Case: Cheese

Story

As cheddar cheese matures, a variety of chemical processes take place. The taste of matured cheese is related to the concentration of several chemicals in the final product. In a study of cheddar cheese from the LaTrobe Valley of Victoria, Australia, samples of cheese were analyzed for their chemical composition and were subjected to taste tests. Overall taste scores were obtained by combining the scores from several tasters.

Variables

variable name	description
case	sample number
taste	subjective taste test score, obtained by combining the scores of several tasters
acetic	Natural log of concentration of acetic acid
h2s	Natural log of concentration of hydrogen sulfide
lactic	Concentration of lactic acid

Exercise

1. Use scatterplots, correlation, and simple regression to examine the relationships among the individual variables.
2. Why do you think acetic and h2s has been transformed?
3. What happens when you run a regression model with all the independent variables in the model?
4. What model would you prefer for prediction?
5. Predict the 'taste' of a cheese where (log) acetic is 5.3, (log) h2s is 8.0 and lactic is 3.0
6. Could there be some problems with the above prediction?
7. Save the results of your analysis in a text document (e.g. latex, word or star-office)

Hints