More on Graphing Using Excel 2

Pie Chart

2-D Pie Chart

Essential Elements in the Human Body

Element	Percent by Mass*	Element	Percent by Mass*
Oxygen	65	Sodium	0.1
Carbon	18	Magnesium	0.05
Hydrogen	10	Iron	<0.05
Nitrogen	3	Cobalt	<0.05
Calcium	1.6	Copper	<0.05
Phosphorus	1.2	Zinc	<0.05
Potassium	0.2	Iodine	<0.05
Sulfur	0.2	Selenium	<0.01
Chlorine	0.2	Fluorine	<0.01

*Percent by mass *gives the mass of the element in grams present in a 100-g sample.*

Our goal is to create a 2-D pie graph for the table above.

- Open new worksheet and rename Sheet as 2-D Pie
- Insert these data into a worksheet as follows:

	A	B
1	Element	Percent by Mass
2	O	65
3	C	18
4	H	10
5	N	3
6	Ca	1.6
7	P	1.2
8	K	0.2
9	S	0.2
10	Cl	0.2
11	Na	0.1
12	Mg	0.05
13	Fe	<0.05
14	Co	<0.05
15	Cu	<0.05
16	Zn	<0.05
17	I	<0.05
18	Se	<0.01
19	F	<0.01

- Now let group the element from K (cell A8) to F (cell A19) into a single cell named Other and reinsert your data in column **D** and **E** as follows:

D	E
Element	Percent by Mass
O	65
C	18
H	10
N	3
Ca	1.6
P	1.2
Others	

- In cell E8, type the following formula

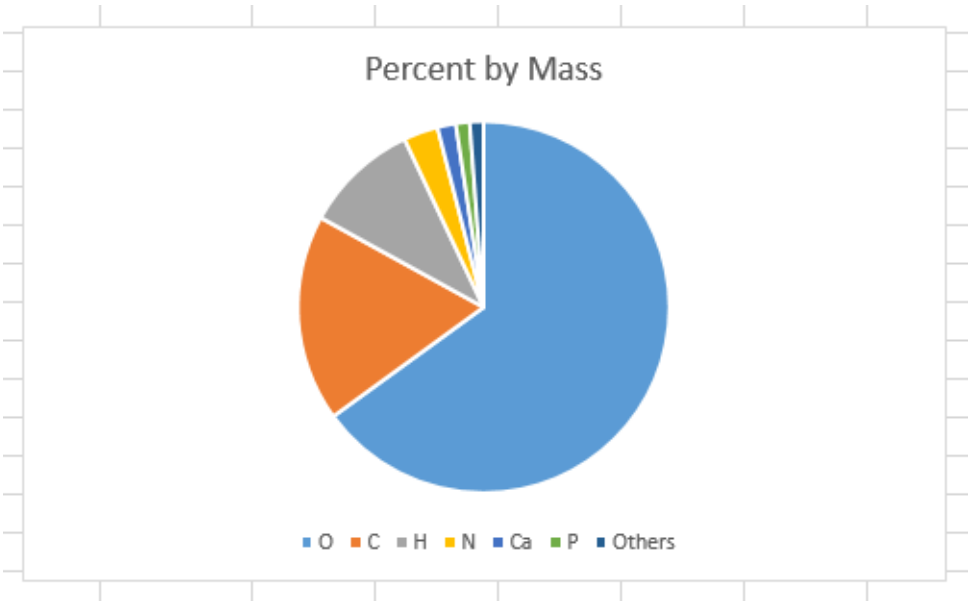
  =100-sum(E2:E7)

  Make sure you get **1.2**

- Select your data as follows

D	E
Element	Percent by Mass
O	65
C	18
H	10
N	3
Ca	1.6
P	1.2
Others	1.2

- From chart options choose Insert Pie or Doughnut Chart and choose Pie from 2-D pie menu. You should get the following graph



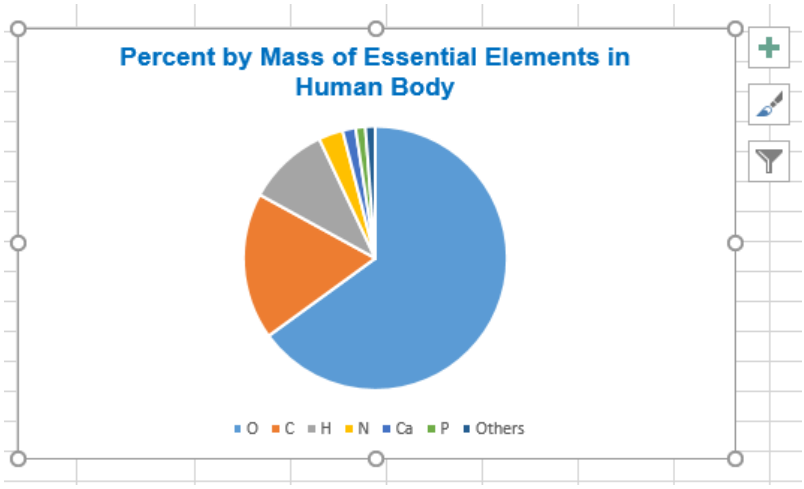
Now, let us do some formatting of the chart.

- Click on the chart title to edit it and modify it to become

Percent by Mass of Essential Elements in the Human Body

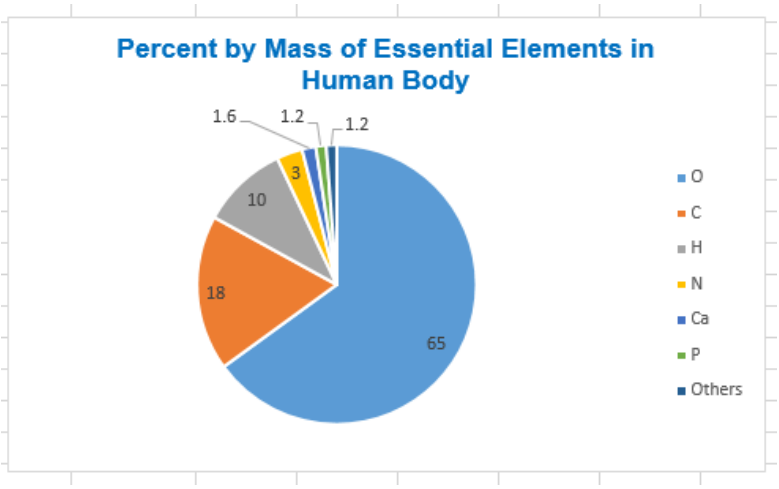
Format chart title as follows:
(Font size: 14, Color: Blue, Font: Arial, Bold)

- Click on your chart to get the formatting option on the top right as in the figure below



From **+** option (Chart Elements) do the following
Labels > Best fit
Legend > Right

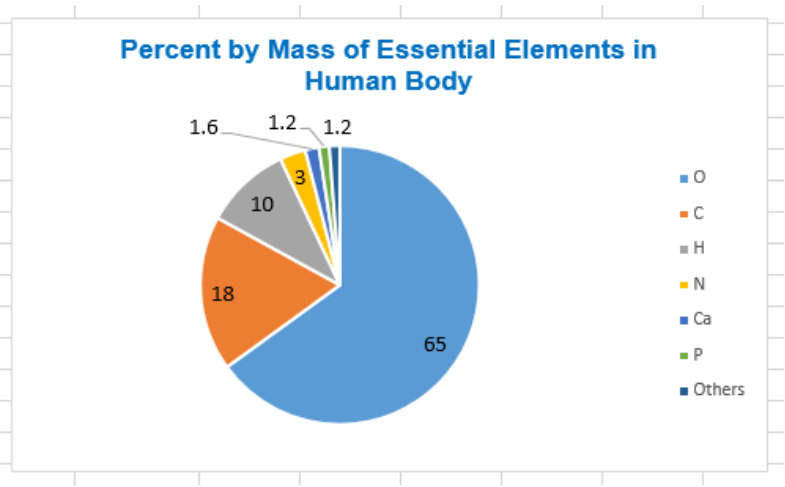
Your chart show become as follows:



Now let do more formatting on the chart

- Click on the numbers (labels) to edit them and make the following formatting: Font size: 11, Font: Calibri (Body), Color: Black
- Click on the legend to edit them and make the Font size: 12

Your Final Figure should look like

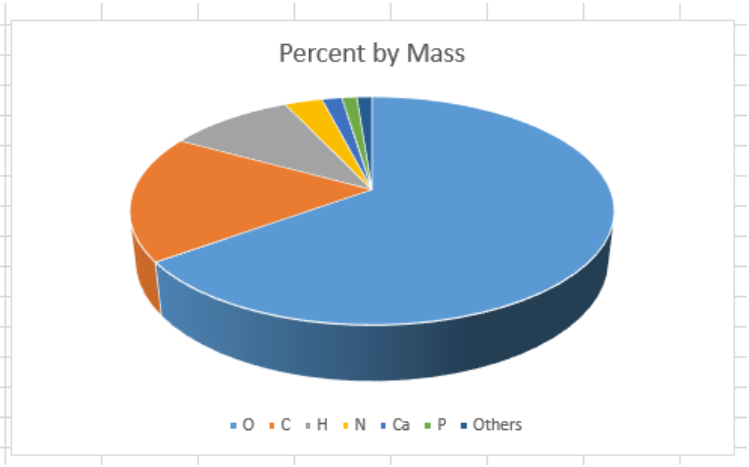


3-D Pie Chart

- Insert new sheet and rename it as 3-D Pie
- Copy data in column D and E form 2-D Pie sheet and past them go to cell A1 in 3-D Pie sheet and paste them.

	A	B
1	Element	Percent by Mass
2	O	65
3	C	18
4	H	10
5	N	3
6	Ca	1.6
7	P	1.2
8	Others	1.2

- Select your data and go to chart options and choose insert Pie or Doughnut Chart and choose Pie from 2-D pie menu. You should get the following graph



Now, let us do some formatting of the chart.

- Click on the chart title to edit it and modify it to become
  Percent by Mass of Essential Elements in the Human Body

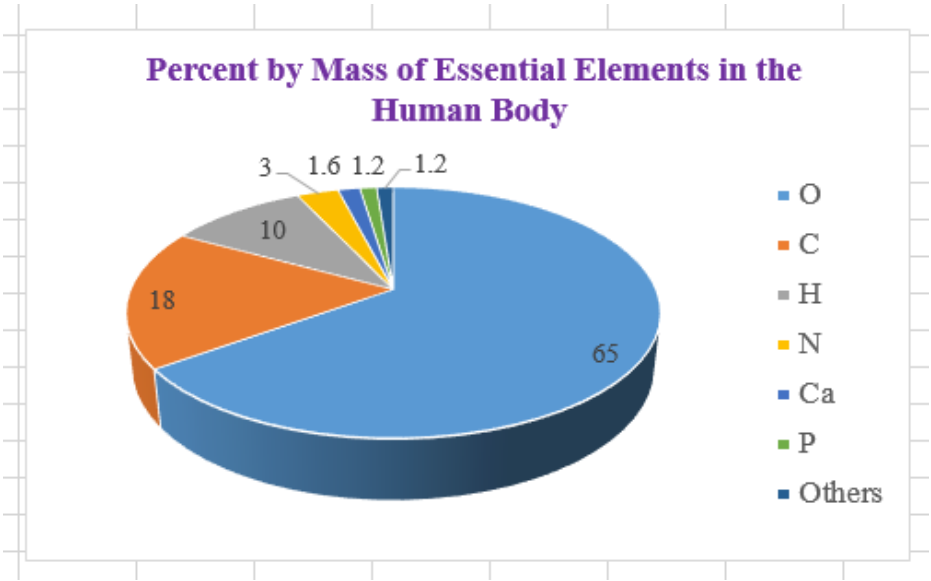
  Format chart title as follows:
  (Font size: 14, Color: Purple, Font: Times New Roman, Bold, italic)

- Click on your chart to get the formatting option on the top right
  From **+** option (Chart Elements) do the following
  Labels > Best fit
  Legend > Right

- Click on the legend and do the following
  Font size = 13, Font: Times New Romans

- Click on the numbers (labels) to edit them and make the following formatting:
  Font size: 11, Font: Times New Roman, Color: Black
- Click on the legend to edit them and make the Font size: 12

Your Final Figure should look like



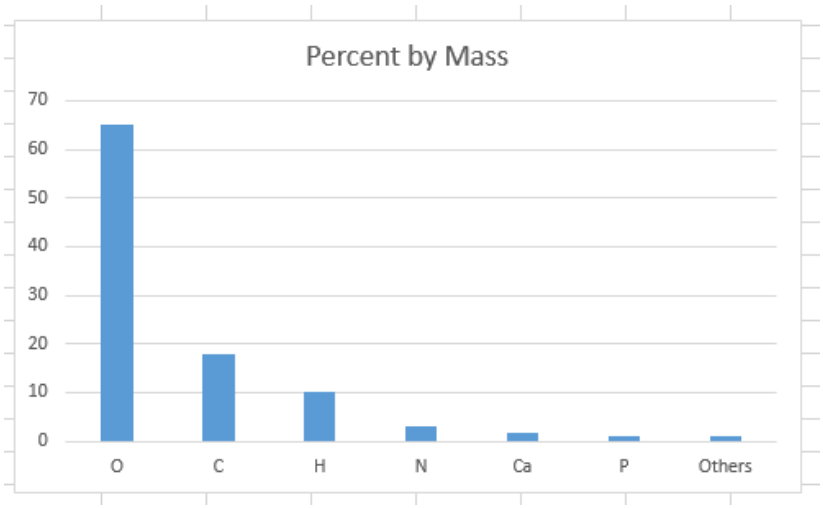
Column Chart

2-D Column

- Insert new sheet and rename it as 2-D Column
- Copy data in column A and B form 3-D Pie sheet and past them go to cell A1 in 2-D Column sheet and paste them.

	A	B
1	Element	Percent by Mass
2	O	65
3	C	18
4	H	10
5	N	3
6	Ca	1.6
7	P	1.2
8	Others	1.2

- Select your data and go to chart options and choose insert *Column or Bar Chart*. From 2-D Colum menu Choose Clustered Column. You should get the following graph



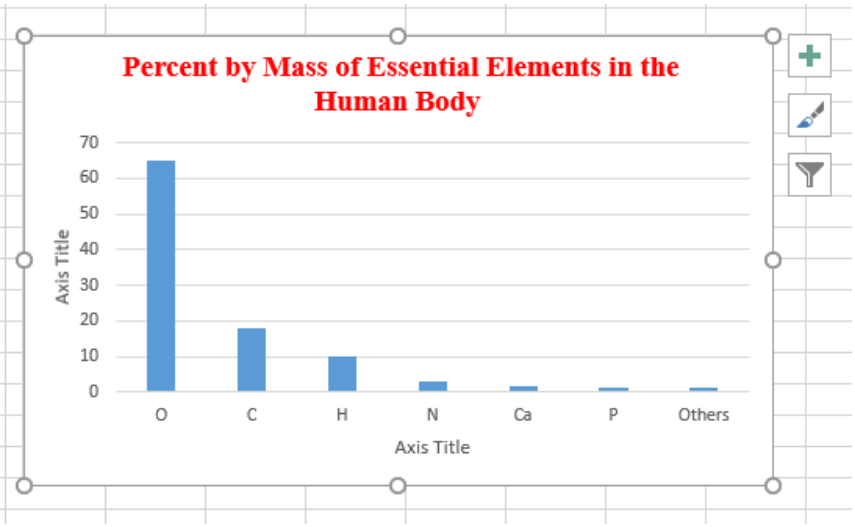
Now, let us do some formatting of the chart.

- Click on the chart title to edit it and modify it to become

Percent by Mass of Essential Elements in the Human Body

Format chart title as follows:
(Font size: 14, Color: Red, Font: Times New Roman, Bold, italic)

- Click on your chart to get the formatting option on the top right as in the figure below

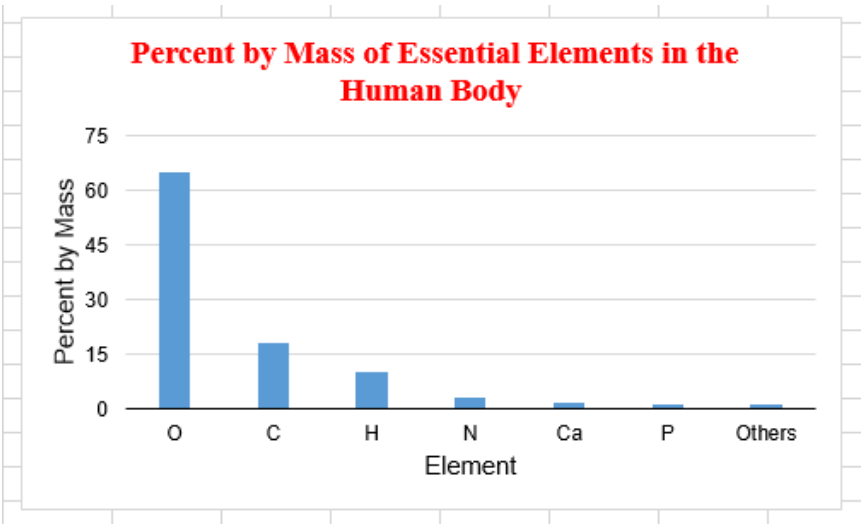


- From **+** option (Chart Elements) check the box Axis Titles and the titles will appear on your chart.
    - Edit x-axis and rename as Element and format it as follows
      (Font size: 11, Font: Arial, Color: Black)
    - Edit y-axis and rename as Percent by Mass
      (Font size: 11, Font: Arial, Color: Black)

- Click on the Element Symbol (x-axis values) to edit them and make the following formatting:
  Font size: 9, Font: Arial, Color: Black
- Format x-axis line to become Black

- Click on the Percent by Mass labels (y-axis values) to edit them and make the following formatting:
  Font size: 9, Font: Arial, Color: Black
  Maximum: 75, Minimum: 0, Major: 15, Minor: 0

  Your Final Chart will become as follows:

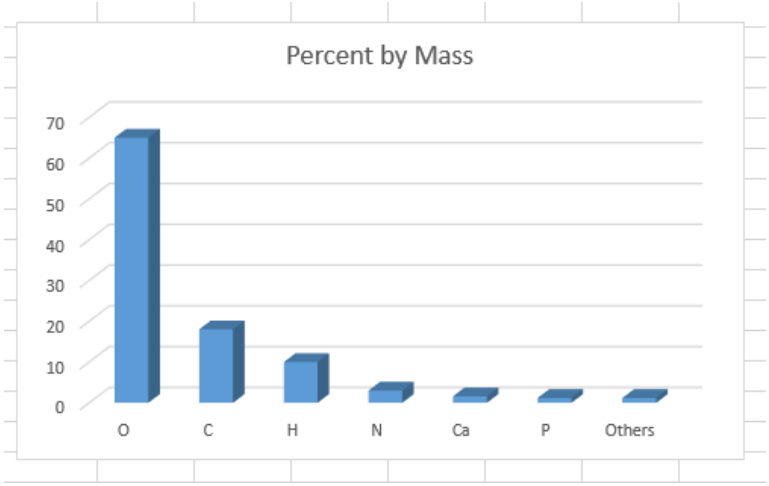


3-D Column

- Insert new sheet and rename it as 3-D Column
- Copy data in column A and B form 2-D Column sheet and past them go to cell A1 in 3-D Column sheet and paste them.

	A	B
1	Element	Percent by Mass
2	O	65
3	C	18
4	H	10
5	N	3
6	Ca	1.6
7	P	1.2
8	Others	1.2

- Select your data and go to chart options and choose insert *Column or Bar Chart*. From 3-D Colum menu Choose Clustered Column. You should get the following graph



Now, let us do some formatting of the chart.

- Click on the chart title to edit it and modify it to become

  Percent by Mass of Essential Elements in the Human Body

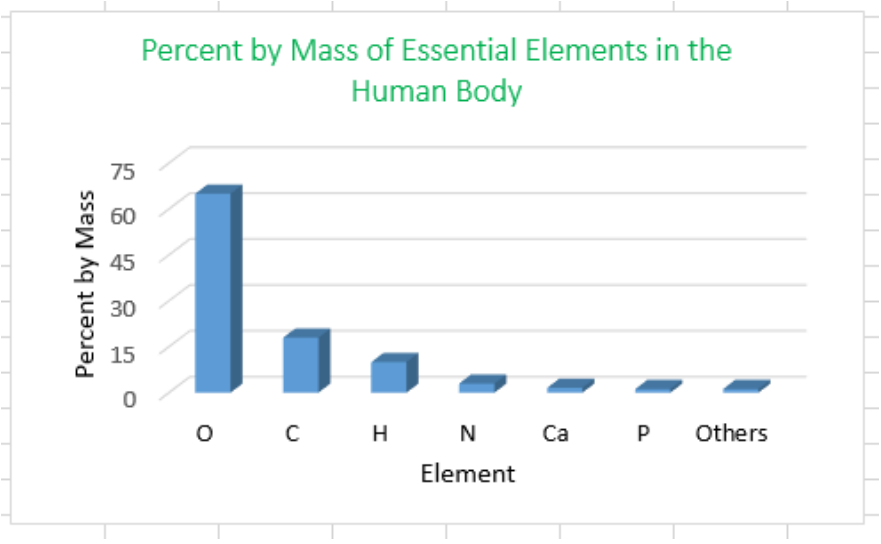
  Format chart title as follows:
  Font size: 14, Color: Green, Font: Calibri Light (non-bolded typeface)

- Click on your chart to get the formatting option on the top right
  From **+** option (Chart Elements) check the box Axis Titles and the titles will appear on your chart.
  - Edit x-axis and rename as Element and format it as follows
    (Font size: 12, Font: Calibri (Body), Color: Black)
  - Edit y-axis and rename as Percent by Mass
    (Font size: 12, Font: Calibri (Body), Color: Black)

- Click on the Element Symbol (x-axis values) to edit them and make the following formatting:
  Font size: 11, Font: Calibri (Body), Color: Black

- Click on the Percent by Mass labels (y-axis values) to edit them and make the following formatting:
  Font size: 11, Font: Calibri (Body), Color: Black
  Maximum: 75, Minimum: 0, Major: 15, Minor: 0

  Your Final Chart will become as follows:



Now, click on any column on your chart to open Format Data Series window on left.

From Series options >> column type >> cylinder

From Series options >> Fill >> Solid line >> Color >> Light Green

Your chart will look as follows: