



SAS outputs in Excel workbook using ODS Excel

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Agenda

SAS Output in Excel Workbook



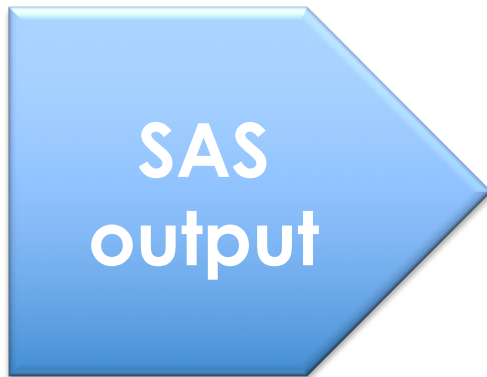
Multiple worksheets in Excel Workbook



Customized output in Excel Workbook



Effectiveness and Limitations of ODS Excel



On Excel Workbook

Multiple Worksheets

Customized Outputs



SAS Output in Excel Workbook

	Subject	Treatment	Gender	Agecat	Height_Cm	Weight_Kg	Bmi	Score
1	Subject1	3	F	> 45 Yrs	168.9	57.6	20.191248986	2
2	Subject2	1	F	> 45 Yrs	168.9	132.9	46.587100526	3
3	Subject3	2	F	>25 to <=35 Yrs	177.8	109.3	34.574558945	3
4	Subject4	2	F	>35 to <=45 Yrs	163.8	113.4	42.265426881	3
5	Subject5	1	M	>25 to <=35 Yrs	168.9	63.5	22.259449838	2.5
6	Subject6	2	F	> 45 Yrs	170.2	64.9	22.404001099	2
7	Subject7	1	F	> 45 Yrs	180.3	95.3	29.315779549	2.5
8	Subject8	1	F	>25 to <=35 Yrs	175.3	77.1	25.089415618	2
9	Subject9	3	F	<= 25 Yrs	165	77.1	28.319559229	2.5
10	Subject10	1	M	>35 to <=45 Yrs	183	77.1	23.022484995	1
11	Subject11	3	M	>25 to <=35 Yrs	177.8	122	38.591913919	1
12	Subject12	3	M	>25 to <=35 Yrs	170.2	70.8	24.440728472	2

```
ods excel file="<Path>\filename.xlsx";

proc print data=ads1;
  var Subject Score Treatment Gender;
run;

ods excel close;
```

	A	B	C	D	E
1	Obs	Subject	Score	Treatment	Gender
2	1	Subject1	2.0	3	F
3	2	Subject2	3.0	1	F
4	3	Subject3	3.0	2	F
5	4	Subject4	3.0	2	F
6	5	Subject5	2.5	1	M
7	6	Subject6	2.0	2	F
8	7	Subject7	2.5	1	F
9	8	Subject8	2.0	1	F
10	9	Subject9	2.5	3	F
11	10	Subject10	1.0	1	M

Print 1 - Data Set WORK.TEMP

SAS output to Excel Multiple Worksheets

AutoSave Off Excel_1 - Saved

File Home Insert Page Layout Formulas Data Review View Help Tell me what you want to do

Clipboard Font Alignment Number Styles

P20

	A	B	C	D	E	F	G	H	I	J	K	L
1	Subject ID	Treatment	Gender	Height (in cm)	Weight (in kg)	BMI	Score					
2	Subject9	3	F	165	77.1	28.319559	2.5					
3	Subject14	1	M	177.8	124.3	39.319466	2					
4	Subject16	1	F	157.5	59	23.784329	1					
5	Subject19	3	F	165.1	46.9	17.205952	2					
6	Subject22	2	F	167.6	82.6	29.405734	3					
7	Subject31	3	F	167.6	63.1	22.463702	1.5					
8	Subject36	1	M	172.7	83	27.828732	2					
9	Subject42	1	M	167.6	69.4	24.706512	2					
10	Subject44	1	F	170.2	92.1	31.793659	2.5					
11	Subject53	3	F	175.3	91.6	29.807918	2.5					
12	Subject54	1	F	162.6	102.5	38.768838	1.5					
13	Subject55	3	M	172.7	104.3	34.970322	2.5					
14	Subject73	2	F	170.2	62.6	21.610023	1					
15	Subject74	2	F	163.8	63.1	23.518064	2.5					
16	Subject77	2	F	172.7	53.5	17.937797	2.5					
17	Subject82	2	M	172.7	83.5	27.996375	2.5					
18	Subject95	3	F	170.2	101.6	35.073136	2.5					
19	Subject97	1	F	156.2	55.7	22.829328	1					
20												
21												
22												
23												
24												
25												
26												

Report 1 - Detailed and-or s Report 2 - Detailed and-or s Report 3 - Detailed and-or s Report 4 - Detailed and-or s

SAS output to Excel Multiple Worksheets

```
ods excel file = "<Path>\filename.xlsx";
```

```
proc report data=ADSL;
```

```
  by agecat;
```

```
  column subject treatment gender height_Cm weight_Kg bmi score;
```

```
  define subject      / "Subject ID";
```

```
  define treatment    / "Treatment";
```

```
  define gender       / "Gender";
```

```
  define height_cm    / "Height (in cm)";
```

```
  define weight_kg    / "Weight (in kg)";
```

```
  define bmi          / "BMI";
```

```
  define score        / "Score";
```

```
run;
```

```
ods excel close;
```

SAS output to Customized Excel

	A	B	C	D	E	F	G	H	
1									
2			Study ID: AABB						
3			Listing for subjects with baseline information						
4			Age Category: <= 25 Yrs						
5									
6				Baseline Information					
7			Subject ID ▾	Treatment ▾	Gender ▾	Subject Height (in cm) ▾	Subject Weight (in kg) ▾	Subject BM ▾	Score ▾
20			Subject73	2	F	170.2	62.6	21.610023	1
21			Subject74	2	F	163.8	63.1	23.518064	2.5
22			Subject77	2	F	172.7	53.5	17.937797	2.5
23			Subject82	2	M	172.7	83.5	27.996375	2.5
24			Subject95	3	F	170.2	101.6	35.073136	2.5
25			Subject97	1	F	156.2	55.7	22.829328	1
26									
27			Note: Subjects listed in the output who received at least one Study treatment.						
28			Note: Subjects listed in the output whose baseline age is <= 25 Yrs						
29									
30									
31									
32									
33									
			<= 25 Yrs	>25 to <=35 Yrs	>35 to <=45 Yrs	> 45 Yrs	summary		

SAS output to Customized Excel

	A	B	C	D	E	F	G	H
1								
2		Study ID: AABB						
3		Listing for subjects with baseline information						
4		Age Category: >25 to <=35 Yrs						
5								
6			Baseline Information					
7		Subject ID ▼	Treatment ▼	Gender ▼	Subject Height (in cm) ▼	Subject Weight (in kg) ▼	Subject BM ▼	Score ▼
44		Subject76	3	F	160.7	74.8	28.964754	2
45		Subject83	3	M	167.6	69.9	24.884513	3
46		Subject88	2	F	160	80.7	31.523438	2.5
47		Subject93	2	F	165.1	120.7	44.280562	2
48		Subject98	1	M	180.3	89.4	27.500847	1.5
49		Subject100	1	F	167.6	68	24.20811	2
50								
51		Note: Subjects listed in the output who received at least one Study treatment.						
52		Note: Subjects listed in the output whose baseline age is >25 to <=35 Yrs						
53								
54								
55								
56								
57								

<= 25 Yrs
>25 to <=35 Yrs
>35 to <=45 Yrs
> 45 Yrs
summary

SAS output to Customized Excel

	A	B	C	D	E	F	G	H	I
1									
2	Summary table for Baseline Characteristic								
3									
4	Age category ▼	Treatment ▼	Sex ▼	Treatment N ▼	Sex N ▼	Height Mean(SD) ▼	Weight Mean(SD) ▼	BMI Mean(SD) ▼	Score Mean(SD) ▼
5	<= 25 Yrs	1	F	4	4	161.63 (6.349)	77.33 (23.491)	29.29 (7.487)	1.50 (0.707)
6			M	3	3	172.70 (5.100)	92.23 (28.591)	30.62 (7.695)	2.00 (0.000)
7		2	F	4	4	168.58 (3.804)	65.45 (12.255)	23.12 (4.789)	2.25 (0.866)
8			M	1	1	172.70 (NA)	83.50 (NA)	28.00 (NA)	2.50 (NA)
9		3	F	5	5	168.64 (4.291)	76.06 (21.870)	26.57 (6.899)	2.20 (0.447)
10			M	1	1	172.70 (NA)	104.30 (NA)	34.97 (NA)	2.50 (NA)
11									
12	>25 to <=35 Yrs	1	F	10	10	169.68 (7.838)	83.24 (23.115)	28.88 (7.748)	1.90 (1.125)
13			M	7	7	176.53 (6.278)	82.59 (14.572)	26.64 (5.773)	1.86 (0.556)
14		2	F	10	10	170.44 (7.519)	90.64 (18.981)	31.36 (7.089)	1.85 (0.914)
15			M	4	4	187.33 (7.594)	109.30 (5.581)	31.22 (2.254)	1.38 (0.750)
16		3	F	6	6	166.13 (3.991)	72.33 (11.596)	26.35 (5.118)	1.42 (1.114)
17			M	5	5	174.24 (7.314)	90.10 (21.986)	29.45 (5.694)	1.60 (0.894)
18									
19	<= 25 Yrs	>25 to <=35 Yrs	>35 to <=45 Yrs	> 45 Yrs	summary				

SAS output to Customized Excel

```
proc format;      /*Highlight 'Score' column by red if score is 0-1*/
  value minscore
    0-1='Red';
run;

ods excel file = "<Path>\filename.xlsx";

title1      j=1 "Study ID: AABB";  /*Titles and footnote*/
title2      j=1 "Listing for subjects with baseline information";
footnote1   j=1 "Note: Subjects listed in the output who received at least
one Study treatment.";
ods excel options(
    start_at                = "2,2"
    embedded_titles         = "on"
    embed_footnotes_once   = "on"
    autofilter              = "1-7"
    sheet_name              = "#byval1"
    tab_color               = "yellow"
    frozen_headers          = "on"
    frozen_rowheaders       = "2"
    absolute_column_width= "15,16,13,10,15,15,14,14"
    row_heights             = "30,20,50,20,20,25,5"
)
style=Listing;
```

SAS output to Customized Excel

```
title3 j=1 'Age Category: #byval1';
footnote2 j=1 'Note: Subjects listed in the output whose baseline age is
#byval1';
options nobyline;

proc report data=ADSL      style(column)=[just=c]
                        style(header)=[color=white backgroundcolor=grey] ;
  by agecat;
  column subject treatment gender ("Baseline Information" height_Cm weight_Kg
    bmi score );
  define subject          / "Subject ID" ;
  define treatment        / "Treatment" ;
  define gender            / "Gender" ;
  define height_cm         / "Subject Height (in cm)"
                        style(header)=[tagattr="wrap:yes"] ;
  define weight_kg         / "Subject Weight (in kg)"
                        style(header)=[ tagattr="wrap:yes"] ;
  define bmi               / "Subject BMI" ;
  define score             / "Score"
                        style(column)=[background=minscore.] ;
run;
```

SAS output to Customized Excel

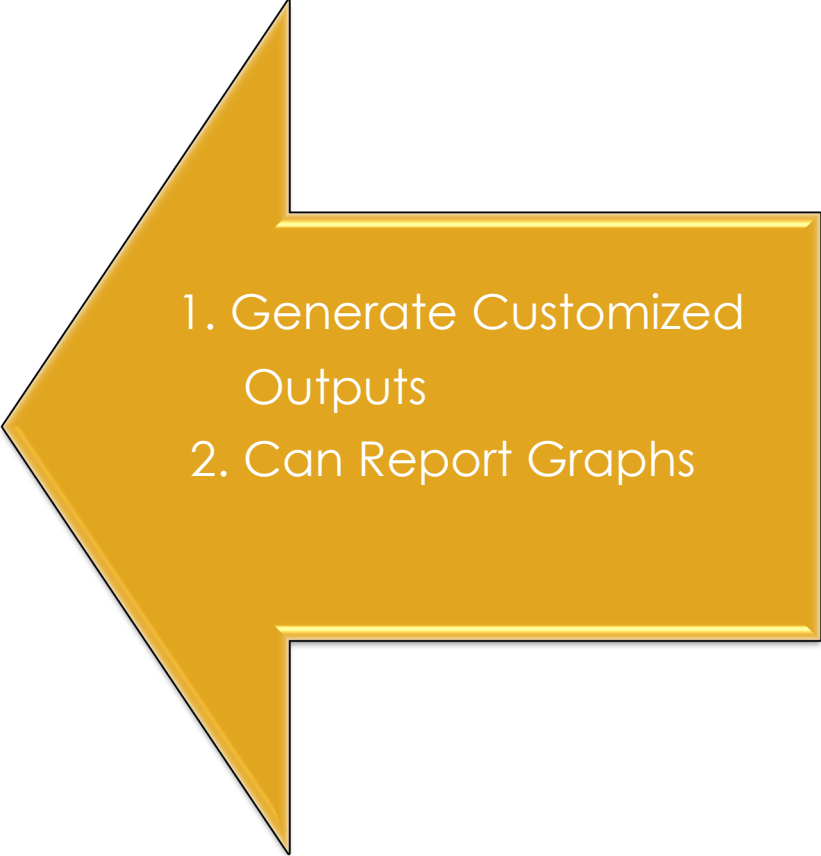
```
title;  
footnote;  
  
title1 j = 1 "Summary table for Baseline Characteristic";  
ods excel options(  
    start_at                = "1,2"  
    embedded_titles         = "on"  
    autofilter              = "all"  
    sheet_name              = "summary"  
    tab_color               = "green"  
    frozen_headers          = "on"  
    frozen_rowheaders       = "1"  
    absolute_column_width   = "15,12,10,10,15,15,14,14"  
    row_heights             = "30,20,50,20,20,25,5"  
)  
style =listing;
```

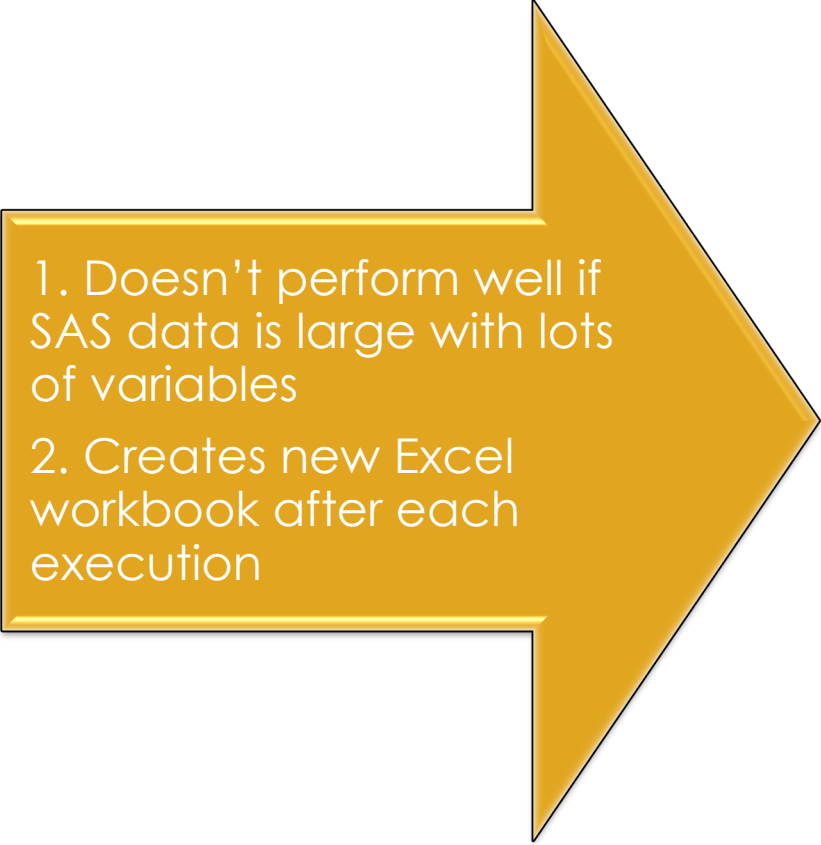
SAS output to Customized Excel

```
proc report data=all_stat
    style(header)=[color=white backgroundcolor=grey]
    style(column)=[just=c] nowd Headline headskip
    split="^" missing ;
column agecatn agecat treatment gender trt_count sex_count height_sum
    weight_sum bmi_sum score_sum;
define agecatn / noprint order;
define agecat / "Age ^ category" order;
define Treatment / "Treatment" order;
define gender / "Sex";
define trt_count / "Treatment ^ N";
define sex_count / "Sex ^ N";
define height_sum / "Height ^ Mean(SD) ";
define weight_sum / "Weight ^ Mean(SD) ";
define bmi_sum / "BMI ^ Mean(SD) ";
define score_sum / "Score ^ Mean(SD) ";
compute after agecatn;
    line "";
endcomp;

run;
ods excel close;
```

ODS Excel Effectiveness and Limitations

- 
1. Generate Customized Outputs
 2. Can Report Graphs

- 
1. Doesn't perform well if SAS data is large with lots of variables
 2. Creates new Excel workbook after each execution

Thank you

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