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Attribute VB_Name = "Module1"
Sub Multiple_Samples_Same_Weight()

' Statistic_Summary_Report_Results Macro
' Macro recorded 6/24/2005 by Weiyin Zhou

'row range
Dim rRange As Range
Dim Rng As Range
Dim Cng As Range

Dim myCol As String
Dim varAnswer As String
Dim myCol_C As String
Dim myCol_D As String
Dim myCol_A As String
Dim myCol_E As String
Dim myCol_H As String
Dim myCol_I As String
Dim myCol_J As String
Dim myCol_G As String

Dim myCol_Begin As Integer
Dim myRow_Begin As Integer
Dim myOldCol As Integer
Dim myRow_Next As Integer


Dim totalrows As Integer
Dim totalcolumns As Integer
Dim Row As Integer
Dim Column As Integer
Dim ISTD As Double
Dim totalRowsAfter As Integer
Dim lastVial As Integer
Dim StartCol As Integer
Dim CurrentVial As Integer
Dim NumCompounds As Integer
Dim NumSamples As Integer
Dim NumVials As Integer
Dim CurrentCompound As Integer
Dim CountRows As Integer
Dim Vol As Double
Dim CountNoBlankRows As Integer
Dim Ceiling As Integer
Dim Floor As Integer
Dim MeanRangeBegin As Integer
Dim MeanRangeEnd As Integer




myCol_G = "G"
myCol_C = "C"
myCol_D = "D"
myCol_A = "A"
myCol_E = "E"
myCol_H = "H"
myCol_I = "I"
myCol_J = "J"
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NumCompounds = 0
lastVial = 1
StartCol = 5
CurrentVial = 2
CurrentCompound = 2
CountRows = 0
CountNoBlankRows = 0
MeanRangeBegin = 4
MeanRangeEnd = 4

ActiveSheet.Name = "Original_Report"

'Add Sheet2, and Sheet2 is active now
ActiveWorkbook.Worksheets.Add


Sheet1.Range("A1:IV65536").Copy Destination:=ActiveSheet.Cells(1, 1)

ActiveSheet.Name = "Summary_Report"


'How many total rows are actually used in the worksheet
totalrows = ActiveSheet.UsedRange.Rows.Count

'if column 4's value is b, f,... then delete these values and put next column's
value into this column.  This happens when do column separattion, in type column,
some type is VV b, VV f, which separate to two column, and shift rest column's
values into wrong columns
For Row = 1 To totalrows Step 1
    If Cells(Row, 4).Value = "b" Or Cells(Row, 4).Value = "f" Or Cells(Row, 4).Value
= "B" Or Cells(Row, 4).Value = "F" Then
        Cells(Row, 4).Value = Cells(Row, 5).Value
        Cells(Row, 5).Value = Cells(Row, 6).Value
        Cells(Row, 6).Value = Cells(Row, 7).Value
        Cells(Row, 7).Value = Cells(Row, 8).Value
        Cells(Row, 8).Value = Cells(Row, 9).Value
        Cells(Row, 9).Value = Cells(Row, 10).Value
    End If
Next Row

'Find out how many rows in Statistic Report
For Row = 1 To totalrows Step 1
    If Cells(Row, 9).Value = "Height" Then
        CountRows = CountRows + 3
        Exit For
    Else
        CountRows = CountRows + 1
    End If
Next Row


'Add Sheet3, and Sheet3 will be copied for Statistic report.
ActiveWorkbook.Worksheets.Add

'Copy data from Summary_Report to Sheet3.
For Row = 1 To CountRows Step 1
    ActiveSheet.Cells(Row, 1) = Worksheets("Summary_Report").Cells(Row, 1).Value
    ActiveSheet.Cells(Row, 2) = Worksheets("Summary_Report").Cells(Row, 2).Value
    ActiveSheet.Cells(Row, 3) = Worksheets("Summary_Report").Cells(Row, 3).Value
    ActiveSheet.Cells(Row, 4) = Worksheets("Summary_Report").Cells(Row, 4).Value
    ActiveSheet.Cells(Row, 5) = Worksheets("Summary_Report").Cells(Row, 5).Value
    ActiveSheet.Cells(Row, 6) = Worksheets("Summary_Report").Cells(Row, 6).Value
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    ActiveSheet.Cells(Row, 7) = Worksheets("Summary_Report").Cells(Row, 7).Value
    ActiveSheet.Cells(Row, 8) = Worksheets("Summary_Report").Cells(Row, 8).Value
    ActiveSheet.Cells(Row, 9) = Worksheets("Summary_Report").Cells(Row, 9).Value
Next Row

ActiveSheet.Name = "Statistic_Report"

'Delete peak width, type and index columns
Cells(1, myCol_J).EntireColumn.Delete
Cells(1, myCol_I).EntireColumn.Delete
Cells(1, myCol_H).EntireColumn.Delete
Cells(1, myCol_G).EntireColumn.Delete
Cells(1, myCol_E).EntireColumn.Delete
Cells(1, myCol_D).EntireColumn.Delete
Cells(1, myCol_C).EntireColumn.Delete
Cells(1, myCol_A).EntireColumn.Delete

'How many total rows are actually used in the worksheet
totalrows = ActiveSheet.UsedRange.Rows.Count

'Counting backwards in For loop
For Row = totalrows To 1 Step -1

    'If in column  contains blanks and ? then delete entire rows
    If Cells(Row, 2).Value = 0 Or Cells(Row, 1).Value = "Type" Or Cells(Row, 1).Value
= "#" Or Cells(Row, 2).Value = "File" Or Cells(Row, 2).Value = "not" Or Cells(Row,
2).Value = "S" Or Cells(Row, 2).Value = "FileName" Or Cells(Row, 2).Value = "[min]"
Then
        Cells(Row, 1).EntireRow.Delete
    End If
Next Row


'How many samples in the sequence
NumSamples = InputBox("Please enter total number of samples in the sequence:")

'Delete first number of rows, which are just names of vials
For Row = NumSamples + 1 To 1 Step -1
    Cells(Row, 1).EntireRow.Delete

Next Row


'How many total rows are after another deletion
totalrows = ActiveSheet.UsedRange.Rows.Count


'Find total number of compounds in one sample
For Row = totalrows To 1 Step -1
    If Cells(Row, 2).Value = ")" Or Cells(Row, 2).Value = "A" Then
        NumCompounds = NumCompounds + 1
    End If
Next Row


'If some rows are missing, then insert blank and copy to column5 for compound name
and column6 for areas
For Row = 1 To NumCompounds Step 1

    If Cells(CurrentVial - 1, 2).Value = ")" Or Cells(CurrentVial - 1, 2).Value = "A"
Then
        Cells(CurrentVial - 1, 5).Value = Cells(CurrentVial - 1, 1).Value
        Cells(CurrentVial - 1, 6).Value = Cells(CurrentVial - 1, 1).Value
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        For NumVials = 2 To NumSamples + 1 Step 1
          If Cells(CurrentVial, 1).Value <> NumVials - 1 Then
            Cells(CurrentVial, 1).EntireRow.Insert
            Cells(CurrentVial, 1).Value = NumVials - 1
            Cells(CurrentVial, 5).Value = Cells(CurrentVial - NumVials + 1, 1).Value
            'Cells(CurrentVial, 6).Value = Cells(CurrentVial, 2).Value
          End If
            Cells(CurrentVial, 5).Value = Cells(CurrentVial - NumVials + 1, 1).Value
            Cells(CurrentVial, 6).Value = Cells(CurrentVial, 2).Value
            CurrentVial = CurrentVial + 1

        Next NumVials


        CurrentVial = CurrentVial + 5

      'If compound only exist in one sample of sequence, therefore, mean and sd are 0,
and columns not exist
      Else
        CurrentVial = CurrentVial - 4

        Cells(CurrentVial - 1, 5).Value = Cells(CurrentVial - 1, 1).Value
        Cells(CurrentVial - 1, 6).Value = Cells(CurrentVial - 1, 1).Value
        For NumVials = 2 To NumSamples + 1 Step 1
          If Cells(CurrentVial, 1).Value <> NumVials - 1 Then
            Cells(CurrentVial, 1).EntireRow.Insert
            Cells(CurrentVial, 1).Value = NumVials - 1
            Cells(CurrentVial, 5).Value = Cells(CurrentVial - NumVials + 1, 1).Value

          End If
            Cells(CurrentVial, 5).Value = Cells(CurrentVial - NumVials + 1, 1).Value
            Cells(CurrentVial, 6).Value = Cells(CurrentVial, 2).Value
            CurrentVial = CurrentVial + 1

        Next NumVials

        CurrentVial = CurrentVial + 5
    End If

Next Row

'Add Sheet3, and Sheet3 is active now
ActiveWorkbook.Worksheets.Add

'Copy data from Processed_Report to Sheet3.
Worksheets("Statistic_Report").Range("E1:IV65536").Copy
Destination:=ActiveSheet.Cells(1, 1)
ActiveSheet.Name = "Report"

'How many total rows are actually used in the worksheet
totalrows = ActiveSheet.UsedRange.Rows.Count



'Delete mean, sd..rows, only leave Area rows
For Row = totalrows To 1 Step -1

   'If in column  contains blanks and ? then delete entire rows
   If Cells(Row, 1).Value = 0 Then
      Cells(Row, 1).EntireRow.Delete
   End If
Next Row
```

origin Supplemental Material 2. Demo of macro script for multiple data process.txt

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'Sort the compound names according to column A1

Columns("A:C").Select
Selection.Sort Key1:=Range("A1"), Order1:=xlAscending, Header:=xlGuess, _
OrderCustom:=1, MatchCase:=False, Orientation:=xlTopToBottom

'Reset CurrentVial
CurrentVial = 1
CurrentRow = 1


'Copy to row
For Row = 1 To NumCompounds + 1 Step 1
    For NumVials = 1 To NumSamples + 1 Step 1
        Cells(CurrentVial, StartCol).Value = Cells(CurrentRow, 2).Value
        CurrentRow = CurrentRow + 1
        CurrentVial = CurrentVial + 1
    Next NumVials
    StartCol = StartCol + 1
    CurrentVial = 1
Next Row

'delete first three columns
Cells(1, 3).EntireColumn.Delete
Cells(1, 2).EntireColumn.Delete
Cells(1, 1).EntireColumn.Delete

'Concentration of internal startard
ISTD = InputBox("Please enter the amount of internal standard (mg):")
Vol = InputBox("Please enter the amount of your sample (ml or g):")

'Add row name, which is Area
Cells(1, 1).Value = "Area"
Cells(1, 1).Font.Bold = True

'Add index to first column
For Row = 1 To NumSamples Step 1
    Cells(Row + 1, 1).Value = Row
Next Row

'How mant total columns are actually used in the worksheet
totalcolumns = ActiveSheet.UsedRange.Columns.Count

'Add columns for concentration
Cells(1, totalcolumns + 2).Value = "Concentration"
Cells(1, totalcolumns + 2).Font.Bold = True

'If blank cell or if concentraion of ISTD is 0, then concentration of compound is
blank
For Column = totalcolumns + 3 To 2 * totalcolumns + 1 Step 1
    Cells(1, Column).Value = Cells(1, CurrentCompound).Value
    For Row = 2 To NumSamples + 1 Step 1
        If Cells(Row, CurrentCompound).Value = "" Then
            Cells(Row, Column).Value = ""
        ElseIf Cells(Row, totalcolumns).Value <> 0 Then
            Cells(Row, Column).Value = Cells(Row, CurrentCompound).Value * ISTD /
Cells(Row, totalcolumns).Value / Vol
        Else
            Cells(Row, Column).Value = ""
        End If
    Next Row

    CurrentCompound = CurrentCompound + 1
```

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Next Column

'Go to the Processed_Report to process Summary Report
Worksheets("Summary_Report").Activate

'How many total rows are actually used in the worksheet
totalrows = ActiveSheet.UsedRange.Rows.Count


For Row = CountRows To 1 Step -1
    Cells(Row, 1).EntireRow.Delete
Next Row

'How many total rows are actually used in the worksheet
totalrows = ActiveSheet.UsedRange.Rows.Count

'Counting backwards in For loop
For Row = totalrows To 1 Step -1

    'If in column  contains blanks and ? then delete entire rows
    If Cells(Row, 2).Value = "" Then
        Cells(Row, 2).EntireRow.Delete
    End If
Next Row


'Set initial values to column G and H
Cells(1, 8).Value = "Total Area"
For NumVials = 2 To NumSamples + 1 Step 1
    Cells(NumVials, 7).Value = NumVials
    Cells(NumVials, 8).Value = 0
Next NumVials

NumVials = 1

'Calculate total areas for each sample then put to column G and H
For Row = 1 To totalrows Step 1
    If Cells(Row, 2).Value = 0 Then
        NumVials = NumVials + 1
    ElseIf Cells(Row, 4).Value = "-" Then

    Else
        Cells(NumVials, 8).Value = Cells(NumVials, 8).Value + Cells(Row, 4).Value

    End If

Next Row


'Copy total areas for each sample to Final Report sheets
For Row = 1 To NumSamples + 1 Step 1
    Worksheets("Report").Cells(Row, 2 * totalcolumns + 3).Value =
ActiveSheet.Cells(Row, 8)
Next Row

'Activate Final_Report and calculate real total areas for each samples, which should
subtract ISTD
Worksheets("Report").Activate

Cells(1, 2 * totalcolumns + 4).Value = "RealTArea"

For Row = 2 To NumSamples + 1 Step 1
    Cells(Row, 2 * totalcolumns + 4).Value = Cells(Row, 2 * totalcolumns + 3).Value
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- Cells(Row, totalcolumns).Value
Next Row


'Add columns for concentration
Cells(1, 2 * totalcolumns + 6).Value = "% Area"
Cells(1, 2 * totalcolumns + 6).Font.Bold = True

CurrentCompound = 2

For Column = 2 * totalcolumns + 7 To 3 * totalcolumns + 5 Step 1
    Cells(1, Column).Value = Cells(1, CurrentCompound).Value
    For Row = 2 To NumSamples + 1 Step 1
        If (Cells(Row, CurrentCompound).Value) = "" Then
            Cells(Row, Column).Value = ""
        Else
            Cells(Row, Column).Value = 100 * Cells(Row, CurrentCompound).Value /
Cells(Row, 2 * totalcolumns + 4).Value
        End If
    Next Row

    CurrentCompound = CurrentCompound + 1
Next Column

'Now do the error checking.
'First ask user to input the range of the rows he/she wants to average.  It should
exclude haxane and 462 from mean
MeanRangeBegin = InputBox("Now we want to computer average area value for a
particular compound.  Please enter start row number you want to average:")
MeanRangeEnd = InputBox("Please enter end row number you want to average:")


'Set initial values for mean row to zero
For Column = 2 To totalcolumns Step 1
        Cells(NumSamples + 2, Column).Value = 0
Next Column

Cells(NumSamples + 2, 1).Value = "Mean"

'Calculate mean for area
For Column = 2 To totalcolumns Step 1

    'Total for each column, if blank, not count in total and mean
    For Row = MeanRangeBegin To MeanRangeEnd

        If Cells(Row, Column).Value = "" Then

        Else
            Cells(NumSamples + 2, Column).Value = Cells(NumSamples + 2, Column).Value
+ Cells(Row, Column).Value
            CountNoBlankRows = CountNoBlankRows + 1

        End If

    Next Row

    'Check if CountNoBlankRows is 0.  If is, it means that this kind of compound in
the sequence are all zeros.
    If CountNoBlankRows = 0 Then
        Cells(NumSamples + 2, Column).Value = 0

    Else
      'Mean for each column
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        Cells(NumSamples + 2, Column).Value = Cells(NumSamples + 2, Column).Value /
CountNoBlankRows

        'Reset CountNoBlankRows to zero
        CountNoBlankRows = 0

    End If

Next Column


'Compare area of each column's value with its average, if it below average, then put
yellow marker as flag
Ceiling = InputBox("Compare area of each cell's value with its compound average, if
it above or below the product of threshold and average, then put blue marker as
flag.  Please enter high threshold, if enter 3, it means 3 times of average value
for a compound in sequence samples:")
Floor = InputBox("Please enter low threshold, if enter 0.2, it means 20% of average
value for a compound in sequence samples:")


 For Column = 2 To totalcolumns Step 1
      For Row = MeanRangeBegin To MeanRangeEnd
            If Cells(Row, Column).Value < 0.3 * Cells(NumSamples + 2, Column).Value Or
Cells(Row, Column).Value > 3 * Cells(NumSamples + 2, Column).Value Then
            Cells(Row, Column).Interior.ColorIndex = 34
          End If
      Next Row

Next Column

'Compare B1:18:1n9 and B2:18:1n7, 18:1n9 should always bigger than 18:1n7.  If not,
then either both peaks are exchange the identification or 18:1n7 did not identified.
 If that happend, put yellow marks as flag on these cells
'For Column = 2 To totalcolumns Step 1
   'If Cells(1, Column).Value = "B1:18:1n9" Then

      'Find right column, ready to compare two columns
      'For Row = 2 To NumSamples + 1
         'If Cells(Row, Column).Value < Cells(Row, Column + 1).Value Then
            'Cells(Row, Column).Interior.ColorIndex = 36
            'Cells(Row, Column + 1).Interior.ColorIndex = 36
         'End If
      'Next Row

      'Exit For

   'End If

'Next Column

'Add Sheet5, and Sheet5 is active now
ActiveWorkbook.Worksheets.Add
Worksheets("Report").Range("A1:IV65536").Copy Destination:=ActiveSheet.Cells(1, 1)
ActiveSheet.Name = "Final_Report"

End Sub
```