
APER=0  
CAGE=0  
AVGS=1  
INST=SP68  
ANGL=In 7.741 8.321 8.466 8.316 7.946 7.411 7.766 7.001 6.107 5.399 4.871 3.815 3.782 3.317 3.122  
2.825 2.728 2.656 2.748 2.724 2.752 2.784 2.807 2.805 2.892 3.177 3.511 4.076 5.027 6.589 8.726  
ANGL=Ex 5.056 6.012 6.969 7.899 8.507 7.797 7.809 7.428 6.098 5.357 4.998 4.402 3.791 3.263 3.288  
2.860 2.824 2.766 2.817 2.891 2.845 2.887 2.957 2.823 2.991 3.337 3.688 4.219 5.142 6.775 9.027  
TAGS=Just a standard!  
[SAMPLE]  
CUST=1  
NAME=Wrist  
LOT=

RJCT=0  
CTYPE=T  
[MEASUREMENT]  
TIME=6405789  
TYPE=T  
APER=0  
CAGE=0  
AVGS=0  
INST=SP68  
ANGL=In 7.762 8.332 8.401 8.286 7.915 7.378 7.400 6.975 5.695 5.358 4.709 3.790 3.446 3.287 3.104  
2.805 2.550 2.592 2.687 2.558 2.615 2.639 2.721 2.727 2.766 2.992 3.356 3.890 4.872 6.312 8.449  
ANGL=Ex 3.387 5.000 6.111 7.147 7.973 7.382 7.472 6.496 5.898 5.067 4.707 4.189 3.337 3.142 2.944  
2.700 2.672 2.667 2.720 2.598 2.606 2.682 2.678 2.592 2.917 3.022 3.466 3.969 4.883 6.335 8.348  
[SAMPLE]  
CUST=1  
NAME=Wrist  
LOT=  
RJCT=0  
CTYPE=M  
SUBST=0  
ITEM= 138 144 142 139  
PNAME=Ink Single Constant  
FPERC=0.0000  
PNAME=Black  
FPERC=22.3722  
PNAME=Reflex Blue  
FPERC=65.9162  
PNAME=Violet  
FPERC=11.7116  
NOTE=::|Specular: SPIN|Illum/Obs: D65/10°|Interpolation Mode: Combination|Extrapolati  
NOTE=on Mode: Auto|Sort Criteria: Metamerism Index (MI)|Loading Options: |None|Colora  
NOTE=nts:|Ink Single Constant|Black|Green|Orange|Reflex Blue|Rubine Red|Violet|Yellow  
NOTE=|::  
[MEASUREMENT]  
TIME=6454919  
TYPE=T  
APER=0  
CAGE=0  
AVGS=0  
INST=SP68  
ANGL=In 9.310 9.148 9.163 9.447 9.720 9.714 9.488 9.003 8.290 7.302 6.231 5.227 4.370 3.823 3.484  
3.323 3.280 3.281 3.326 3.390 3.468 3.544 3.633 3.737 3.878 4.071 4.333 4.661 5.130 5.819 6.703  
ANGL=Ex 7.222 6.949 6.900 7.183 7.471 7.449 7.187 6.640 5.847 4.763 3.594 2.506 1.580 0.988 0.620  
0.451 0.410 0.425 0.487 0.569 0.663 0.749 0.847 0.961 1.112 1.321 1.601 1.951 2.446 3.171 4.097  
TAGS=Combinatorial Formulation  
[SAMPLE]  
CUST=1  
NAME=Wrist  
LOT=THIS IS A TRIAL  
RJCT=2  
CTYPE=T  
SUBST=0  
ITEM= 138 144 142 139  
PNAME=Ink Single Constant  
FPERC=0.0000  
PNAME=Black

FPERC=22.3722  
PNAME=Reflex Blue  
FPERC=65.9162  
PNAME=Violet  
FPERC=11.7116  
[MEASUREMENT]  
TIME=6456088  
TYPE=T  
APER=0  
CAGE=0  
AVGS=0  
INST=SP68  
ANGL=In 7.762 8.332 8.401 8.286 7.915 7.378 7.400 6.975 5.695 5.358 4.709 3.790 3.446 3.287 3.104  
2.805 2.550 2.592 2.687 2.558 2.615 2.639 2.721 2.727 2.766 2.992 3.356 3.890 4.872 6.312 8.449  
ANGL=Ex 3.387 5.000 6.111 7.147 7.973 7.382 7.472 6.496 5.898 5.067 4.707 4.189 3.337 3.142 2.944  
2.700 2.672 2.667 2.720 2.598 2.606 2.682 2.678 2.592 2.917 3.022 3.466 3.969 4.883 6.335 8.348

This is a typical \*.mif file exported from X-RiteColor Master. The file format is similar to a typical windows \*.ini file. It is a readable text file with section headings. The section headings are in brackets. A description of each section and its contents follows:

[FILE INFO]

VERSION: Version of software that created the file. This is not used.  
TIME: This represents the creation time. It can be zero.  
ANGLE: This is a critical entry.  
If '45' is selected it implies that a 0/45 or 45/0 instrument was used to create the data.  
If 'InEx' is selected it implies that a sphere type instrument was used to create the data.  
SOURCE: This is the program used to create the \*.mif file. In this case it was 'X-RiteColor Master'. It can be 'IM' for Ink Master, or something else.

[COLORANT]

The line with the 'V' indicate the calibration set used.  
The following lines with the 'P' represent the inks or colorants used in the formula.  
First item of each line is a database reference of the calibration set, ink or colorant used.  
The second item is a value used by the database to identify the company. The next item is the colorant type. It's always 'C' for the calibration set, 'P' for the colorant, 'B' for the black colorant, 'N' for the white colorant, 'J' for the waste colorant. The last item is the description of the calibration set, ink or colorant used.

[CUSTOMER]

All values in this section should match the data in the Edit Customer dialog in X-RiteColor Master. As a special note, the value IDNT is a value used by the database in X-RiteColor Master to identify the company. If any of these values don't match, X-RiteColor Master may put this standard into the wrong place in the database

[STANDARD]

- CUST: This value must match the value for IDNT above and is shown in the Edit Customer dialog in Ink Master.
- NAME: This is the name of the standard.
- DESC: This is the description of the standard.
- TOLR: This line (and others that have the same TOLR beginning) is the tolerance associated with the standard.  
The first item is the angle:  
15, 25, 45, 75, 110, In, Ex  
The second item is the tolerance type:  
Lab, LCH, CMC, DE, MET, STR, YEL, WHT, BRT, OFFSET\_LAB, DE\_(FMC2), DEN, DIN6172, CIE94, DE94  
The third item is either the illuminant/observer (primary and secondary – if any) or the tolerance subtype (if any):  
ASTM\_E313, ASTM\_D1925, Apparent, Tristimulus, Chromatic, TAPPI\_452, CIE, STATUS\_A, STATUS\_E, STATUS\_I, STATUS\_T, SPECTRAL, SPECTRAL\_X, HIFI, HEXACHROME  
These are followed by the tolerance values.
- NOTE: This line (and others that have the same NOTE beginning) is the note associated with the standard. Inclusion of the notes in the file is optional.

[MEASUREMENT]

- TIME: This is the time the standard was created. It is not critical.
- TYPE: This must be 'S' for standard, 'T' for sample (w/ or w/o formula).
- APER: This should always be zero.
- CAGE: This should always be zero
- AVGS: This is the number of readings.
- INST: This is the instrument used to do the measurement. It can be zero.
- ANGL: This is the reflectance data of the standard. The first item is the angle followed by the % of reflectance for each wavelength. This starts with a wavelength of 400 nm and goes to 700 nm in 10 nm increments.  
In the case of a single angle instrument the data file would have only one ANGL entry.  
In the case of a sphere instrument the data file would contain two ANGL entries, one for 'In' and one for 'Ex'.  
In the case of a multi angle instrument the data file would contain three or five ANGL entries, one for each angle.
- TAGS: This line is the tag(s) associated with the standard. Inclusion of the tags in the file is optional.

[SAMPLE]

- CUST: This value must match the value for IDNT above and is shown in the Edit Customer dialog in Ink Master.
- NAME: This is the name of the standard.
- LOT: This is the Lot ID of the sample.
- RJCT: This is '2' for accepted, '1' for rejected, '0' for undetermined.
- CTYPE: This is 'T' for trial (w/ or w/o formula), 'M' for match.

SUBST: This is the substrate used.  
ITEM: A database reference of the inks or colorants used.  
PNAME: The first instance of this is the calibration set used.  
FPERC: The first instance of this is the percent per volume of extender in the formula.  
PNAME: This is the first ink name used.  
FPERC: This is the percent per volume of the above listed ink.  
Etc.  
Colorants, vehicles and resins are presented by the percents per weight.  
NOTE: This line (and others that have the same NOTE beginning) is the note associated with the sample. Inclusion of the notes in the file is optional.

[MEASUREMENT]

TIME: The time the sample was created.  
TYPE: This must be 'S' for standard, 'T' for sample (w/ or w/o formula).  
APER: This should always be zero.  
CAGE: This should always be zero  
AVGS: This is the number of readings.  
INST: This is the instrument used to do the measurement. It can be zero.  
ANGL: This is the reflectance data of the sample. The first item is the angle followed by the % of reflectance for each wavelength. This starts with a wavelength of 400 nm and goes to 700 nm in 10 nm increments.  
In the case of a single angle instrument the data file would have only one ANGL entry.  
In the case of a sphere instrument the data file would contain two ANGL entries, one for 'In' and one for 'Ex'.  
In the case of a multi angle instrument the data file would contain three or five ANGL entries, one for each angle.  
TAGS: This line is the tag(s) associated with the sample. Inclusion of the tags in the file is optional.

The [SAMPLE] data can be repeated in the file for each sample.

# XTF

```
[FILE INFO]
VERSION=2000
ANGLES=1
[CUSTOMER]
CUST=X-Rite Inc.`3100 44th St.` `Grandville`MI` ``````
[STANDARD]
STD=yellow`Original Data`730801`427760000`
MEAS=4`-13108`1`-13108`0.0000`
REFL=0`11.4505`10.5470`9.8687`9.5455`9.5731`9.7359`10.0842`10.2366`10.9011`14.1785`22.7073`35.2
290`41.6010`43.5718`44.0266`44.6302`45.1029`46.2529`47.8420`53.9054`59.4566`62.1707`64.0395`63.5
638`63.3158`63.3350`62.9590`63.5563`64.0031`64.1575`63.7211`
TOL=CMC`*`0`7`0`2.0000`1.0000`1.0000`0.0000`0.0000`0.0000`0.0000`0.0000`0.0000`0.0000`
TOL=LAB`*`0`7`0`1.0000`1.0000`1.0000`0.0000`0.0000`0.0000`0.0000`0.0000`0.0000`0.0000`
TAGS=This is a standard tag`
NOTE=Just a standard note...
[SAMPLE]
SAMP=T`U` `730801`446660000`
MEAS=4`0`1`8306`0.0000`
REFL=0`11.7508`10.4755`9.8457`9.4893`9.5731`9.6923`10.0105`10.1764`10.8296`14.1531`22.7052`35.3
153`41.6843`43.6986`44.1431`44.7447`45.2465`46.4876`48.0401`54.1010`59.6216`62.3760`64.2355`63.7
674`63.5392`63.6047`63.1195`63.7530`64.2249`64.3331`63.9195`
TAGS=Booth No. 1`
NOTE=Sample #5
[SAMPLE]
SAMP=M`U` `730823`332120000`
MEAS=0`0`1`0`0.0000`
REFL=0`7.7976`8.1696`8.3737`8.2559`8.2779`8.9297`9.9720`10.2798`13.0002`23.2419`33.9953`39.0065
`41.1177`40.2848`38.9126`39.6439`41.7209`45.5315`50.2808`55.7462`60.5980`62.9731`64.2488`65.1222
`65.7703`66.7231`67.6189`68.2419`68.6836`68.9657`69.0811`
PNAME=Ink Single Constant`Black`Quinacridone`Yellow
FPERC=89.2719`2.5185`2.4490`5.7606
```

This is a typical \*.xtf file exported from X-RiteColor Master. The file format is similar to a typical windows \*.ini file. It is a readable text file with section headings. The section headings are in brackets. A description of each section and its contents follows:

```
[FILE INFO]
VERSION: Version of software that created the file. This is not used.
ANGLES: This is a critical entry.
        If '1' is selected it implies that a 0/45 or 45/0 instrument was used to
        create the data.
        If '2' is selected it implies that a sphere type instrument was used to create
        the data.
        If '3' or '5' is selected it implies that a multi angle type instrument was
        used to create the data.
```

[CUSTOMER]

CUST: All items in this line should match the data in the Edit Customer dialog in X-RiteColor Master.

[STANDARD]

STD: The first item in this line is the name of the standard followed by the alternate standard description (if any). These items are followed by the date and time the standard was created.

TOL: This line (and others that have the same TOL beginning) is the tolerance associated with the standard.  
The first item is the tolerance type:  
LAB, LCH, CMC, DE, FMC2, CIE94, MET, DIN6172, OFFSET, SHADE  
The second item is the tolerance subtype:  
APPAR, TRIST, CHROM, E313, D1925, CIE, TAPPI, A, E, I, T, SPEC, SPECX, HIFI, HEX, '\*' if none  
These are followed by the angle (0, 1, 2, 3, 4), illuminant/observers (primary and secondary) and tolerance values.

TAGS: This line is the tag(s) associated with the standard. Inclusion of the tags in the file is optional.

NOTE: This line is the note associated with the standard. Inclusion of the notes in the file is optional.

MEAS: The first item is the instrument aperture used to do the measurement followed by the calibration age, number of readings, instrument type and opacity value.

REFL: This is the reflectance data of the standard. In the case of a single angle instrument, it would have only one entry (as shown above). The first item is the angle '0' (45) followed by the % of reflectance for each wavelength. This starts with a wavelength of 400 nm and goes to 700 nm in 10 nm increments.  
In the case of a sphere instrument the data file would contain two entries, one starting with '0' (INCLUDED) and one with '1' (EXCLUDED).  
In the case of a multi angle instrument the data file would contain three or five entries.  
If the case of three entries, one is starting with '0' (25), one with '1' (45), and one with '2' (75).  
If the case of five entries, one is starting with '0' (15), one with '1' (25), one with '2' (45), one with '3' (75), and one with '4' (110).

[SAMPLE]

SAMP: The first item is 'T' for sample (w/ or w/o formula), 'M' for match. The second item is 'A' for accepted, 'R' for rejected, 'U' for undetermined. These items are followed by the Lot ID (if any), and the date and time the measurement was taken.

- MEAS: The first item is the instrument aperture used to do the measurement followed by the calibration age, number of readings, instrument type and opacity value.
- REFL: This is the reflectance data of the sample. In the case of a single angle instrument, it would have only one entry (as shown above). The first item is the angle '0' (45) followed by the % of reflectance for each wavelength. This starts with a wavelength of 400 nm and goes to 700 nm in 10 nm increments.  
In the case of a sphere instrument the data file would contain two entries, one starting with '0' (INCLUDED) and one with '1' (EXCLUDED).  
In the case of a multi angle instrument the data file would contain three or five entries.  
If the case of three entries, one is starting with '0' (25), one with '1' (45), and one with '2' (75).  
If the case of five entries, one is starting with '0' (15), one with '1' (25), one with '2' (45), one with '3' (75), and one with '4' (110).
- TAGS: This line is the tag(s) associated with the sample. Inclusion of the tags in the file is optional.
- NOTE: This line is the note associated with the sample. Inclusion of the notes in the file is optional.
- PNAME: The first item of this line is the calibration set used followed by the ink or colorant names used.
- FPERC: The first item of this line is the percent per volume of extender in the formula followed by the percents per volume of the above listed inks. Colorants, vehicles and resins are presented by the percents per weight.

The [SAMPLE] data can be repeated in the file for each sample.