

THE FIVE STEPS OF ANALYSIS



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The Five Steps

- ◆ Sampling and Sample Preservation
- ◆ Sample Preparation
- ◆ Use of Standards
- ◆ Procedure
- ◆ Calculations and Interpretation



Sampling and Sample Preservation

- ◆ Extreme care should be taken when obtaining and preserving a sample to insure that it is representative of the investigation site.





Sampling and Sample Preservation

- ◆ Follow the correct sampling protocol for the test and the type of sample being measured.





Sampling and Sample Preservation

- ◆ Sample preservation techniques
 - pH adjustment
 - Proper temperature
 - containers



Sample Preparation

- ◆ Filtration
- ◆ Dilution
- ◆ Distillation
- ◆ Digestion
- ◆ Extraction
- ◆ pH adjustment





Use of Standards

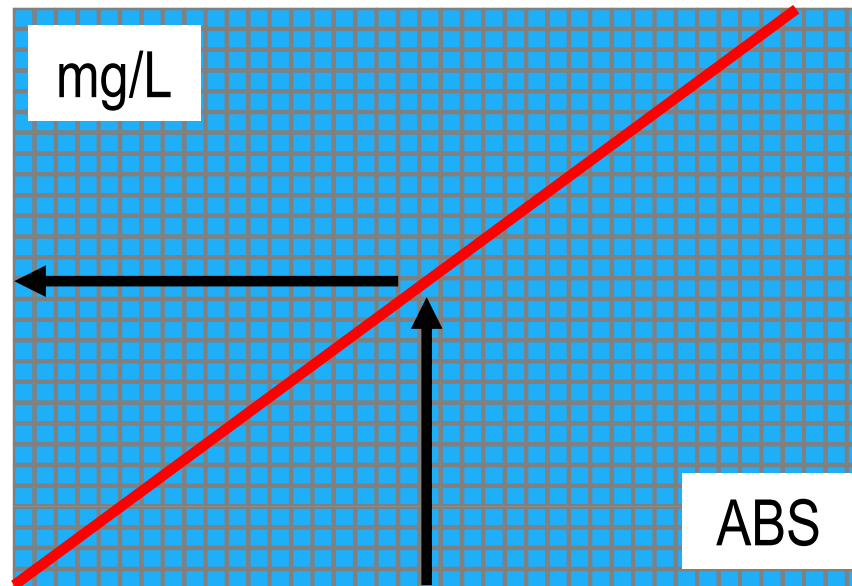
- ◆ Calibration Standards
- ◆ Accuracy Check
 - Standard Solution



Use of Standards

◆ Calibration Standards

- Used to prepare a standard curve





Use of Standards

◆ Standard Solutions

- Verify technique, chemistry, and instrumentation
- Am I running the test correctly?





Procedure

- ◆ Make sure that the procedure is correct for:
 - Analyte
 - Type of sample
 - Concentration range





Calculations And Interpretation

- ◆ The final step
 - Ensure measurement is expressed in proper units
 - Perform any required calculations

