

**TO DETERMINE MASS SUSCEPTIBILITY OF MYERS WOOD MW03 NATURAL SOIL,
TRENCH B HEAT AFFECTED CLAY & TRENCH G FURNACE IN-FILL SAMPLES**

<u>Calibration samples</u>	Mass g	Bridge reading	Total susceptibility $K_T \times 10^{-8} \text{ m}^3$	Mass susceptibility $\chi \times 10^{-8} \text{ m}^3 \text{ kg}^{-1}$
Manganese sulphate	50.00	62.0	4.06	81.2
High alumina cement	50.00	538	35.80	716
<u>Test samples</u>				
Natural A-1	69.55	5.5	0.36	5
Natural A-2	68.21	5.7	0.37	5
Natural B-1	69.10	5.9	0.39	6
Natural B-2	68.91	6.5	0.43	6
B267-A	35.38	1962	130.75	3696
B267-B	36.54	1946	129.69	3549
B271-A	23.69	503	33.47	1413
B271-B	23.28	516	34.33	1475
G718-A	41.73	1488	99.15	2376
G718-B	41.08	1469	97.88	2383
Mean	)			6
Median	) Natural			6
Standard Deviation	+/-)			0
Mean	) Trench B			2533
Median	) heat affected			2512
Standard Deviation	+/-) clay			1260
Mean	) Trench G			2379
Median	) furnace			2379
Standard Deviation	+/-) in-fill			5

Chart data

Total sus.	Meter	Total sus.	Meter
0	0		
4.06	62.0	4.06	62.0
		35.80	538

Slope & constant values as calculated by data trendline:

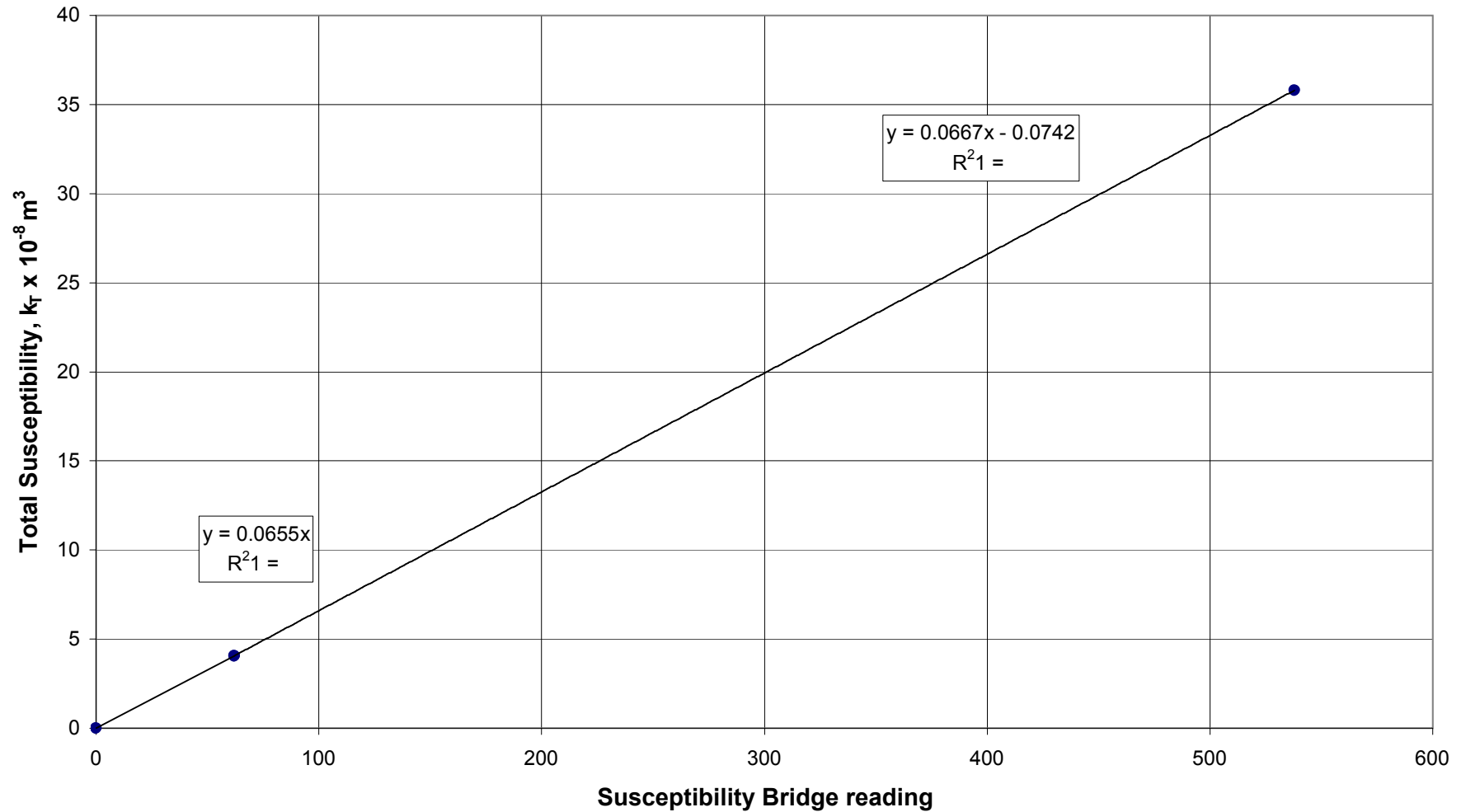
m	c	x	y
0.0655	0	62.0	4.0610
0.0667	-0.0742	62.0	4.0612
0.0667	-0.0742	538	35.8104

Slope & constant values as calculated from raw data:

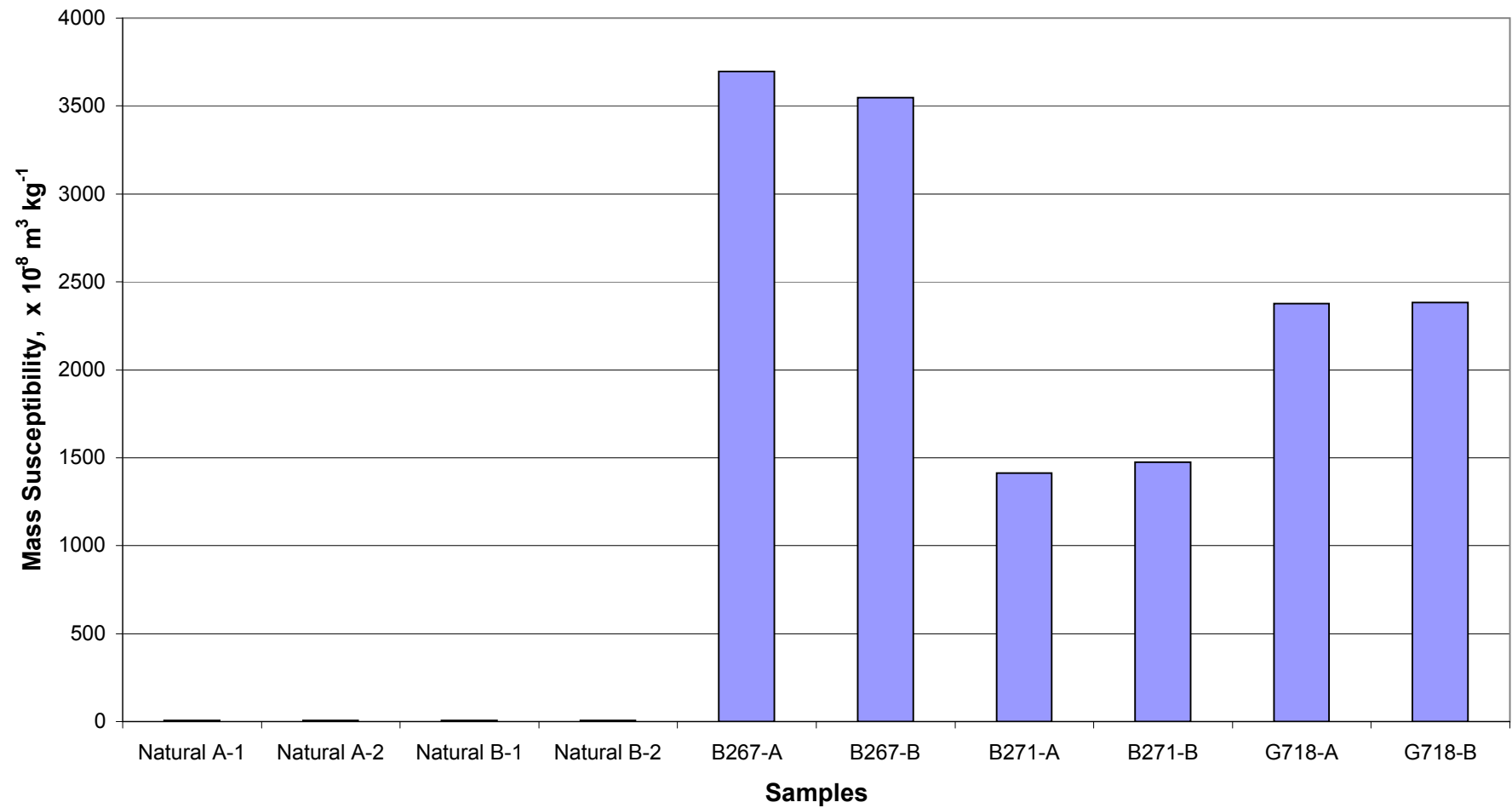
m	c	x	y
0.06548	0	62.0	4.06
0.06668	-0.0742	62.0	4.06
0.06668	-0.0742	538	35.80

Above slope & constant values used in formula to calculate total susceptibility from the corresponding meter reading.

MW03 NATURAL SOIL, TRENCH B HEAT AFFECTED CLAY & TRENCH G FURNACE IN-FILL SUSCEPTIBILITY CALIBRATION CURVE



MW03 NATURAL SOIL, TRENCH B HEAT AFFECTED CLAY & TRENCH G FURNACE IN-FILL MASS SUSCEPTIBILITY



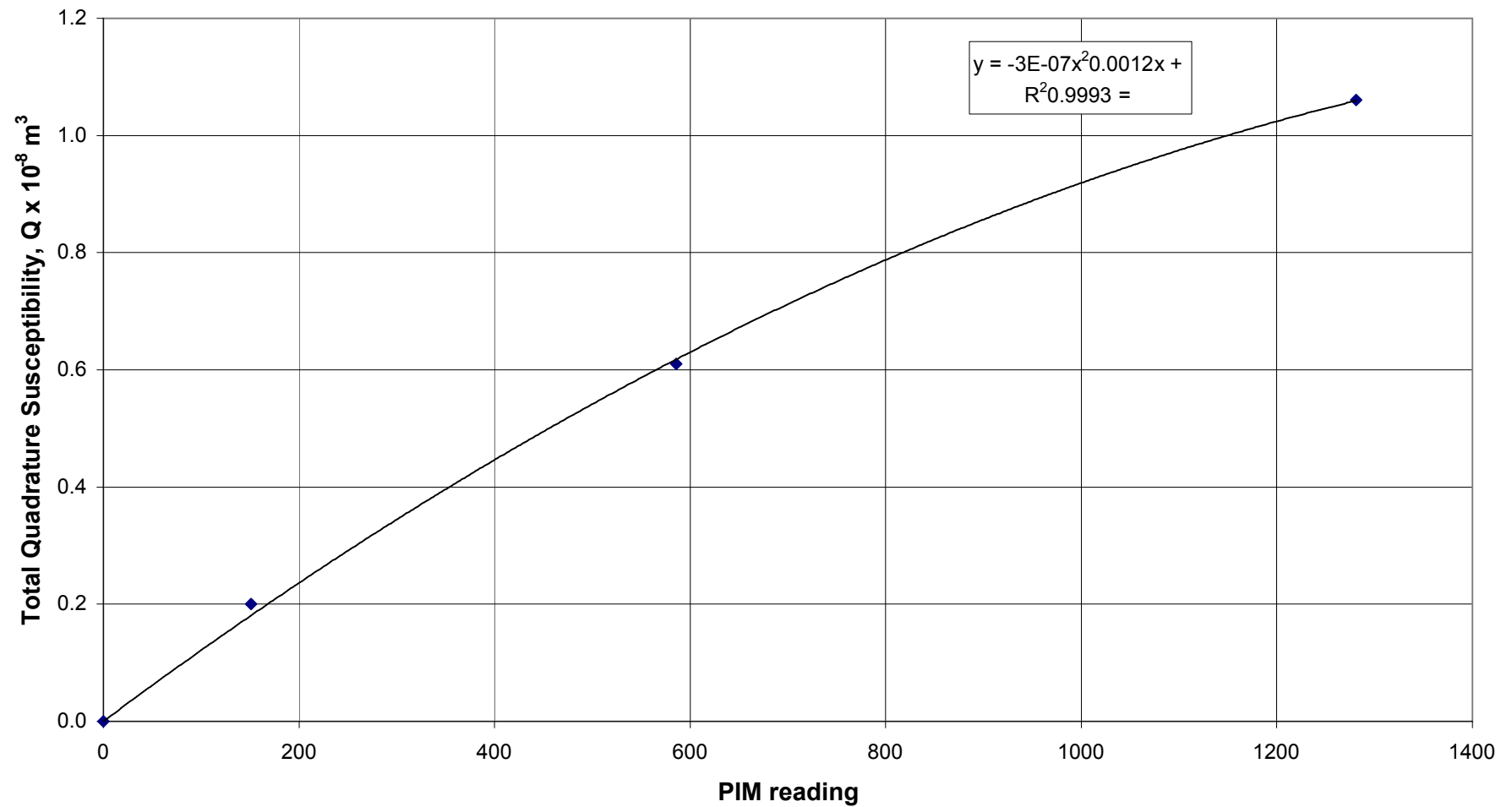
**TO DETERMINE MASS QUADRATURE SUSCEPTIBILITY AND MAGNETIC VISCOSITY OF MW03
NATURAL SOIL, TRENCH B HEAT AFFECTED CLAY & TRENCH G FURNACE IN-FILL SAMPLES**

<u>Calibration samples</u>	Mass g	PIM reading	Total quad. sus. $Q \times 10^{-8} \text{ m}^3$	Mass quad. sus. $q \times 10^{-8} \text{ m}^3 \text{ kg}^{-1}$	Magnetic viscosity %
High alumina cement	50.00	151	0.20	4.0	
BS87	50.00	586	0.61	12.2	
BS62	40.64	1281	1.06	26.1	
<u>Test samples</u>					
Natural A-1	69.55	15	0.02	0.3	5.0
Natural A-2	68.21	15	0.02	0.3	4.8
Natural B-1	69.10	24	0.03	0.4	7.4
Natural B-2	68.91	25	0.03	0.4	7.0
B267-A	35.38	1156	0.99	28	0.8
B267-B	36.54	1198	1.01	28	0.8
B271-A	23.69	1836	1.19	50	3.6
B271-B	23.28	1808	1.19	51	3.5
G718-A	41.73	1836	1.19	29	1.2
G718-B	41.08	1770	1.18	29	1.2
Mean	)			0.3	6.0
Median	) Natural			0.3	6.0
Standard Deviation	+/-)			0.1	1.3
Mean	) Trench B			39	2.1
Median	) heat affected			39	2.1
Standard Deviation	+/-) clay			13	1.6
Mean	) Trench G			29	1.2
Median	) furnace			29	1.2
Standard Deviation	+/-) in-fill			0	0.0

Chart data

Total quad.	PIM
0	0
0.20	151
0.61	586
1.06	1281

**MW03 NATURAL SOIL, TRENCH B HEAT AFFECTED CLAY & TRENCH G
FURNACE IN-FILL QUADRATURE SUSCEPTIBILITY CALIBRATION CURVE**



MW03 NATURAL SOIL, TRENCH B HEAT AFFECTED CLAY & TRENCH G
FURNACE IN-FILL MASS QUADRATURE SUSCEPTIBILITY & MAGNETIC
VISCOSITY

