

Balance

Waage

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Balance

In the lab, chemicals are weighed in using different balances.

If a high accuracy **is not** necessary (like during preparative work), a laboratory balance is used (top picture). Accuracy: ± 0.1 g

If a high accuracy **is** necessary (like during analytical work), an analytical balance is used (bottom picture). Accuracy: ± 0.0001 g





Laboratory and analytical balances are expensive precision instruments that should always be treated appropriately and with care!

Contaminations should be prevented or directly removed.



Frequently switching laboratory and analytical balances on and off should be avoided.

Laboratory Balance

A sample container (e.g. a watch glass) is placed on the weighing plate.

To prevent the sample container from being weighed, the balance is tared (TARA).



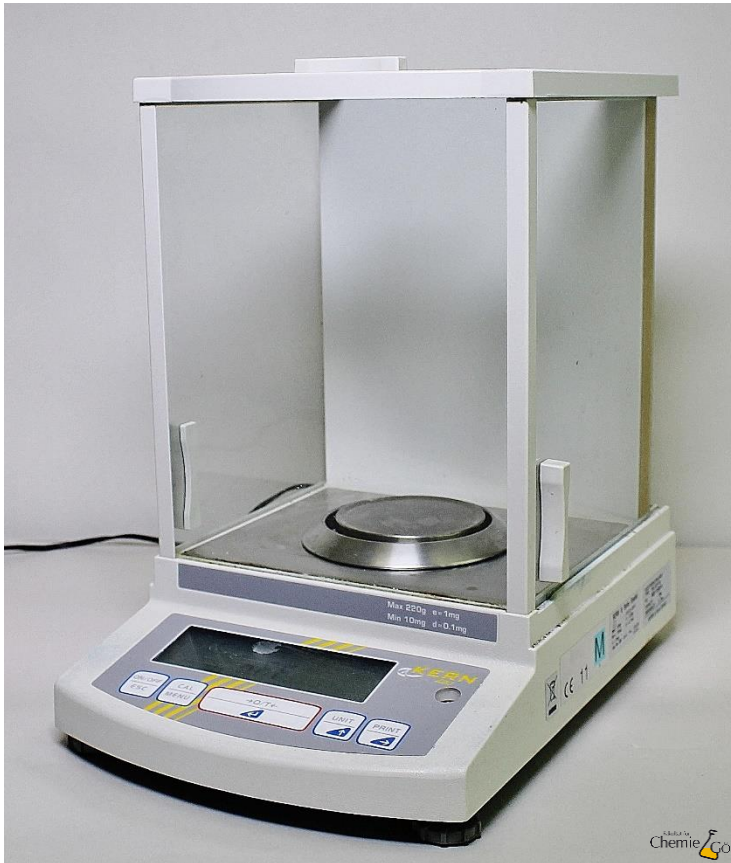
The desired amount of the substance is weighed out and the displayed value is noted down.

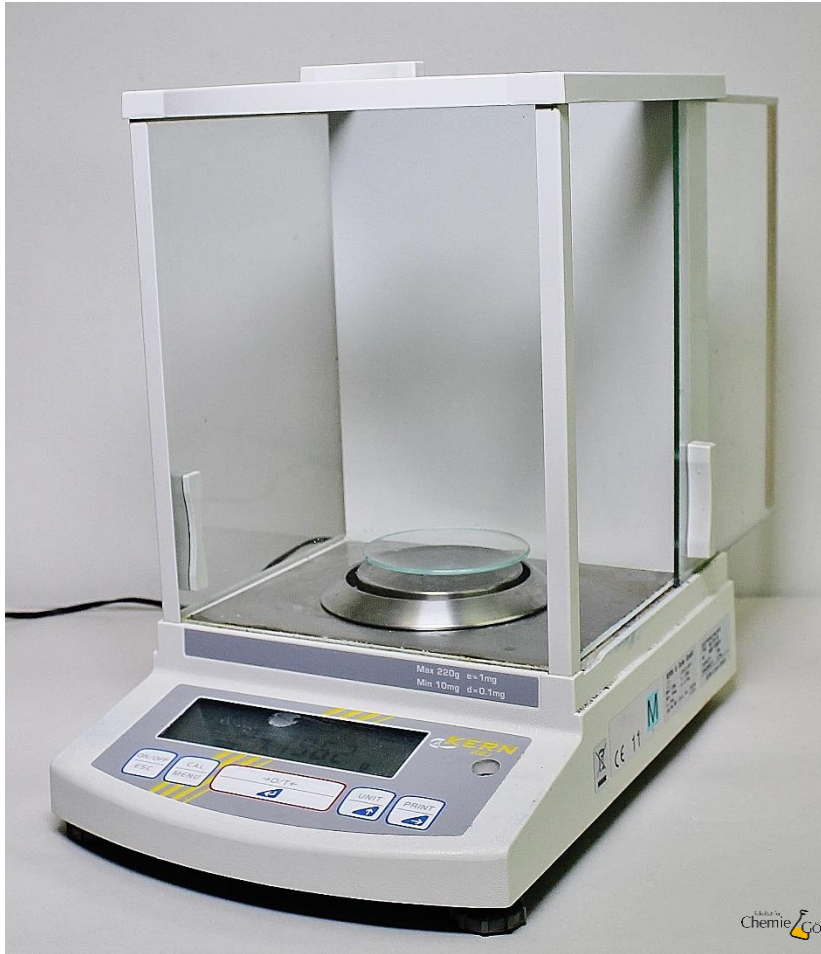


The sample container is removed from the weighing plate and the balance is tared. If necessary, the surface is cleaned with a paper towel.

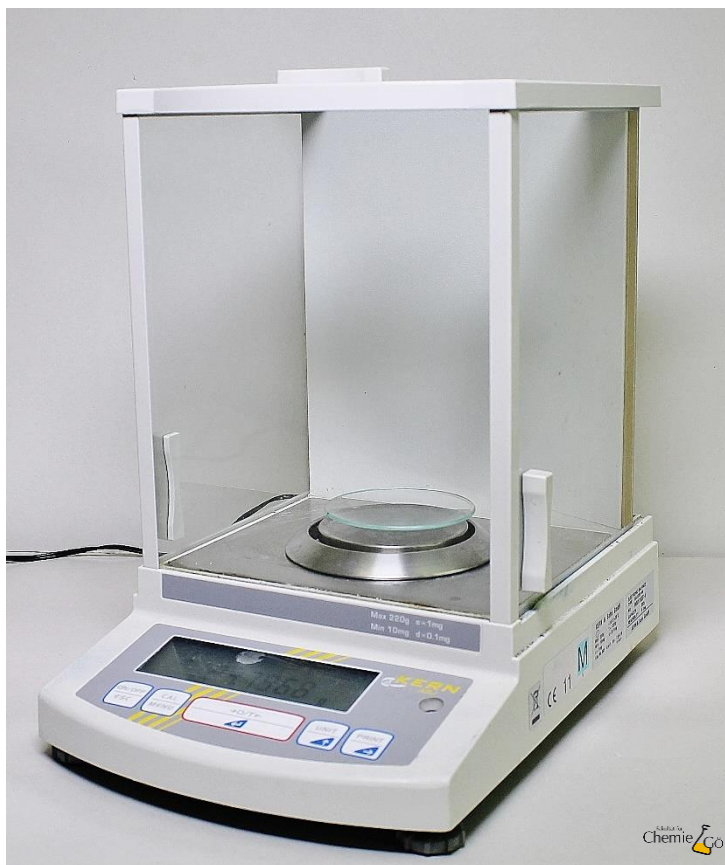
Analytical Balance

Before use, the balance must be tared to 0 with closed side windows.



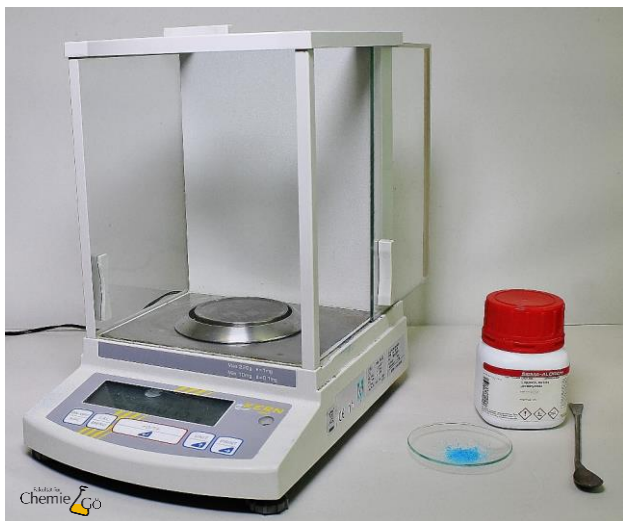


After opening the side window, a sample container (here: watch glass) is placed on the weighing plate.



The side window is closed and after some time the weight of the sample container can be noted down.





The sample container is removed and a substance is added to it.



Subsequently, the sample container with the substance is placed on the weighing plate.

Once again the side window is closed and after some time the weight is noted down.





Finally, the difference between the two values is calculated to determine the exact weight of the sample.

