

# How to Calculate the Average by Color in Excel Easily

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## RECOMMENDED CITATION

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PSYCHOLOGICAL SCALES. Retrieved from <https://scales.arabpsychology.com/?p=131479>

Calculating the average by color in Excel refers to the process of finding the mean value of a specific data set based on the color of the cells. This can be done by using the AVERAGEIF function, which allows users to specify a range of cells to be evaluated and a specific color criterion to be met. By selecting the desired color as the criterion, the function will only consider the cells with that color and calculate the average of their values. This feature can be useful in analyzing and organizing data based on color categories, providing a quick and efficient way to determine the average value of a particular color group.

## **Average by Color in Excel (Step-by-Step Example)**

**Often you may want to average values in Excel based on their color.**

**For example, suppose we have the following dataset and we'd like to calculate the average value of cells based on the cell colors:**

	A	B	C	D	E	F
1	<b>Values</b>					
2	20					
3	13					
4	15					
5	18					
6	20					
7	24					
8	26					
9	30					
10	12					
11	15					
12						
13						
14						
15						
16						
17						
18						

**The easiest way to do this is by writing some code in VBA in Excel.**

**This might seem intimidating if you're not familiar with VBA but the process is straightforward and the following step-by-step example shows exactly how to do so.**

### **Step 1: Enter the Data**

**First, enter the data values into Excel:**

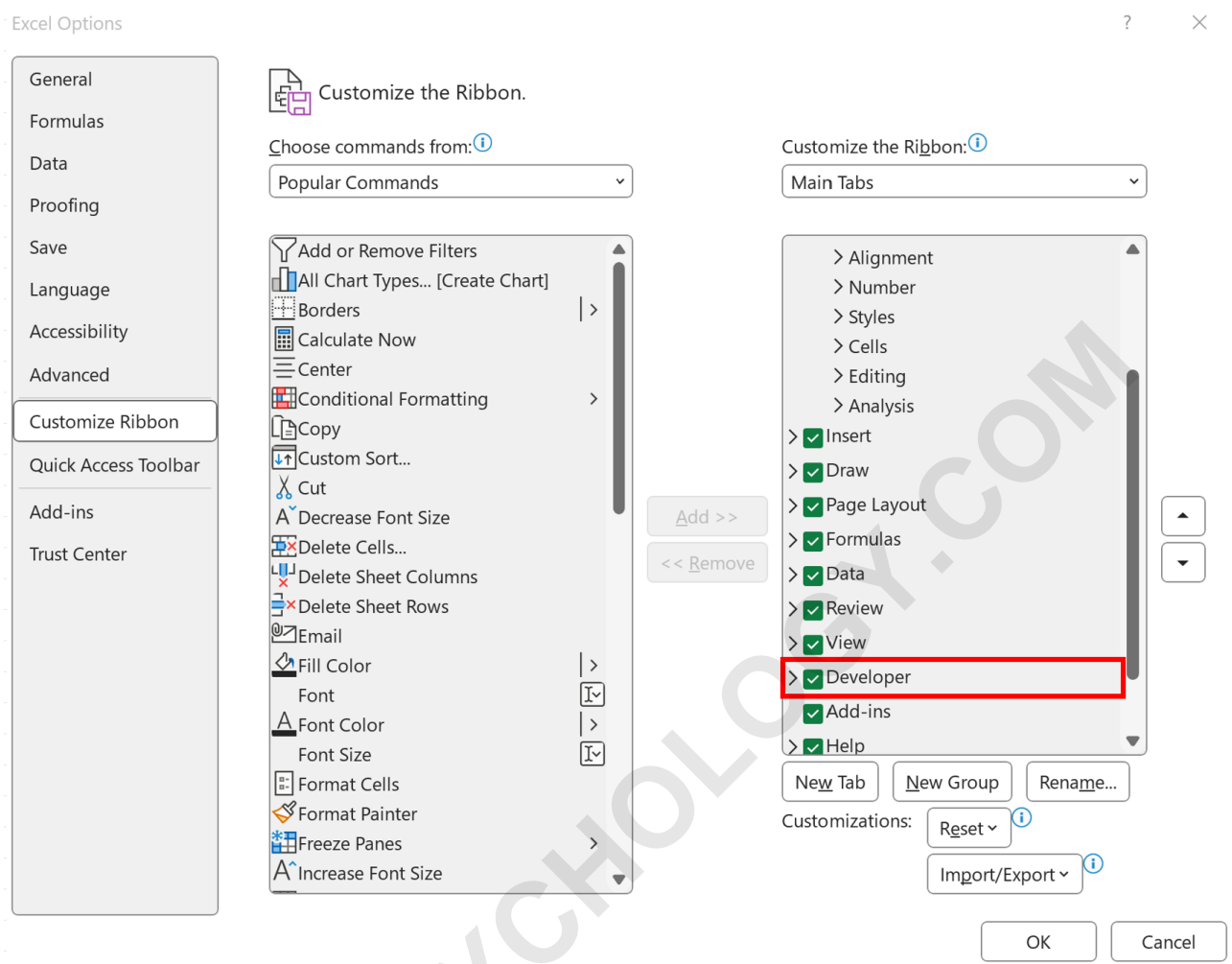
	A	B	C	D	E	F
1	<b>Values</b>					
2	20					
3	13					
4	15					
5	18					
6	20					
7	24					
8	26					
9	30					
10	12					
11	15					
12						
13						
14						
15						
16						
17						
18						

## Step 2: Show the Developer Tab in Excel

Next, we need to make sure the Developer tab is visible on the top ribbon in Excel.

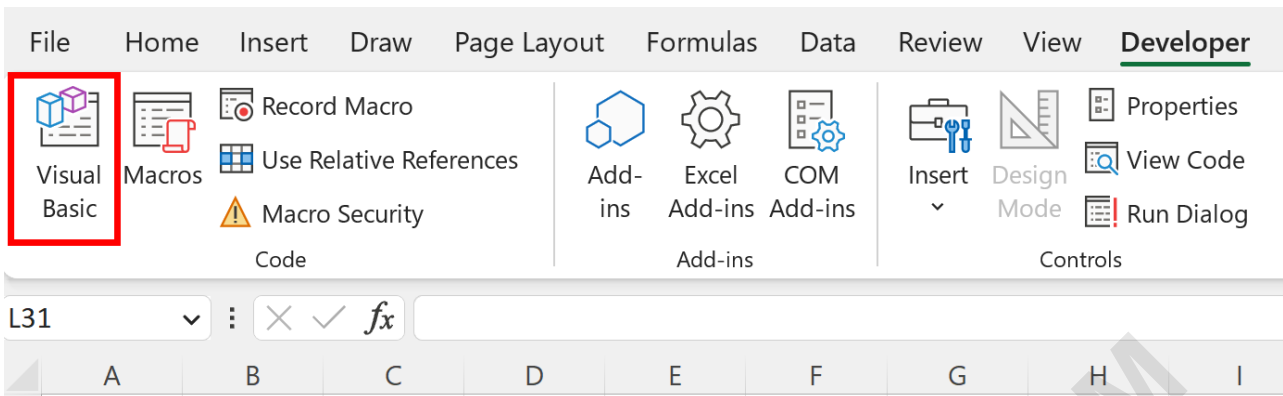
To do so, click the File tab, then click Options, then click Customize Ribbon.

Under the section called Main Tabs, check the box next to Developer, then click OK:

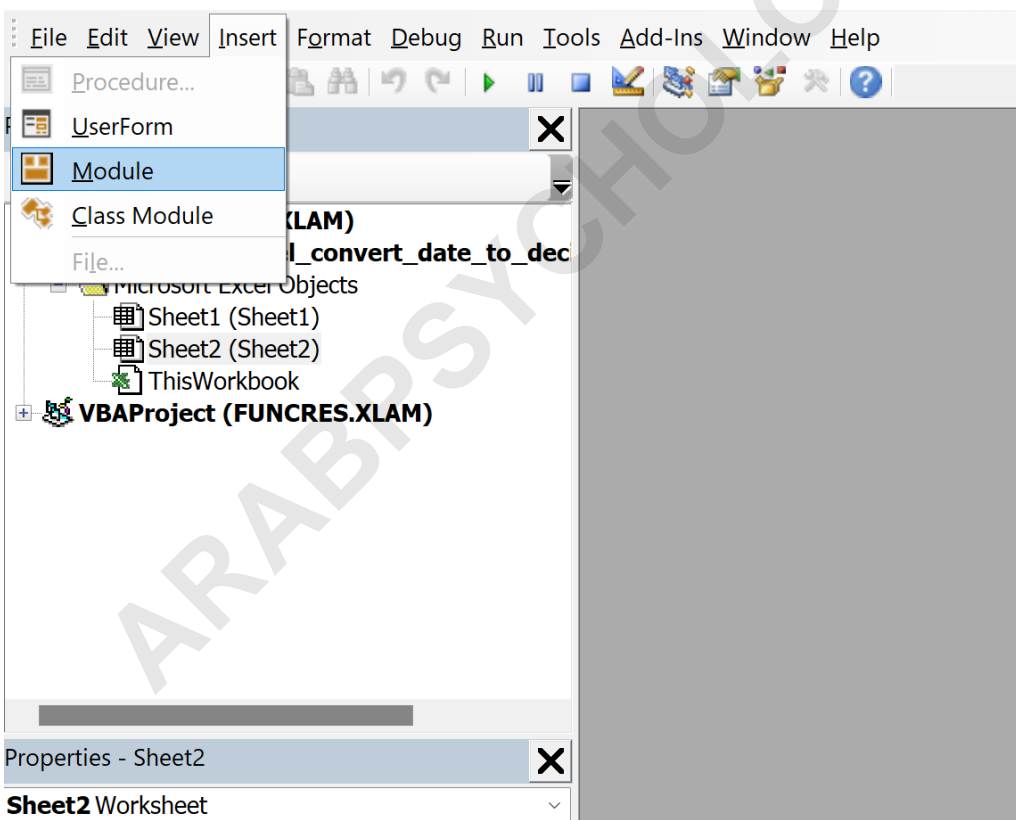


### Step 3: Create a Macro Using VBA

Next, click the Developer tab along the top ribbon and then click the Visual Basic icon:



**Next, click the Insert tab and then click Module from the dropdown menu:**



**Next, paste the following code into the module code editor:**

**Function AvgCellsByColor(CellRange As Range,  
CellColor As Range)**

**Dim CellColorValue As Integer**

**Dim RunningAvg As Long**

**Dim RunningSum As Long**

**Dim RunningCount As Long**

**CellColorValue = CellColor.Interior.ColorIndex**

**Set i = CellRange**

**For Each i In CellRange**

**If i.Interior.ColorIndex = CellColorValue Then**

**RunningSum = RunningSum + i.Value**

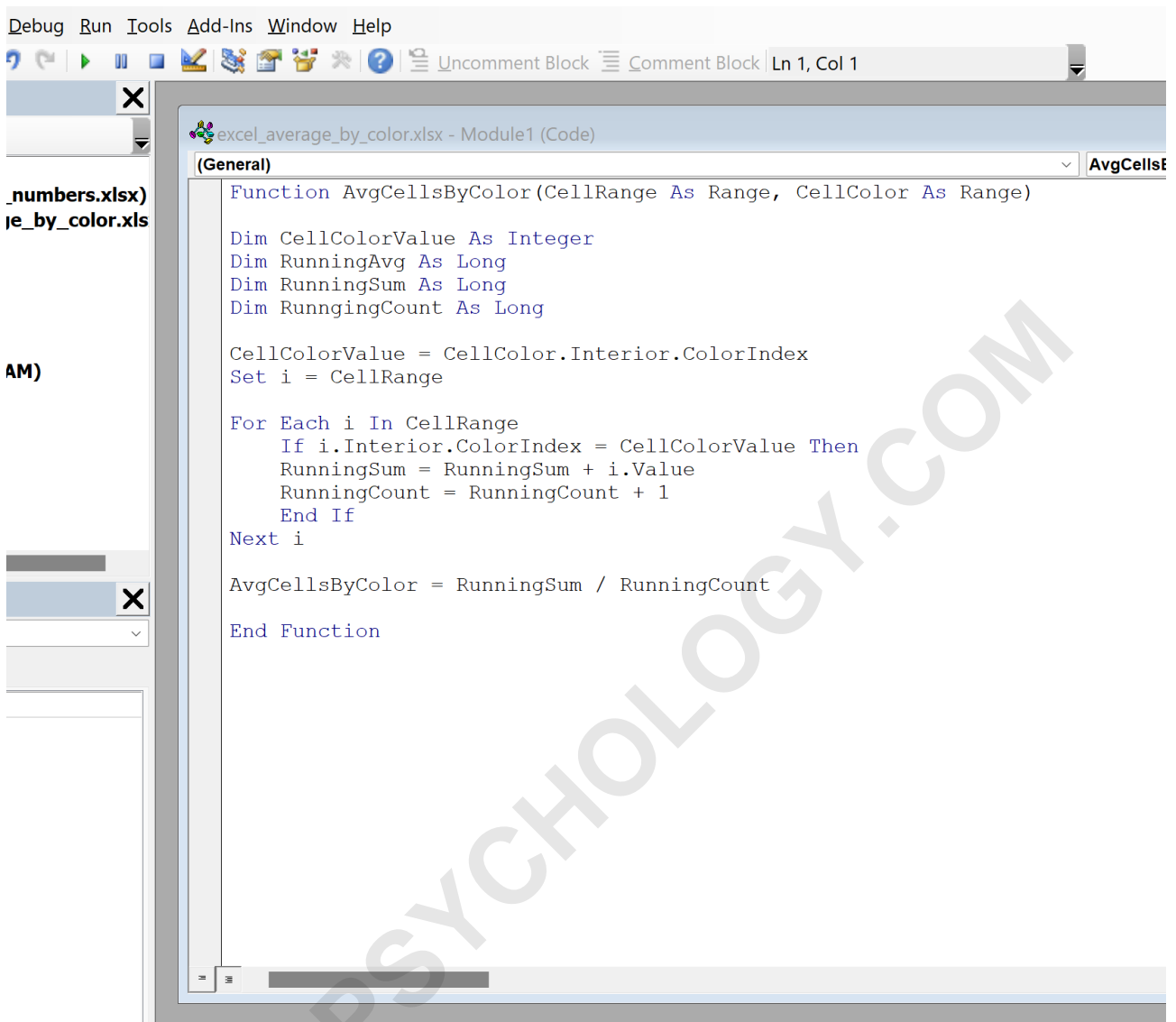
**RunningCount = RunningCount + 1**

**End IfNext i**

**AvgCellsByColor = RunningSum / RunningCount**

**End Function**

**The following screenshot shows how to do so:**



```
Function AvgCellsByColor(CellRange As Range, CellColor As Range)

Dim CellColorValue As Integer
Dim RunningAvg As Long
Dim RunningSum As Long
Dim RunningCount As Long

CellColorValue = CellColor.Interior.ColorIndex
Set i = CellRange

For Each i In CellRange
    If i.Interior.ColorIndex = CellColorValue Then
        RunningSum = RunningSum + i.Value
        RunningCount = RunningCount + 1
    End If
Next i

AvgCellsByColor = RunningSum / RunningCount

End Function
```

**Next, close the VB Editor.**

**Step 4: Use the Macro to Average by Color**

**Lastly, we can use the macro we created to calculate the average of cell values based on color.**

**First, fill in cells C2:C4 with the colors that you'd like to calculate the average value for.**

Then type the following formula into cell D2:

**=AvgCellsByColor(\$A\$2:\$A\$11, C2)**

Drag and fill this formula down to each remaining cell in column D and the formula will automatically calculate the average value for each of the cells that have specific background colors:

	A	B	C	D	E	F
1	<b>Values</b>					
2	20		Light Green	17.66667		
3	13		Light Blue	17.75		
4	15		Light Orange	23		
5	18					
6	20		Light Green			
7	24		Light Orange			
8	26		Light Blue			
9	30		Light Orange			
10	12		Light Blue			
11	15		Light Orange			
12						
13						
14						
15						

For example, we can see that the average value of the cells with a light green background is 17.67.

We can confirm this by manually calculating the

**average of each cell with a light green background:**

**Average of Cells with Light Green Background:  $(20 + 13 + 20) / 3 = 17.67$ .**

**This matches the value calculated by our formula.**

**The following tutorials explain how to perform other common operations in Excel:**

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