

```

%_mprintto;
options notes nosource;
proc datasets lib=work nolist memtype=data kill; quit;
%put NOTE:
=====;
%put NOTE: Covance Study Number : 000000106326;
%put NOTE: Client Protocol ID   : ZRHM-PK-05-JP;
%put NOTE: Program Name        : t_cosingcat.sas;
%put NOTE: Purpose              : table of exhaled CO during single use
days categorical measuremeants;
%put NOTE: ;
%put NOTE: Input Data           : ADAM.ADBX;
%put NOTE: Output               : t_15_2_4_10_2(co);
%put NOTE: Macros Called        : _MPRINTTO;
%put NOTE: ;
%put NOTE: Programmed by        : cvn_jriley;
%put NOTE: Creation Date        : 2014-08-08;
%put NOTE: SAS Version          : 9.3;
%put NOTE: ;
%put NOTE: == Latest Run
=====;
%put NOTE: Run by                : &sysuserid;
%put NOTE: Date/Time             :
%sysfunc(putn(%sysfunc(date()),e8601da.))T%sysfunc(putn(%sysfunc(time()),
e86011z.));
%put NOTE: ;
%put NOTE: == Modification History
=====;
%put NOTE: Date      Initials   No. Reason;
%put NOTE: 11Aug2014  JMH        1) Amended footnote;
%put NOTE: 11Aug2014  JMH        2) Added rows;
%put NOTE: 24Sep2014  JR         3) Amended sort in dual prog dataset;
%put NOTE: ;
%put NOTE:
=====;
options notes source source2 nofullstimer validvarname=upcase missing='
';
ods _all_ close;
ods listing;

*=====;
* START OF PROGRAM CODE                                     ;
*=====;

%let tflno=T_15_02_04_10_02(co);

%let TFL_Part=%scan(&_SASPROGRAMFILE,-3,%str(/));

data _null_;
  tmp="&TFL_Part";
  if tmp not in ("dev" "qc") then call symput("TFL_Part", "prod");
  call symput('TFLpath', compress("&_SASPROGRAMFILE", ""));
run;

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*****;
* read in data ;
*****;
/*Bring in appropriate data from adbx*/
data adbx;
    set adam.adbx(where=(paramcd='CO' and avisit in ('Day 1' 'Day 3')
and pprotfl='Y' and anl02fl='Y'));/* Used both analysis flags, may need
reviewing*/
run;

/* Calculate totals for products */
data adsl;
    set adam.adsl(where=(pprotfl='Y'));
    if analgrln=1 then do;
        if index(trt01a,'THS 2.2') or index(trt02a,'THS 2.2') then
trtord=4;
        output;
        if index(trt01a,'CC') or index(trt02a,'CC') then trtord=5;
        output;
    end;
    else if analgrln=2 then do;
        if index(trt01a,'THS 2.2') or index(trt02a,'THS 2.2') then
trtord=10;
        output;
        if index(trt01a,'NRT gum') or index(trt02a,'NRT gum') then
trtord=7;
        output;
    end;
    else if missing(analgrln) then delete;
run;

proc sort data=adsl nodupkey out=adsl1;
    by analgrln analgrl trtord subjid;
run;

proc freq data=adsl1(where=(not missing(trtord))) noprint;
    table analgrln*analgrl*trtord/ out =totals2(drop=percent
rename=(count=total));
run;

data totals3;
    set totals2;

    call symput('trt'||strip(put(trtord,best.)),strip(put(total,best.)));
run;

proc sort data=totals3;
    by analgrln analgrl trtord;
run;

/* Back to data */
data adbx_orig;
    set adbx;
    format stat $30.;

```

```

        statval=aval;

    if not missing(aval) and aval <= 10 then do;
        stat='CO <= 10 ppm - n (%)';
        statord=1;
    end;
    if not missing(aval) and aval > 10 then do;
        stat='CO > 10 ppm - n (%)';
        statord=2;
    end;
    else if missing(aval) then do;
        stat='Missing n(%)';
        statord=3;
    end;
run;

proc sort data=adbx_orig;
    by analgrln analgrl trtan trta atptn atpt statord stat;
run;

proc freq data=adbx_orig noprint;
    tables analgrln*analgrl*trtan*trta*atptn*atpt*statord*stat /
    out=results01(drop=percent);
run;

data results02;
    set results01;

    if analgrln=2 and trtan=4 then trtan=10;

    trtord=trtan;
run;

proc sort data=results02;
    by analgrln analgrl trtord;
run;

data results03;
    merge results02 totals3;
    by analgrln analgrl trtord;
run;

data results04;
    set results03;
    format result $30.;

    percent=count/total*100;

    if percent=100 then result=strip(count)||' (100 %)';
    else if percent ge 10 then result=strip(count)||' (
'||compress(put(percent,8.1))||'%)';
    else if percent lt 10 then result=strip(count)||' (
'||compress(put(percent,8.1))||'%)';

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        if index(result,'100') then result=tranwrd(result,'100.0','100');
run;

proc sort data=results04;
    by atptn atpt statord stat;
run;

proc transpose data=results04 out=results05 prefix=_ name=varname;
    by atptn atpt statord stat;
    var result;
    id trtord;
    idlabel trta;
run;

/* 2) start JMH 11Aug2014 */
PROC SORT DATA=RESULTS05 NODUPKEY OUT=DUMROWS (KEEP=ATPTN ATPT);
    BY ATPTN ATPT;
RUN;

DATA DUMROWS1;
    SET DUMROWS;
    ATTRIB STAT LENGTH=$30.
           STATORD LENGTH=8.;

    STATORD=1;
    STAT='CO <= 10 ppm - n (%)';
    OUTPUT;
    STATORD=2;
    STAT='CO > 10 ppm - n (%)';
    OUTPUT;
RUN;

DATA RESULTS05A;
    MERGE RESULTS05 (IN=A) DUMROWS1 (IN=B);
    BY ATPTN ATPT STATORD STAT;
    IF A OR B;
RUN;

/* 2) end JMH 11Aug2014 */

data results06;
    set RESULTS05A /*results05*/; /* 2) JMH 11Aug2014 */

    if missing(_4) then _4='0';
    if missing(_5) then _5='0';
    if missing(_10) then _10='0';
    if missing(_7) then _7='0';
run;

data labels;
set results06;
    attrib _4 label = "THS 2.2 Menthol$(N=&trt4)"
           _5 label = "mCC$(N=&trt5)"
           _10 label = "THS 2.2 Menthol$(N=&trt10)"
           _7 label = "NRT gum$(N=&trt7)"

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```

        atpt1 label = 'Unformatted Timepoint'
        atpt label = 'Formatted Timepoint';

    atpt1=atpt;

    if index(atpt,'T0') then atpt=tranwrd(atpt,'T0',"T${sub 0}");
run;

proc sort data=labels;
    by atptn statord ;
run;

/*options replace;*/
proc sql noprint;

create table table.t_15_02_04_10_02 as
select atpt, stat, _4, _5, _10, _7
from labels
order by atptn, STATORD; /* 3) JR 24Sep2014 */

quit;
/*options noreplace;*/

data paging;
    set labels;
    by atptn statord ;

    flag=1;

    if ln gt 13 then ln=1; /*Amend to look presentable, and avoid page
overflows*/
    else ln+1;
    if ln=1 then page+1;
    call symput("page",compress(put(page,best.)));
run;

options number nodate orientation=landscape papersize=&p_pgsz missing='
';
ods escapechar='$';
%let linetop = \brdrt\brdrs\brdrw30; * needs to be 1.5pt so calculated
in twips (1/20 pt) ;
%let linebot = \brdrb\brdrs\brdrw30;
%macro outrtf(blankn=, halfblnk=);

%if &halfblnk=N %then %let halfblnk=;
%else %if &halfblnk=Y %then %let halfblnk=\~;

ods path stdlib.t106326 (read) ;
ods results off;
ods rtf toc_data
file="/cvn/projects/prj/data/000000106326/TFL/&TFL_Part./&tflno..rtf"
style=t106326 startpage=yes headery=1440 footery=1440 ;
ods noproctitle;

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```

%do i=1 %to &page;
ods proclabel = ' ';

title ;
footnote;
%let wd=0;

data comp;
    set paging end=eof;
    where page=&i;

    /* Amend title as needed */
    _firtitl="Table 15.2.4.10.2 Descriptive Statistics of Exhaled CO
(ppm) During Single Use Categorical Measurements - PK";
    _upcas=(length("Path: &TFLpath.")-
length(compress("Path:&TFLpath.",'ABCDEFGHIJKLMNOPQRSTUVWXYZ')))/2;
    len=&blankn.-length("(page &i of &page)");
    if eof then do;
        call symput('_FSRTITL', trim(left(_firtitl)));
        call symput('_blankn', compress(put(len,best.)));
    end;
    drop _firtitl _upcas len;
run;

ods listing close;

* most set up in template others below;
* title arial 12pt bold with 12pt paragraph space below;
* all headers to be arial 11pt bold;
* data arial 10pt;
* headers to be central, text values left aligned and numeric centered
around decimal point;
proc report data = comp missing headline headskip missing nowd split =
'$' %if &i=1 %then %do; contents=' ' %end; %else %do; contents='' %end;;
;
    column flag page atptn atpt statord stat ("Group-1 PK &linebot" _4
_5) ("Group-2 PK &linebot" _10 _7);

    define flag          / order order=internal noprint;
    define page          / order order = internal noprint;
    define atptn         / order order=internal noprint;
    define atpt          / group style={just=left cellwidth=1.5cm}
style(header)={just=center} "Timepoint";
    define statord       / order order=internal noprint;
    define stat          / display style={just=left cellwidth=1.5cm}
style(header)={just=center} "Statistic";
    define _4            / display style={just=left cellwidth=1.5cm
pretext="\tqdec\tx500 "} style(header)={just=center};
    define _5            / display style={just=left cellwidth=1.5cm
pretext="\tqdec\tx500 "} style(header)={just=center};

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        define _10          / display style={just=left cellwidth=1.5cm
pretext="\tqdec\tx500 "} style(header)={just=center};
        define _7          / display style={just=left cellwidth=1.5cm
pretext="\tqdec\tx500 "} style(header)={just=center};

break before flag / page %if &i=1 %then %do;
contents="\&_fsrtitl" %end; %else %do; contents='' %end;;

break after page / page;

compute after atptn;
    line " ";
endcomp;

compute before page / style={protectspecialchars=off};;
    line "&linetop";
endcomp;

compute before _page_ / style={just=left protectspecialchars=off};
    line "\b\fs24\sa24&_FSRTITL." ; * \b = bold, \fs24 is font
size 12pt, \sa24 is space after 12pt;
    line "\b\fs24\sas24Population";
    line "&linebot";
endcomp;

compute after _page_ / style={just=left protectspecialchars=off
PRETEXT="\&LINETOP."};
    line "Note: mCC = menthol conventional cigarettes; NRT gum =
Nicotine Replacement Therapy gum; THS = Tobacco Heating System.";
/*    line "Note: Percentages are based on the number of subjects
indicated in the column header (N)"; */
    LINE "Note: Percentages are based on the number of subjects
indicated in the column header (N)."; /* 1) JMH 11Aug2014 */
    line "Note: T${sub 0} = Time of first product use at single
use day.";

    line ' ';
    line 'Appendix 15.3.3.5';
    line "Path: &TFLpath." &_blankn.*"\~\~" "(Page &i of &page)";
    line "Program Run: &sysdate &sysuserid Program Status:
&status";
endcomp;

run;
%end;
ods rtf close;
ods results on;
ods path sashelp.tmplmst (read);

%mend ;

%outrtf(blankn=68, halfblnk=N);

ods listing;
proc printto print = "&table./t_15_02_04_10_02.lst" new;

```

```
run;

proc contents data = table.t_15_02_04_10_02 varnum;
run;
ods listing close;

proc printto ; run;
*=====;
* END OF PROGRAM CODE ;
*=====;
```