Another Yardstick

- Consensus Reports

magruder fertilizer
check sample program

STRIVING FOR EXCELLENCE IN ANALYSIS

Consensus Report

A Quality Reference Material

Magruder Check Sample # 160111

Micro Mix

Analyte	Value	± Uncertainty	# Labs
Soluble Potassium as K2O (%)	0.177	2.05E-02	7
Acid Soluble Calcium (%)	2.263	4.42E-02	11
Acid Soluble Magnesium (%)	0.6692	2.55E-02	12
Total Sulfur (%)	0.201	4.58E-02	7
Acid Soluble Boron (1.5%)	1.547	1.53E-02	51
Acid Soluble Cadmium (ppm)	4.473	3.34E-01	7
Acid Soluble Chromium (ppm)	73.96	7.01E+00	7
Acid Soluble Cobalt (ppm)	155.4	1.28E+01	6
Acid Soluble Copper (3%)	3.942	3.37E-02	66
Acid Soluble Iron (18%)	18.41	2.17E-01	65
Acid Soluble Lead (ppm)	469.3	1.31E+01	6
Acid Soluble Manganese (7.5%)	8.249	7.37E-02	61
Acid Soluble Molybdenum (200ppm)	195.2	1.32E+01	24
Acid Soluble Nickel (ppm)	114.4	1.04E+01	6
Sodium (%)	0.5633	1.09E-02	7
Acid Soluble Zinc (7%)	8.163	6.53E-02	67

Standard Deviation (sdev) & Standard Error (serr)

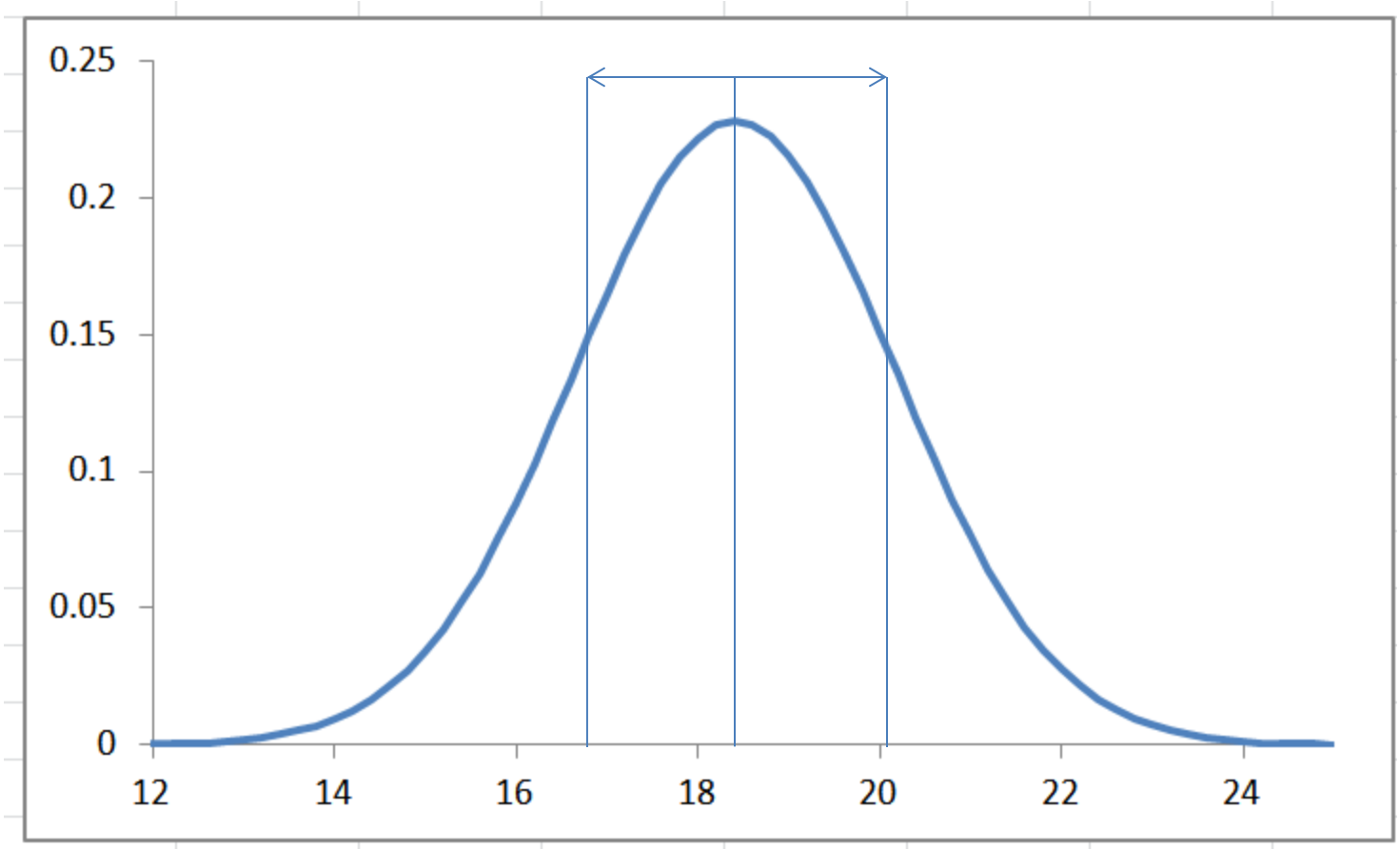
Acid-Soluble Iron in 160111

sdev: 18.41 ± 1.75

serr: 18.41 ± 0.21

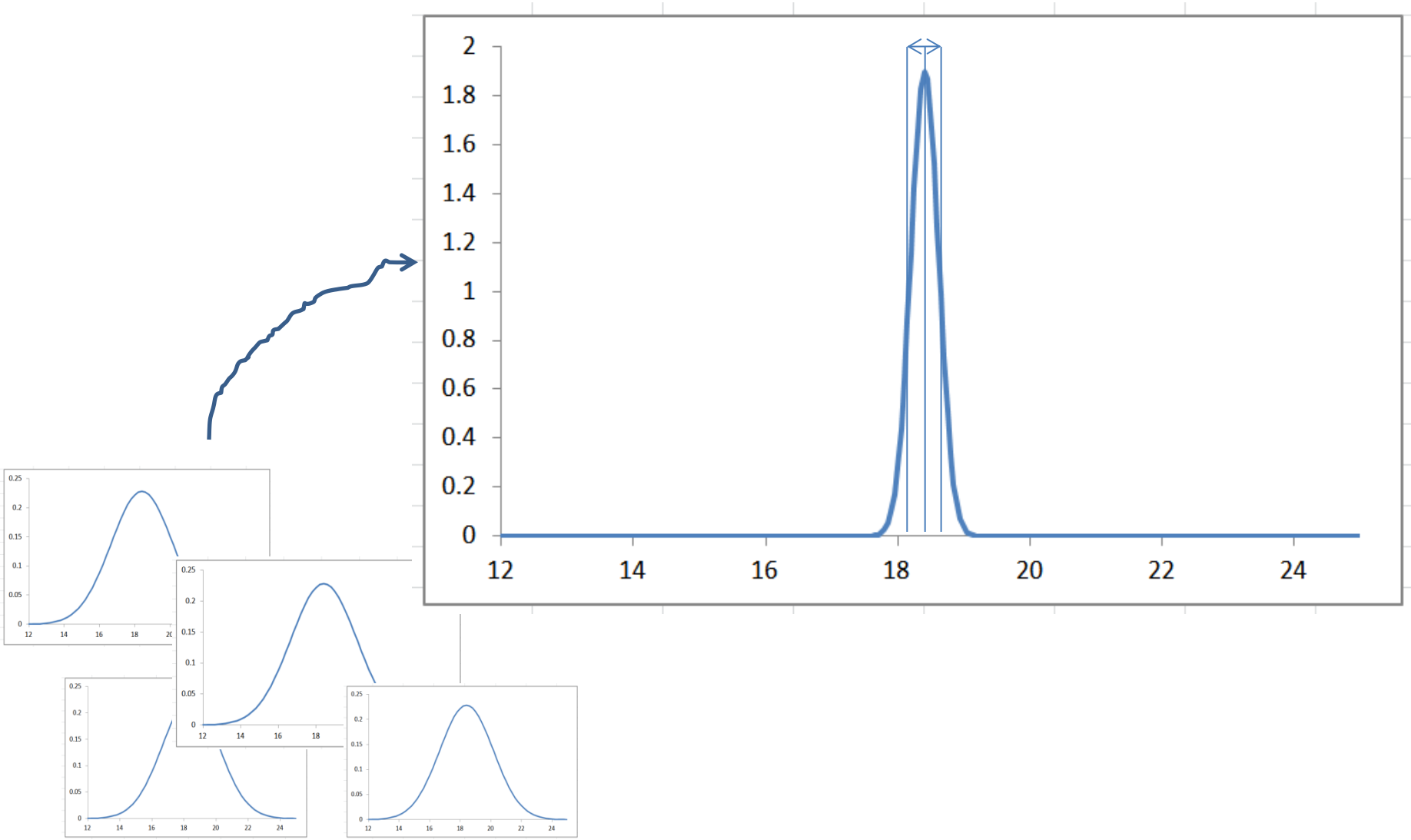
Standard Deviation

Dispersion of all results from 65 labs



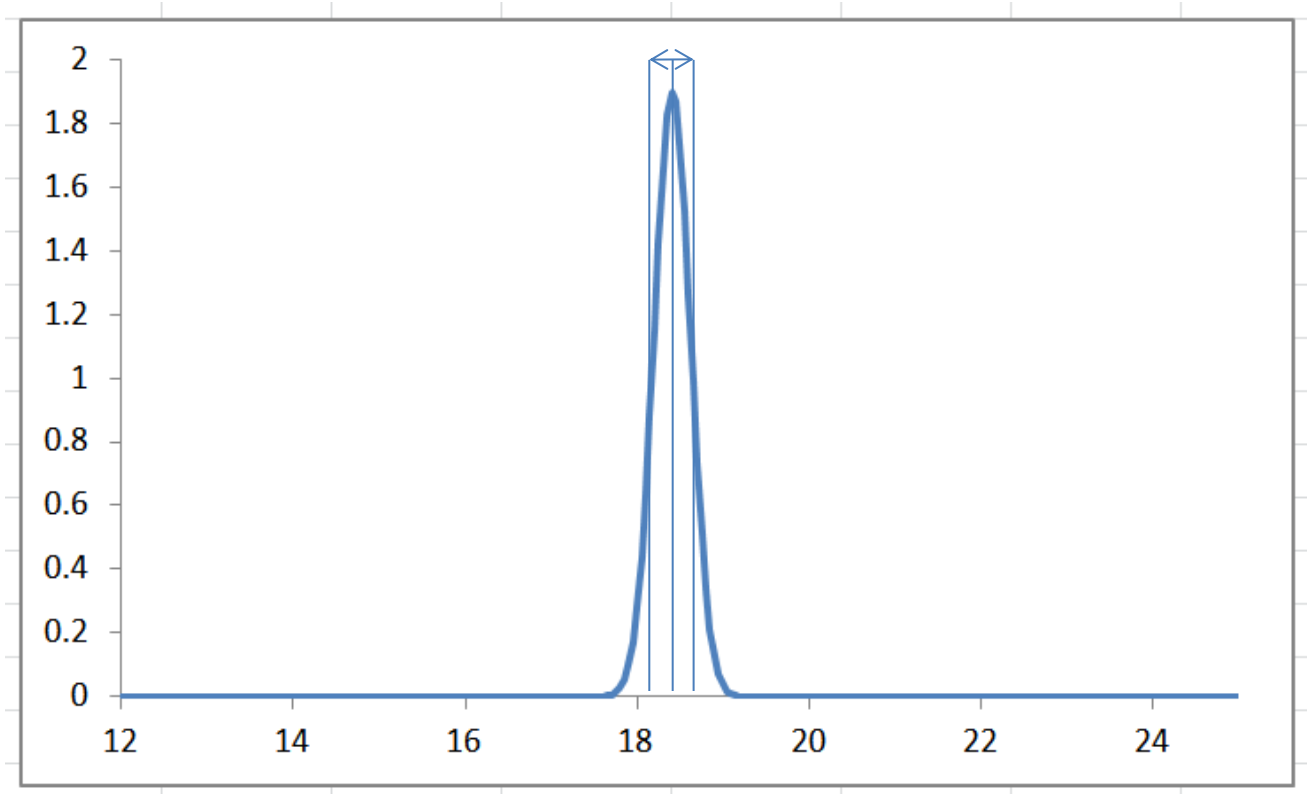
Standard Error

Dispersion of means from multiple sets of 65 labs



Standard Error

Provides estimate of the “true” mean



Standard Error

Provides estimate of the “true” mean

The higher the number of labs, the better the estimate.

Standard error = robust mean / $\sqrt{n}$