

§2.1.1 Accuracy and Precision — Evaluation of the results

I. accuracy—the closeness of the experimental value to the true value.

Accuracy is expressed by the error .

Error includes Absolute Error and Relative Error.

II. Precision—the agreement between values in a set of data

Precision is expressed by deviation.

Deviation means the difference between an experimental value and the average value.

III. The relationship between accuracy and precision:

Precision is the prerequisite of accuracy.

Precision is good, but accuracy might be good or poor.

The main difference of them is the presence of systematic errors .

If the precision is good, then accuracy is also good after eliminating the systematic errors.

IV. Relative Deviation and Absolute Deviation

Absolute deviation: the difference between an experimental value and the average value.

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