Two One-Sided Equivalence Tests for Two Group Design

Parameters	Values
Test Significance Level, α	0.025
Lower Equivalence Limit for μ_0-μ_1, Δ(L)	-0.176
Upper Equivalence Limit for μ_0-μ_1, Δ(U)	0.176
Expected Difference, μ_0-μ_1	0.000
Common Standard Deviation, σ	0.400
Power (%)	96.98
Sample Size per Group, n	177

Summary Statement

When the sample size in each group is 177, a two group design will have 96.98% power to reject both the null hypothesis that the test mean minus the standard mean is below -0.176 and the null hypothesis that the test mean minus the standard mean is above 0.176 i.e., that the test and standard are not equivalent, in favor of the alternative hypothesis that the means of the two groups are equivalent, assuming that the expected difference in means is 0, the common standard deviation is 0.4 and that each test is made at the 2.5% level.