

Single Substitution Data Sheet
(Optional Sequence A)
SXX

Laboratory data and conditions:

| | | | |
|--|-----------|-------------------|-------------|
| Operator | Joe Smith | | |
| Date | 2/23/03 | Temperature | 20.6 C |
| Balance | AT 261 | Pressure | 752.5 mm Hg |
| Load | 57 g | Relative Humidity | 45.7 % |
| Standard deviation of the process, from control chart, s_p | | | 0.015 mg |

Mass standard(s) data:

| ID | Nominal | Mass Correction (mg Conventional) | Unc: From Cal. Rpt. (mg) | Unc: k factor | Density g/cm ³ |
|-------|---------|--------------------------------------|-----------------------------|------------------|------------------------------|
| S_1 | 50 g | 0.010 | 0.032 | 2 | 8.0 |
| S_2 | 5 g | 0.009 | 0.014 | 2 | 7.95 |
| S_3 | 1 g | 0.004 9 | 0.008 6 | 2 | 7.95 |
| S_4 | 500 mg | 0.002 8 | 0.006 4 | 2 | 7.95 |
| S_5 | 200 mg | 0.001 | 0.004 8 | 2 | 7.95 |
| sw | 500 mg | -0.015 84 | 0.000 82 | 2 | 8.41 |
| S_c | 2 oz | 0.251 | 0.045 | 2 | 7.84 |
| X | 2 oz | TBD | TBD | 2 | 7.84 |

*Mass Correction = *True Mass* if using buoyancy correction. Mass Correction = *Conventional Mass* if NOT using buoyancy correction. Density is used only with buoyancy corrections.

Observations:

| Measurement No. | Weights | Balance Observations, Units ____g | | |
|-----------------|----------------|-----------------------------------|---|--------|
| Time: 9:10 am | | | | |
| 1 (O_1) | $S + t_s$ | | 0 | 000 00 |
| 2 (O_2) | $X + t_x$ | | 0 | 002 20 |
| 3 (O_3) | $X + t_x + sw$ | | 0 | 502 19 |
| Time: 9:13 am | | | | |

Measurement Assurance (Duplication of the Process):

| Measurement No. | Weights | Balance Observations, Units ____g | | |
|-----------------|---------------------|-----------------------------------|---|--------|
| Time: 9:15 am | | | | |
| 1 (O_1) | $S + t_s$ | | 0 | 000 00 |
| 2 (O_2) | $S_c + t_{Sc}$ | | 0 | 000 22 |
| 3 (O_3) | $S_c + t_{Sc} + sw$ | | 0 | 499 77 |
| Time: 9:20 am | | | | |

Note: dotted line represents decimal point.