How to Use Excel AGGREGATE Function with Multiple Criteria (3 Examples)

If you are searching for some special tricks to use the Excel AGGREGATE function with multiple criteria then you have landed in the right place. There are some tricks in using the AGGREGATE function with multiple criteria in Excel. This article will show you each and every step with proper illustrations so, you can easily apply them for your purpose. Let’s get into the central part of the article.

## Download Practice Workbook

You can download the practice workbook from here:

## Overview of AGGREGATE Function

The **AGGREGATE** function is used on different functions like **AVERAGE**, **COUNT**, **MAX**, **MIN**, **SUM**, **PRODUCT** etc., with the option to ignore hidden rows and error values to get certain results.

**Syntax of AGGREGATE Function**

* Syntax with References

=AGGREGATE(function\_num, options, ref1, ref2, …)

* Syntax with Array Formula

=AGGREGATE(function\_num, options, array, [k])

**Descriptions of the Arguments:**

1. **function\_num** = It is a required Argument and defines which task to to do. There are **19 functions** are available to perform with the **AGGREGATE** function. Each function is defined by individual numbers. (see the table below)

| **FUNCTION NAME** | **Function Number** |
| --- | --- |
| AVERAGE | 1 |
| COUNT | 2 |
| COUNTA | 3 |
| MAX | 4 |
| MIN | 5 |
| PRODUCT | 6 |
| STDEV.S | 7 |
| STDEV.P | 8 |
| SUM | 9 |
| VAR.S | 10 |
| VAR.P | 11 |
| MEDIAN | 12 |
| MODE.SNGL | 13 |
| LARGE | 14 |
| SMALL | 15 |
| PERCENTILE.INC | 16 |
| QUARTILE.INC | 17 |
| PERCENTILE.EXC | 18 |
| QUARTILE.EXC | 19 |

1. **Options** = **Required**, **values** to **ignore**. There are **7 values** each representing the option to **ignore** while performing the operations with the functions defined.

| **OPTION NUMBER** | **OPTION NAME** |
| --- | --- |
| 0 or omitted | Ignore nested SUBTOTAL and AGGREGATE functions |
| 1 | Ignore hidden rows, nested SUBTOTAL and AGGREGATE functions |
| 2 | Ignore error values, nested SUBTOTAL and AGGREGATE functions |
| 3 | Ignore hidden rows, error values, nested SUBTOTAL and AGGREGATE functions |
| 4 | Ignore nothing |
| 5 | Ignore hidden rows |
| 6 | Ignore error values |
| 7 | Ignore hidden rows and error values |

1. **Ref1 = Required**, the first **numeric argument** for functions to perform the operation. It could be **one single** value, **array** value, **cell reference,** etc.
2. **Ref2 = Optional**, it could be numeric values from **2 to 253.**
3. **Array** = Required for **Array** Formula. It is the range of **numbers** or **cell references** based on the **performance** of the **functions**.
4. **[k]** = **Optional in Array** Formula, this argument is needed only when performing with the **function number from 14 to 19**.

## 3 Examples to Use Excel AGGREGATE Function with Multiple Criteria

In this section, I will show you the quick and easy steps to use the **Excel AGGREGATE function** with **multiple criteria** on Windows operating system. You will find detailed explanations with clear illustrations of each thing in this article. I have used [**Microsoft 365 version**](https://support.microsoft.com/en-us/office/download-and-install-or-reinstall-microsoft-365-or-office-2021-on-a-pc-or-mac-4414eaaf-0478-48be-9c42-23adc4716658) here. But you can use any other versions as of your availability. If anything of this article doesn’t work in your version then leave us a comment.

### Example 1: Find the nth Smallest Value Using AGGREGATE Function with Multiple Criteria

In this example, I will show you how you can use the **AGGREGATE** function to find the lowest or **nth** lowest value meeting **multiple** criteria. I have a **dataset** where I have columns containing persons’ **first names**, **IDs**, **Names** of **Cities** where they **live**, and Ages. So, I want to get the values of the **lowest** age among the persons whose name is “**James**” and who live in **Houston** city.

**📌 Steps:**

* For this, first assign **2 cells** to get input of the **Name** and **City**. I have assigned cell **H4** for **First Name** and **H5** for **City**.
* Then, assign a cell to get the **lowest age** following the **previously** mentioned **criteria.**

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* Then, insert the following formula into cell H7:

=AGGREGATE(16,6,E5:E20/((H4=B5:B20)\*(H5=D5:D20)),1)

**🔎 Formula Breakdown:**

=AGGREGATE(function\_num, options,array, [k])

* Function\_num = 16: It is used to find the smallest value of the selected range.
* Options = 6: It commands to ignore the error values.
* Array = E5:E20/((H4=B5:B20)\*(H5=D5:D20)): It defines the criteria for the array **E5:E20**. The first criterion is to match the cell H4 in range B5:B20 and the second criterion is to match cell H5 in range D5:D20.
* [k] = 1: Here, 1 is used to get the lowest value in the range meeting the criteria and you can use 2,3, or n to find the 2nd, 3rd, or nth smallest values of the specified range.

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* Thus, you have got the **lowest age** of people named “**James**” and living in “**Houston**” city using the **AGGREGATE** function.
* You can also get the 2nd, 3rd, or nth smallest value by assigning the fourth argument, k accordingly.

✅Note:

Multiple criteria in the array of the **AGGREGATE** function are only applicable for function numbers **14** to **19**.

### Example 2: Find the nth largest Value Using **AGGREGATE Function** with Multiple Criteria

Similarly you can use the **AGGREGATE** function to get the **Highest** of **largest** value of the range which meets the criteria. For this, you have to specify the **Function\_Num** as **14** which works to find the largest value. Insert the following formula into cell **H7** to find the **largest** value:

=AGGREGATE(14,6,E5:E20/((H4=B5:B20)\*(H5=D5:D20)),1)

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### Example 3: Find the Percentile Using **AGGREGATE Function** with Multiple Criteria

**AGGREGATE Percentile** in Excel calculates the **k-th** percentile for a set of data. A percentile is a value below which a given percentage of values in a data set fall.

For this, you have to specify the **Function\_Num** as **16** which works to find the **Percentile**. The value of **k** can be **decimal or percentage-wise**. Meaning, for the 10th percentile, the value should be entered as 0.1 or 10%. Insert the following formula into cell **H7** to find the **Percentile**:

=AGGREGATE(16,6,E5:E20/((H4=B5:B20)\*(H5=D5:D20)),0.1)

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Similarly, you can calculate **Quartile** and **Percentile** values using the corresponding Function Number mentioned above.

## Using INDEX Function with AGGREGATE Function in Excel for Multiple Criteria

In this case, I will show you how to combine **INDEX** and **AGGREGATE Functions** in Excel to calculate the total **sum** of given data in a certain period. We will do this by the following steps.

**📌 Steps:**

* First, arrange a dataset like the following image.

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* Next, in the **C13** cell insert the name of the desired customer similar to the following image.
* After that, in the **C14** cell insert the following formula.

=AGGREGATE(9,0,INDEX(C6:E11,,MATCH(C13,C5:E5,0)))

**🔎 Formula Breakdown:**

* **MATCH(C13, C5:E5,0) = 3:** The [**MATCH function**](https://www.exceldemy.com/excel-match-function/) works to find for the matches of cell C13 in the range C5:E5..
* **INDEX(C6:E11, ,MATCH(C13, C5:E5,0)) = {1200;900;1000;1000;3000;100}:** The [**INDEX function**](https://www.exceldemy.com/index-function-excel/) works return the cells of the column specified by the **Match** function.
* **AGGREGATE(9,0,INDEX(C6:E11,,MATCH(C13,C5:E5,0)))):** The **AGGREGATE** function sums the list made by the **INDEX** function.

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* Finally, you will get the desired result similar to the following image.

## Conclusion

In this article, you have found how to use the **Excel AGGREGATE function** with **multiple criteria**. I hope you found this article helpful. You can visit our website [**ExcelDemy**](http://www.exceldemy.com) to learn more Excel-related content. Please, drop comments, suggestions, or queries if you have any in the comment section below.