

EXTERNAL STANDARD CALIBRATION



For an external standard quantitation, known data from a calibration standard and unknown data from the sample are combined to generate a quantitative report.

It is called external standard because the standard or known material is separate or external to the unknown material.

*Ref: Hewlett Packard Reference Manual Volume II,
Report Calculations, Page 16-18*



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- It involves a simple comparison of instrument responses from the sample to the responses from the target compounds in the calibration standards.

Ref: SW846, 8000C, Section 11.4.2, Revision 3, March 2003



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Equation for Calibration Factor

(External Standard Curve)

$$CF = (A_x)/(C_x)$$

Where: A_x = Area of the compound
 C_x = Concentration of the compound



Benefits

The advantages of external standard calibration are that it is simple to perform this type of calibration and it can be applied to a wide variety of methods.

*Ref: SW846, 8000C, Section 11.4.2, Revision 3,
March 2003*



Disadvantage

Its primary disadvantage is that it is greatly affected by the stability of the chromatographic detector system and the presence of chromatographic interferences in a sample or sample extract.

*Ref: SW846, 8000C, Section 11.4.2, Revision 3,
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