

**Double Substitution Data Sheet**  
(Optional Sequence A)  
*SXXS*

**Laboratory data and conditions:**

Operator	PM		
Date	4/16/2002	Temperature	21.5 °C
Balance	AT 1005	Pressure	743.88 mm Hg
Nominal Load	1 kg	Relative Humidity	48 %
Standard deviation of the process, from control chart, $s_p$			0.085 mg

**Mass standard(s) data:**

ID	Nominal	Mass Correction* (mg Conventional)	Expanded Unc: From Cal. Rpt. (mg)	Unc: k factor	Density g/cm <sup>3</sup>
$S$ (Primary)	1 kg	6.973	0.052	2	7.9926
$X$ ( $W$ )	1 kg	TBD	TBD	2	7.95
$sw$	50 mg	0.001 7	0.000 6	2	7.95
$S_c$	1 kg	-0.30	0.12	2	7.95

\*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:**

Observation No.	Weights	Balance Observations, Units
Time: 10:15 am		
1 ( $O_1$ )	$S + t_s$	0 : 00
2 ( $O_2$ )	$X + t_x$	-4 : 66
3 ( $O_3$ )	$X + t_x + sw$	45 : 38
4 ( $O_4$ )	$S + t_s + sw$	50 : 15
Time: 10:25 am		

**Measurement Assurance (Duplication of the Process):**

Observation No.	Weights	Balance Observations, Units
Time: 10:30 am		
1 ( $O_1$ )	$S + t_s$	0 : 16
2 ( $O_2$ )	$S_c + t_{Sc}$	-7 : 11
3 ( $O_3$ )	$S_c + t_{Sc} + sw$	42 : 91
4 ( $O_4$ )	$S + t_s + sw$	50 : 10
Time: 10:40 am		

Note: dotted line represents decimal point