

Store	Con1	Con2
1	141	118
2	184	167
3	132	137
4	161	168
5	176	175
6	196	197
7	169	143
8	199	169
9	150	123
10	218	197

t-Test: Paired Two Sample for Means

	Con1	Con2
Mean	172.6	159.4
Variance	750.2666667	789.3777778
Observations	10	10
Pearson Correlation	0.863335004	
Hypothesized Mean Difference	0	
df	9	
t Stat	2.874702125	
P(T<=t) one-tail	0.009167817	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.018335635	
t Critical two-tail	2.262157163	
Difference in Means	13.2	

With a one tailed test we can see that the p value of 0.009 is lower than 0.05 which means that the null hypothesis is rejected. An alternative hypothesis of filter agent 1 being more effective than 2 would be accepted.

The t stat of 2.874 is greater than the t critical value for the one tail of 1.833 so we reject the null hypothesis

We can conclude that the filter agent 1 is vastly more effective than number 2.