ABSORBENCY OF PAPER TOWELS

8. Describing the Data

The following SPSS output provides some numerical summaries of the mean weight of water absorbed for each combination of towel brand and time.

Report

WATER

BRAND	TIME	Mean	N	Std. Deviation
1.00	3.00	9.3800	5	.6419
	5.00	10.4200	5	.6058
	10.00	10.7200	5	.1924
	Total	10.1733	15	.7658
2.00	3.00	11.5800	5	.4712
	5.00	12.2000	5	.4528
	10.00	12.2800	5	.1304
	Total	12.0200	15	.4814
3.00	3.00	13.1600	5	.4037
	5.00	13.4000	5	.3162
	10.00	13.3800	5	.1924
	Total	13.3133	15	.3137
Total	3.00	11.3733	15	1.6739
	5.00	12.0067	15	1.3408
	10.00	12.1267	15	1.1411
	Total	11.8356	45	1.4105

The table shows the means of amount of water absorbed for each combination of levels of the two factors. The mean amount of water absorbed increases when taken across time levels. There is almost no change in the mean when time increases from the 5 second level to the 10 second level.

The overall means among the three brands, 10.1733, 12.0200, and 13.3133 differ significantly, which indicates very strong brand main effects.

The impact of immersion time can be noticed by comparing the mean amount of water absorbed at time level of 3 and 5 seconds. The differences indicate that the time main effects seem to be statistically significant. On the other, the differences for the time levels of 5 and 10 seconds are very small for each brand.

As you can see, the standard deviation for each brand decreases when taken across the three time levels. Moreover, the table shows that the highest mean amount of water absorbed is achieved for the brand 3. The lowest mean amount of water absorbed is achieved for the brand 1.