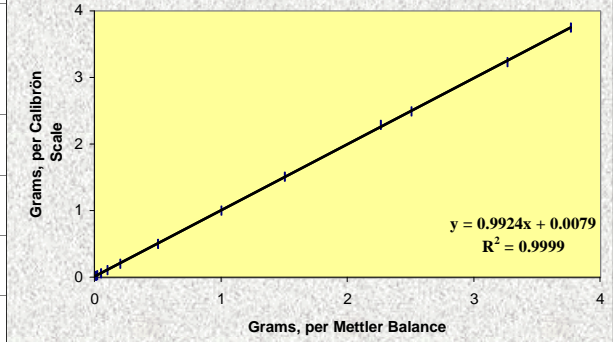
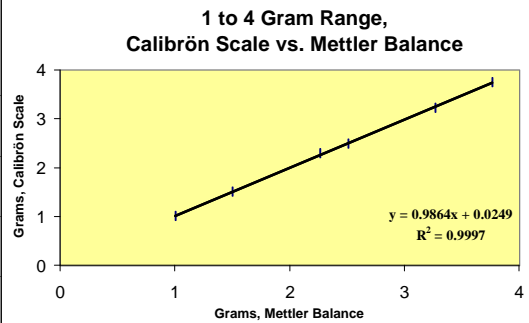
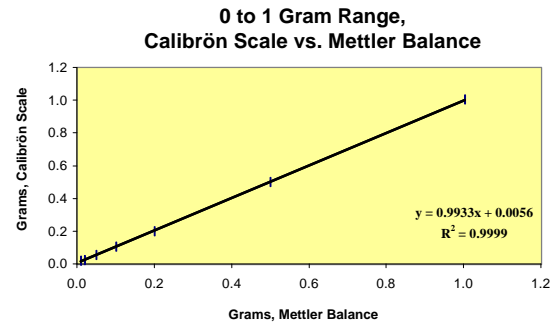


Calibrön Precision Twin Beam Gram Scale 0 to 4 Grams (0 to 20 Carats)
 A mechanical "pocket" balance

**Full 0 to 4 Gram Range,
 Calibrön Scale vs. Mettler Balance**



Calibrön Weighing Results for Twelve "Standard Masses"

Object	10 mg Ohaus Calibr. Mass	20 mg Ohaus Calibr. Mass	50 mg Ohaus Calibr. Mass	100 mg Ohaus Calibr. Mass	200 mg Ohaus Calibr. Mass	500 mg Ohaus Calibr. Mass	1,000 mg Ohaus Calibr. Mass	1,000 & 500 mg Ohaus Masses	Dime (U.S. Mint, 1992 D)	Penny (U.S. Mint, 1990 D)	Dime & 1,000 mg Ohaus Mass	Dime, 500 & 1,000 mg Ohaus Masses
Weighing 1, g	0.0250	0.0250	0.0675	0.1125	0.2000	0.5000	1.0000	1.5125	2.2500	2.4875	3.2250	3.7500
Weighing 2, g	0.0125	0.0250	0.0500	0.1000	0.2000	0.5000	1.0125	1.5000	2.2500	2.4750	3.2250	3.7625
Weighing 3, g	0.0250	0.0250	0.0500	0.1000	0.2000	0.5000	1.0000	1.5125	2.3750	2.5000	3.2375	3.7250
Statistics												
Mean of 3, g	0.0208	0.0250	0.0558	0.1042	0.2000	0.5000	1.0042	1.5083	2.2917	2.4875	3.2292	3.7458
Standard Deviation	0.007	0.000	0.010	0.007	0.000	0.000	0.007	0.007	0.072	0.012	0.007	0.019
Coefficient of Variation (CV)	34.641%	0.000%	18.096%	6.928%	0.000%	0.000%	0.719%	0.478%	3.149%	0.503%	0.223%	0.510%

Note: The 0 to 1 gram beam is divided into 0.1 gram markings, which are subdivided into 0.025 gram markings (1/4 of 0.1 gram). An analyst can easily discern the poise arrow at the "halfway" point between these "1/4 of 0.1 gram" markings. Hence, the analyst can report readings of "1/8 of 0.1 gram" = 0.0125 gram. (Hence, increments of: 0.0125, 0.0250, 0.0375, 0.0500, 0.0625, 0.0750, 0.0875, and 0.1000)

Regarding a 1 gram mass: BOTH beams of the Calibrön scale CAN take an accurate weight on a 1 gram mass.

Conclusions: The Calibrön Scale is highly accurate and shows excellent linearity across its entire range. Practically, it has the following accuracy limits:

Calibrön vs. Mettler AE 100 Summary of Weight Data,

Object	10 mg Ohaus Calibr. Mass	20 mg Ohaus Calibr. Mass	50 mg Ohaus Calibr. Mass	100 mg Ohaus Calibr. Mass	200 mg Ohaus Calibr. Mass	500 mg Ohaus Calibr. Mass	1,000 mg Ohaus Calibr. Mass	1,000 & 500 mg Ohaus Masses	Dime (U.S. Mint, 1992 D)	Penny (U.S. Mint, 1990 D)	Dime & 1,000 mg Ohaus Mass	Dime, 500 & 1,000 mg Ohaus Masses
Mean Calibrön Weight (Y)	0.0208	0.0250	0.0558	0.1042	0.2000	0.5000	1.0042	1.5083	2.2917	2.4875	3.2292	3.7458
Mean Mettler Weight (X)	0.0099	0.0200	0.0502	0.1003	0.2000	0.4998	1.0035	1.5033	2.2634	2.5086	3.2670	3.7667
Difference from Mettler Weight (g)	0.0109	0.0050	0.0056	0.0039	0.0000	0.0002	0.0007	0.0050	0.0283	-0.0211	-0.0378	-0.0209
Percent of Mettler Weight	210.101%	125.000%	111.155%	103.888%	100.000%	100.040%	100.070%	100.333%	101.250%	99.159%	98.843%	99.445%

Mass Range	Accuracy
≤ 1.00 gram	± 0.0125 gram
>1.00 gram	± 1.3%

Notes:

- All three charts show almost perfect linearity, where the theoretical linear equation is:
 $y = 1.0000x + 0.0000$
- All three charts show excellent correlation coefficients (R^2 values), where a perfect value = 1.
 David W. Davenport, 07-FEB-2000, Version 1.0