

# Instructions for carrying out statistical procedures and tests using Minitab

These instructions are closely linked to the author's book:

**Essential Statistics for the Pharmaceutical Sciences**  
**John Wiley & Sons Ltd <http://eu.wiley.com>**  
**2007**  
**ISBN: 978-0-470-03468-2**

For all references to chapters or tables, see the above book.

**Using Minitab to perform a  
correlation analysis**

## Using Minitab to perform a correlation analysis

**Example: Table 14.1 Heights at which leaves were growing in the trees (M) and drug content (mg/100g dry leaf)**

The two sets of data are entered into two labelled columns and we follow the menus:

*Stat / Basic Statistics / Correlation ...*

Then we merely identify the columns to be analysed.

The output is:

### **Correlations: Height, Drug**

```
Pearson correlation of Height and Drug = -0.777  
P-Value = 0.000
```

Notice the term 'Pearson correlation'. There is another form of correlation (Spearman correlation – See Chapter 17), but this is used less frequently and Pearson correlation is frequently referred to simply as 'Correlation'.

The correlation coefficient ( $r$ ) is given as  $-0.777$ . The minus sign indicates negative correlation and a value of  $-0.777$  tells us that there is quite a strong relationship. The results are also statistically significant ( $P < 0.001$ )