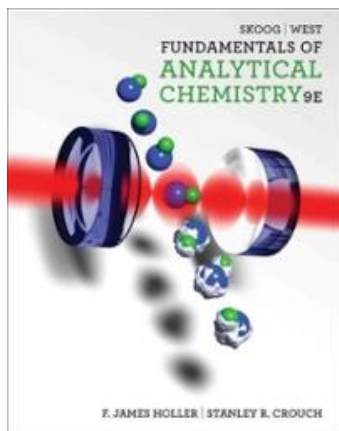


STATISTICS IN CHEMISTRY

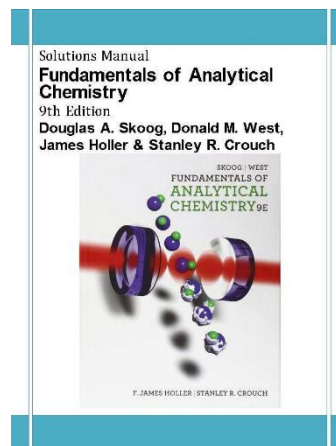


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1. Skoog DA, West DM, Holler FJ, Crouch SR. Fundamentals of Analytical Chemistry. Nelson Education; 2013.
2. Skoog DA, West DM, Holler FJ, Crouch SR. Solutions Manual of Fundamentals of Analytical Chemistry. Nelson Education; 2013.

Significant figures

Significant figures

A significant number is the exact number and the first uncertain number. For significant figures, the last digit is always considered ambiguous. Whether or not zero is significant depends on the place of zero. The zero between the two numbers is always taken as a significant number. The zero used for locating the comma is meaningless.

Determination of meaningful figures in numerical calculations

Addition and subtraction

In addition and subtraction, a significant figure is found by visual inspection. The calculated result should be rounded to the same number of digits after the comma, whichever number contains the least number after the comma.

Multiplication and division

In multiplication and division, the number of significant digits in the result figure is equal to that of the least significant number of digits in the operation.

Logarithm and antilogarithm

In the logarithm of a number, after the comma, the number of significant digits in the original number is taken.

In the antilogarithm of a number, the original number is taken as the number of digits after the comma.

Rounding of data

When rounding the data, the number to the right of the digit to be rounded is checked. If this number is less than 5, the numbers on the right are discarded and the number is left unchanged. If the number on the right side is greater than 5, the numbers on the right side are discarded and the number is increased by one. If the number on the right is 5, then the number to be rounded is rounded to the nearest even number.