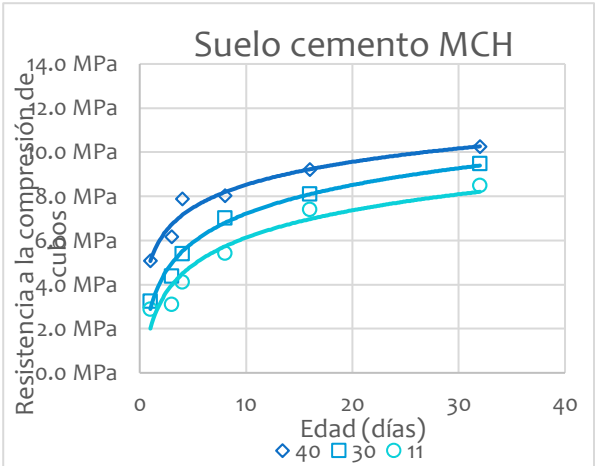
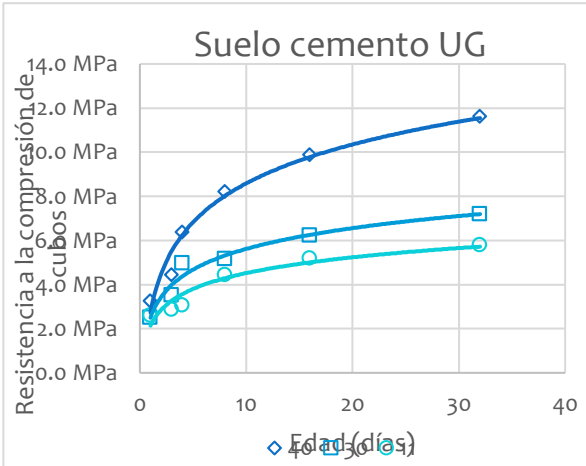
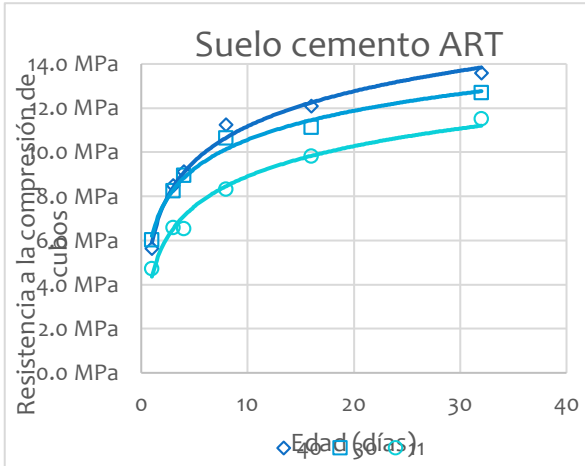


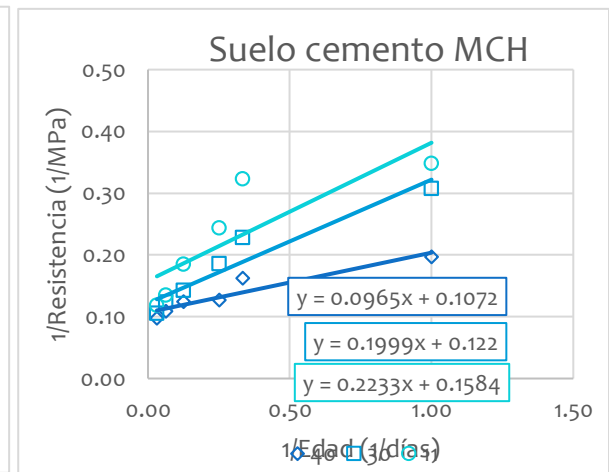
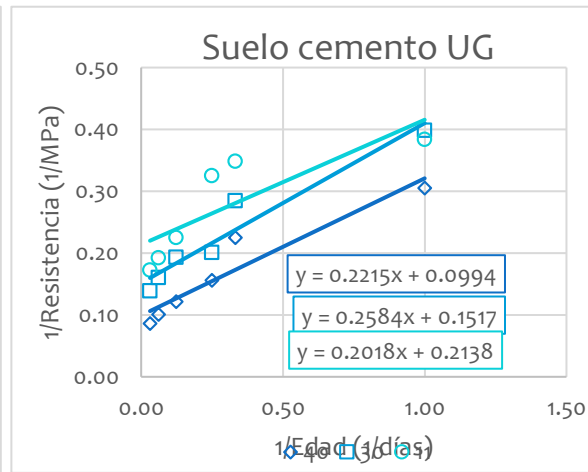
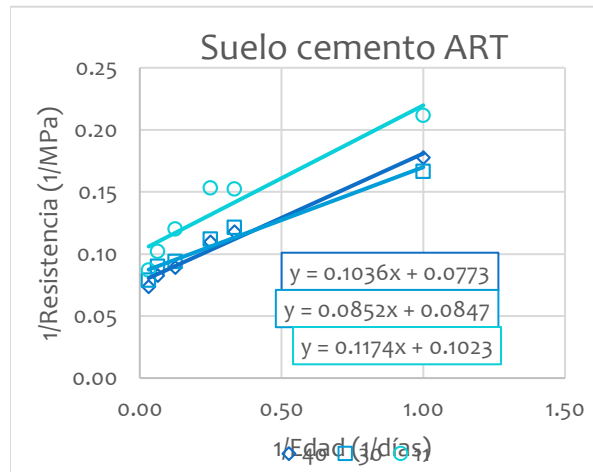
Memoria de cálculo del Q y el To

Edad	ART			UG			MCH		
	40	30	11	40	30	11	40	30	11
1	5.6 MPa	6.0 MPa	4.7 MPa	3.3 MPa	2.5 MPa	2.6 MPa	5.1 MPa	3.3 MPa	2.9 MPa
3	8.5 MPa	8.3 MPa	6.6 MPa	4.4 MPa	3.5 MPa	2.9 MPa	6.2 MPa	4.4 MPa	3.1 MPa
4	9.1 MPa	8.9 MPa	6.5 MPa	6.4 MPa	5.0 MPa	3.1 MPa	7.9 MPa	5.4 MPa	4.1 MPa
8	11.2 MPa	10.6 MPa	8.3 MPa	8.2 MPa	5.2 MPa	4.4 MPa	8.0 MPa	7.0 MPa	5.4 MPa
16	12.1 MPa	11.1 MPa	9.8 MPa	9.9 MPa	6.2 MPa	5.2 MPa	9.2 MPa	8.1 MPa	7.4 MPa
32	13.6 MPa	12.7 MPa	11.5 MPa	11.6 MPa	7.2 MPa	5.8 MPa	10.3 MPa	9.5 MPa	8.5 MPa



1/Edad	1/Resistencia			1/Resistencia			1/Resistencia		
	40	30	11	40	30	11	40	30	11
1.00	0.18	0.17	0.21	0.31	0.40	0.38	0.20	0.31	0.35
0.33	0.12	0.12	0.15	0.22	0.28	0.35	0.16	0.23	0.32
0.25	0.11	0.11	0.15	0.16	0.20	0.32	0.13	0.19	0.24
0.13	0.09	0.09	0.12	0.12	0.19	0.22	0.12	0.14	0.18
0.06	0.08	0.09	0.10	0.10	0.16	0.19	0.11	0.12	0.14
0.03	0.07	0.08	0.09	0.09	0.14	0.17	0.10	0.11	0.12

Memoria de cálculo del Q y el To



Ecuación de la recta

40 $y = 0.1036 x + 0.0773$

30 $y = 0.0852 x + 0.0847$

11 $y = 0.1174 x + 0.1023$

1/Su	Su
0.0773	12.94
0.0847	11.81
0.1023	9.78

40 $y = 0.2215 x + 0.0994$

30 $y = 0.2584 x + 0.1517$

11 $y = 0.2018 x + 0.2138$

1/Su	Su
0.0994	10.06
0.1517	6.59
0.2138	4.68

40 $y = 0.0965 x + 0.1072$

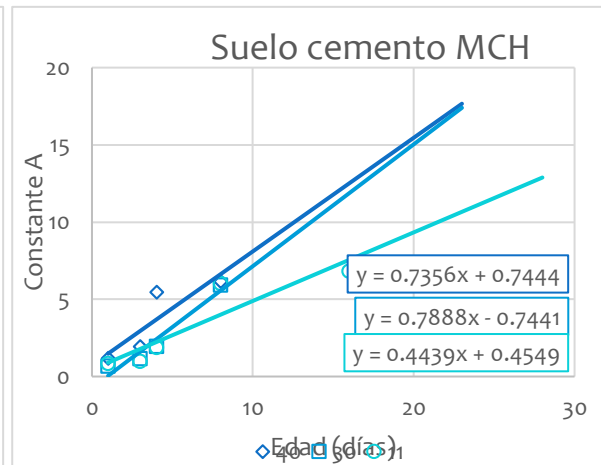
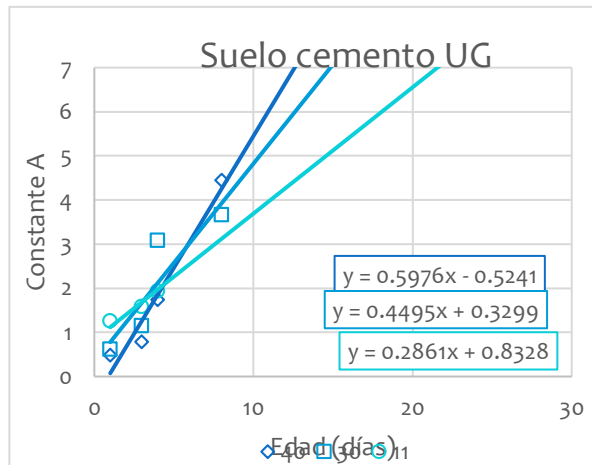
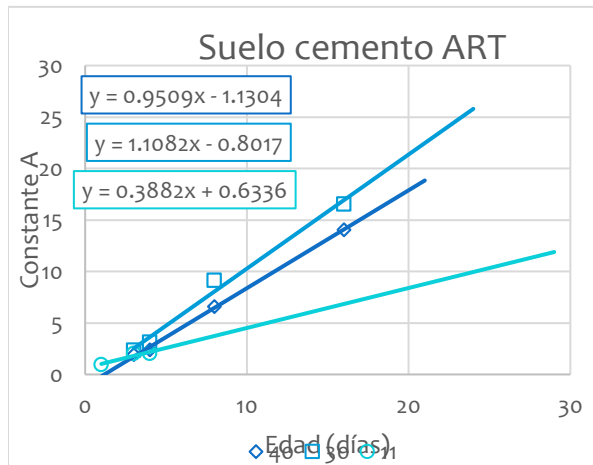
30 $y = 0.1999 x + 0.122$

11 $y = 0.2233 x + 0.1584$

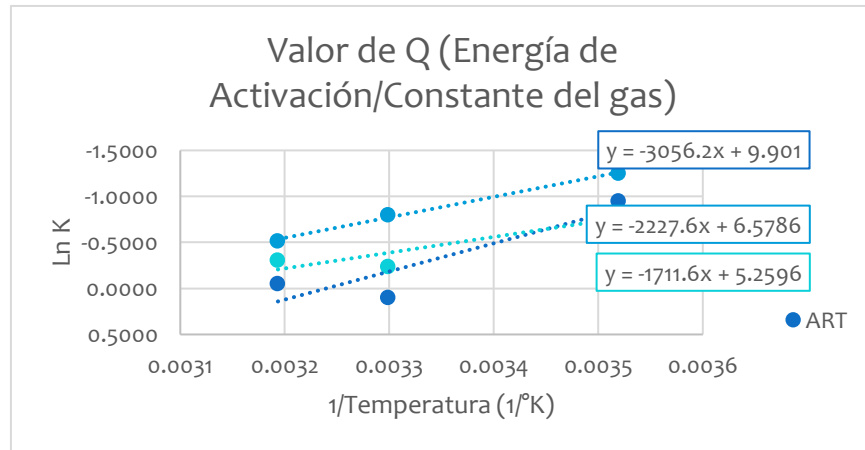
1/Su	Su
0.1072	9.33
0.122	8.20
0.1584	6.31

Constante A	40	30	11	40	30	11	40	30	11
1	0.7693	1.0386	0.9364	0.4828	0.6146	1.2612	1.1919	0.6580	0.8346
3	1.9065	2.3236	2.0539	0.7925	1.1460	1.5852	1.9427	1.1507	0.9609
4	2.3935	3.1245	2.0156	1.7453	3.0821	1.9291	5.4511	1.9276	1.8567
8	6.5960	9.1472	5.7260	4.4445	3.6694		6.1608	5.9084	6.0288
16	14.0586	16.5513		55.7133	17.3472		85.4109	77.1852	6.7982
32	20.7609	14.4665		-7.3945	11.8235	9.9981	-11.0909	-7.3489	-3.9155

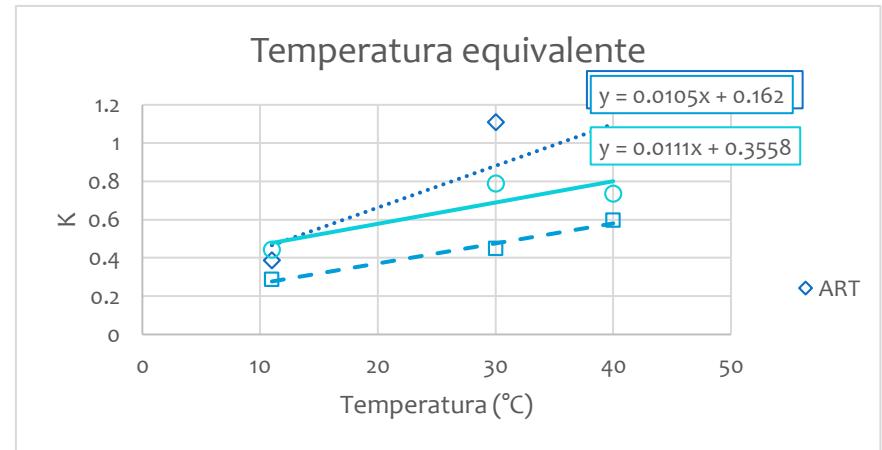
Memoria de cálculo del Q y el To



Ecuación		K	ln K	°K	1/°K	K	ln K	K	ln K
40		0.9509	-0.0503	313.15	0.00319336	0.5976	-0.5148	0.7356	-0.3071
30		1.1082	0.1027	303.15	0.0032987	0.4495	-0.7996	0.7888	-0.2372
11		0.3882	-0.9462	284.15	0.00351927	0.2861	-1.2514	0.4439	-0.8122



	Q
ART	3056.2
UG	2227.6
MCH	1711.6



	T referencia
$y = 0.0218x + 0.2263$	-x = 10.38
$y = 0.0105x + 0.162$	-x = 15.43
$y = 0.0111x + 0.3558$	-x = 32.05

Memoria de cálculo del Q y el To

Tipo SC	Mr (500)	Madurez máx	T máx	T mín	ΔT	Factor de Edad Máx	Madurez (30hr)	Δ Factor Edad Máx	Δ Factor Mad máx
MCH-40	261.07	41.10	50.2	42.1	8.1	1.6569	1882.40	13.42	332.9
MCH-30	274.46	32.48	32.9	22.8	10.1	1.2294	1457.20	12.42	328.0
MCH-11	287.84	36.13	22.9	10.2	12.7	1.4005	1061.37	17.79	458.8
UG-40	167.83	31.91	48.4	46.8	1.6	1.8583	1465.70	2.97	51.1
UG-30	153.37	23.81	32.2	26.9	5.3	1.2867	1061.27	6.82	126.2
UG-11	290.90	27.81	25.2	10	15.2	1.5502	663.02	23.56	422.8
ART-40	170.36	30.19	50	47.1	2.9	2.4527	1371.42	7.11	87.6
ART-30	202.09	21.79	33.2	26.9	6.3	1.4602	955.82	9.20	137.3
ART-11	283.22	25.29	27.4	11.8	15.6	1.8247	571.10	28.47	394.5

