

## Introduction

Proficiency Testing Australia (PTA) conducted a survey of companies involved in the Waters (Chemical) proficiency testing program. The survey was an adaptation from a previous NATA survey conducted in 2001.

The survey was conducted in September 2007 by PTA's Quality Manager, Bella St.Clair. Input and assistance was also received from Lexie Russell, PTA Senior Scientific Officer and Mark Bunt, PTA Statistician

Graphical summaries for each of the questions in the survey are presented below. Where a question was unanswered by a respondent, the response for that question was recorded as "Unknown". This differs from the response "Not sure", which was an option for some of the questions in the survey. The response "N/A" is an abbreviation for "Not Applicable"

## Methods

The survey consisted of 23 questions, arranged around five sections (Organisation, Statistical Analysis, Technical Validity, Laboratory Performance & Follow Up and General). Response categories were a ranking from Excellent to Poor.

Participant results were transcribed into Excel. Count data was converted to percentages and comparisons graphed against the 2001 data. For those questions which graphically showed a category change the ordinal groups were used as a numeric to run two sample t-tests. These were conducted using Minitab and were based on a 95% confidence interval.

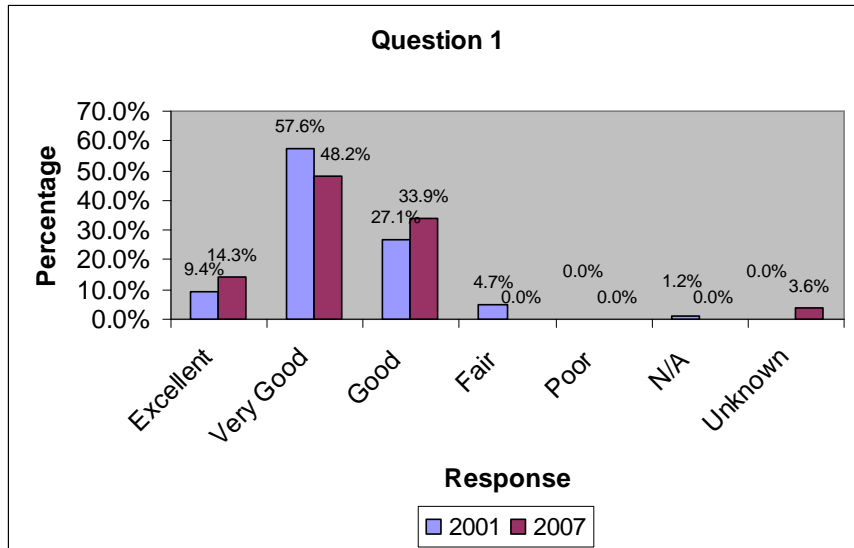
## Results

Surveys were sent to a total of 188 laboratories. Of these, 56 were returned. This represents a 30% response rate. This response rate is slightly down on the 2001 survey which recorded a 48% return rate.

## PART 1 - ORGANISATION

### Question 1

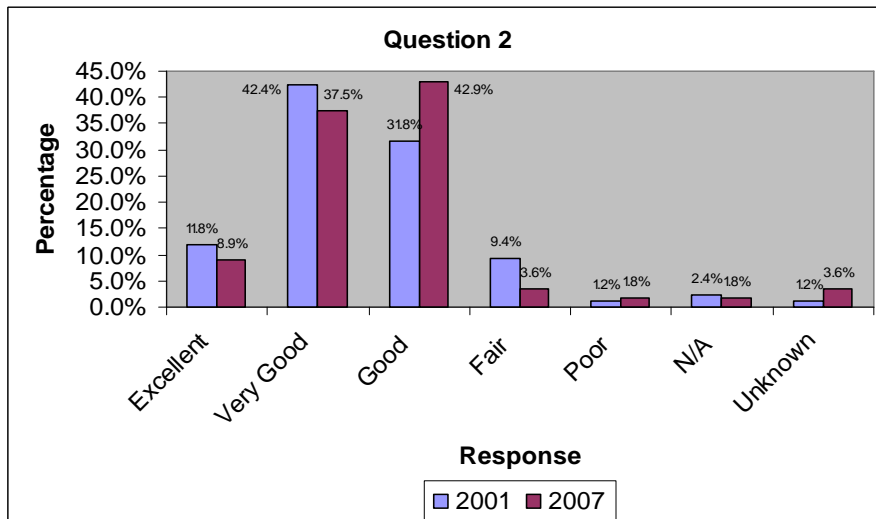
Based on your past participation, how do you rate the overall quality of these programs?



T-Test conducted - Not significant.

### Question 2

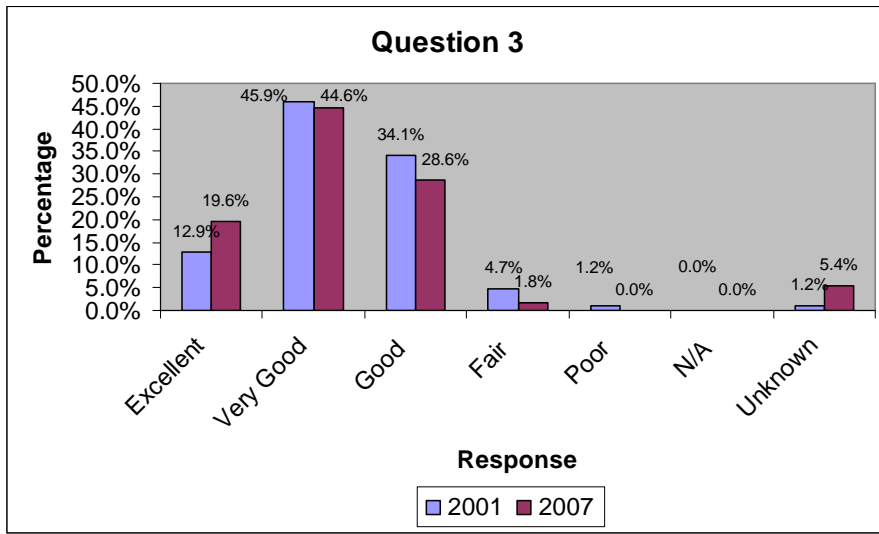
How useful is the yearly program schedule questionnaire in nominating your participation?



T-Test conducted - Not significant.

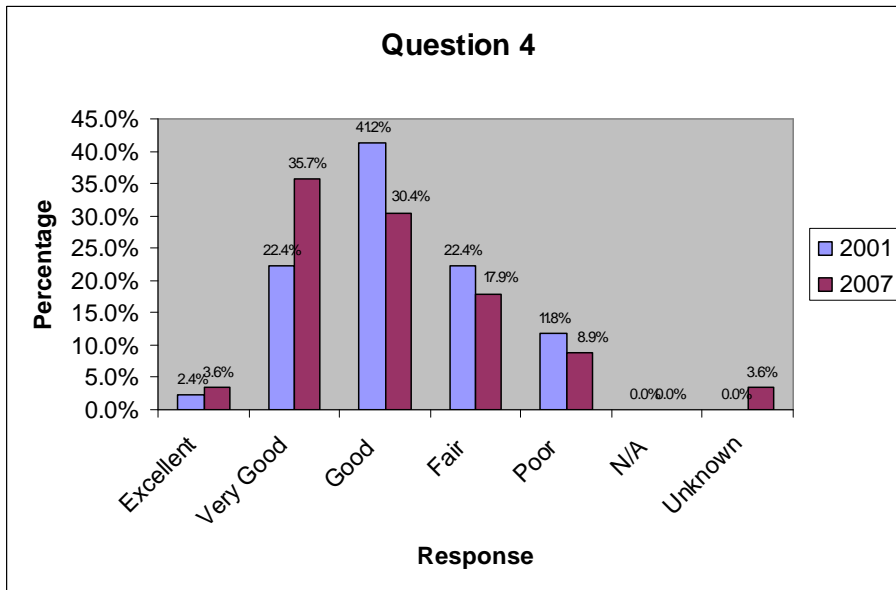
**Question 3**

*How would you rate your sample receipt based on the advised program schedule?*



**Question 4**

*How would you rate the timeliness of the issue of the final reports?*

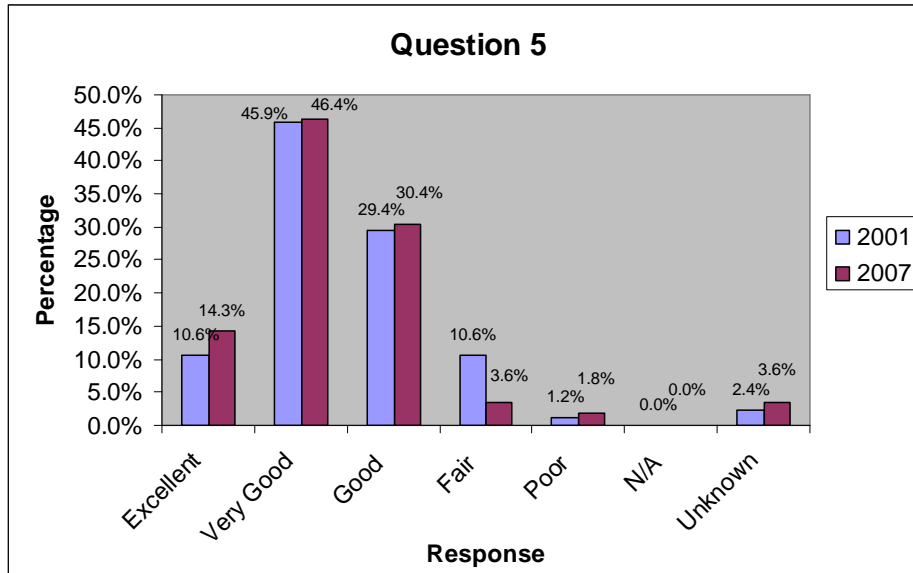


T-Test conducted - Not significant.

## PART 2 - STATISTICAL ANALYSIS

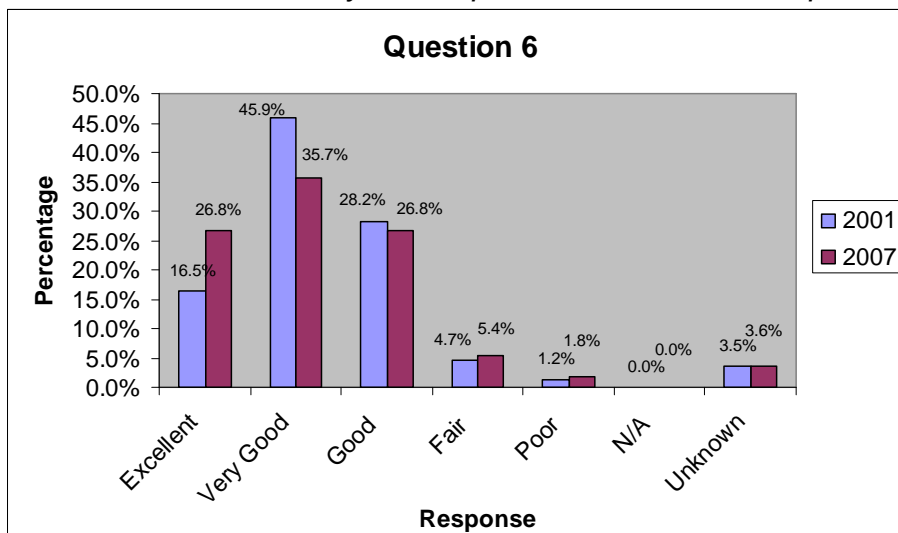
### Question 5

*How would you rate the content of the reports in providing your laboratory with an evaluation of your testing performance?*



### Question 6

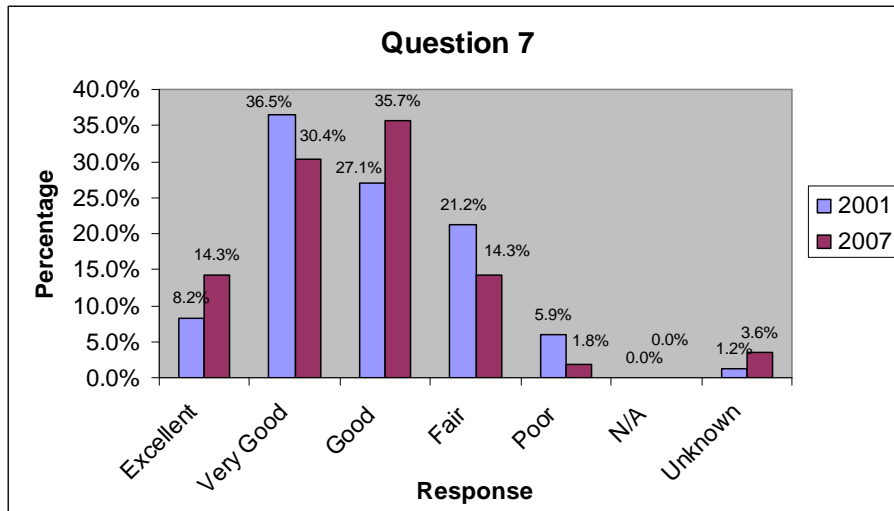
*How useful are the individual summary sheets provided with the final reports?*



T-Test conducted - Not significant.

**Question 7**

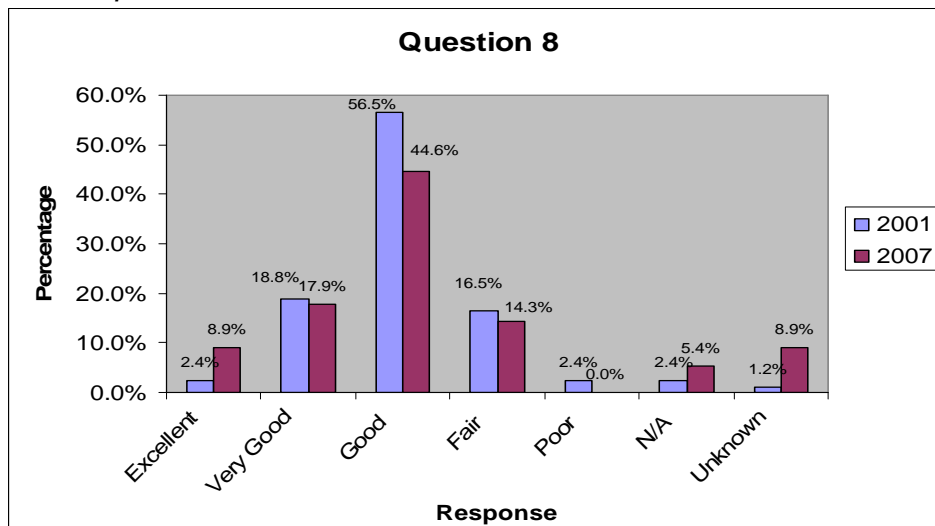
*How useful do you find the graphical displays of data such as Youden diagrams and z-score bar charts?*



T-Test conducted - Not significant.

**Question 8**

*How useful do you find the reference document "Guide to Proficiency Testing Australia" to interpret the final reports?*

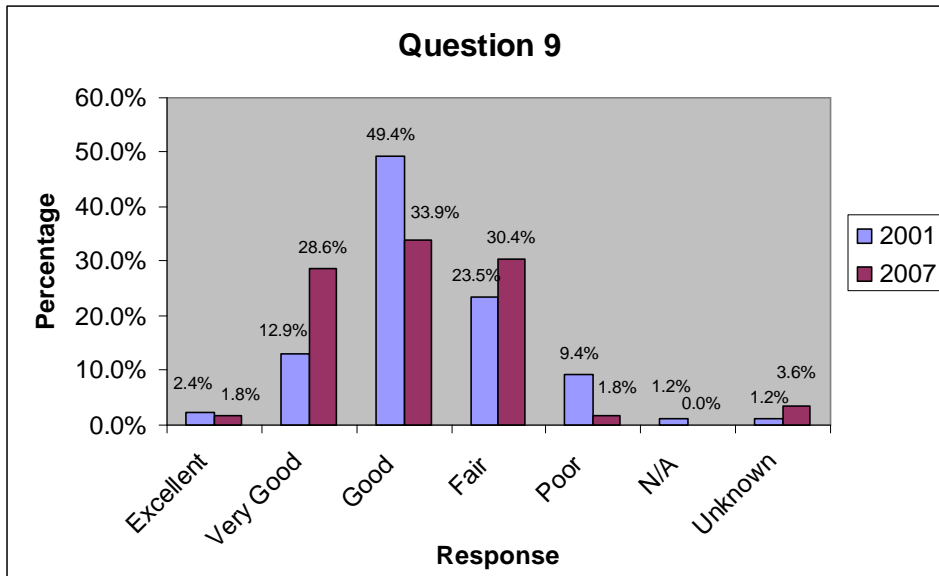


T-Test conducted - Not significant.

### PART 3 - TECHNICAL VALIDITY

#### Question 9

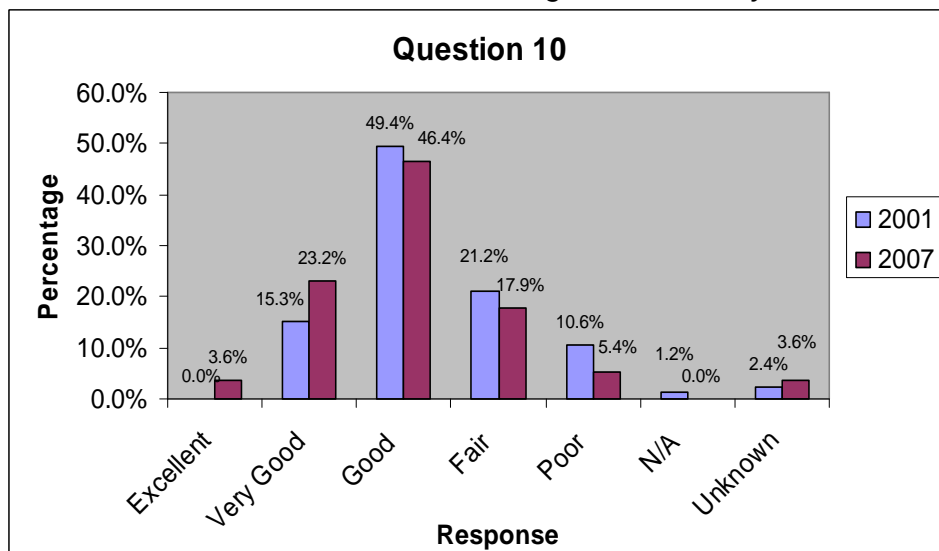
How do rate the selection of determinations in meeting the needs of your laboratory?



T-Test conducted - Not significant.

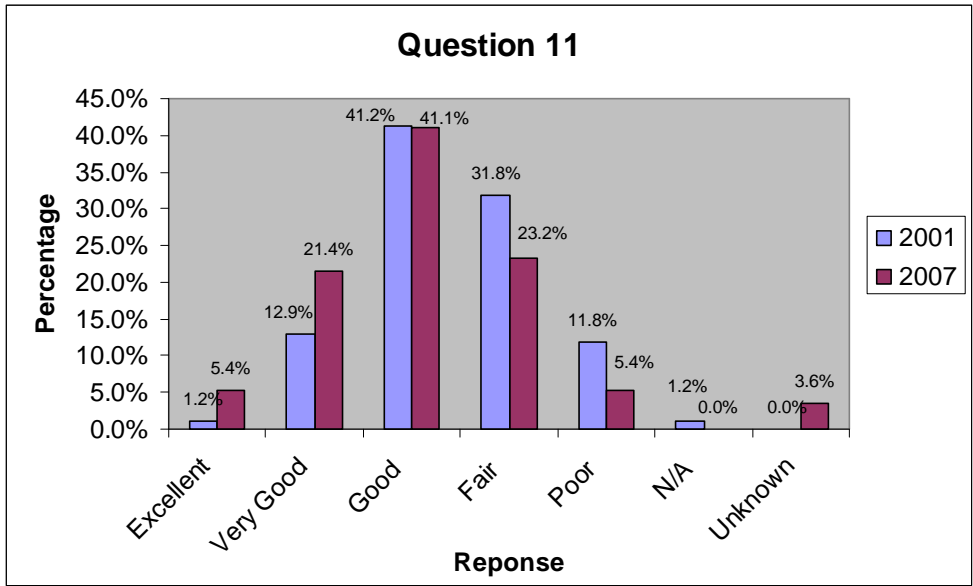
#### Question 10

How do you rate the concentration levels in meeting the needs of your laboratory?



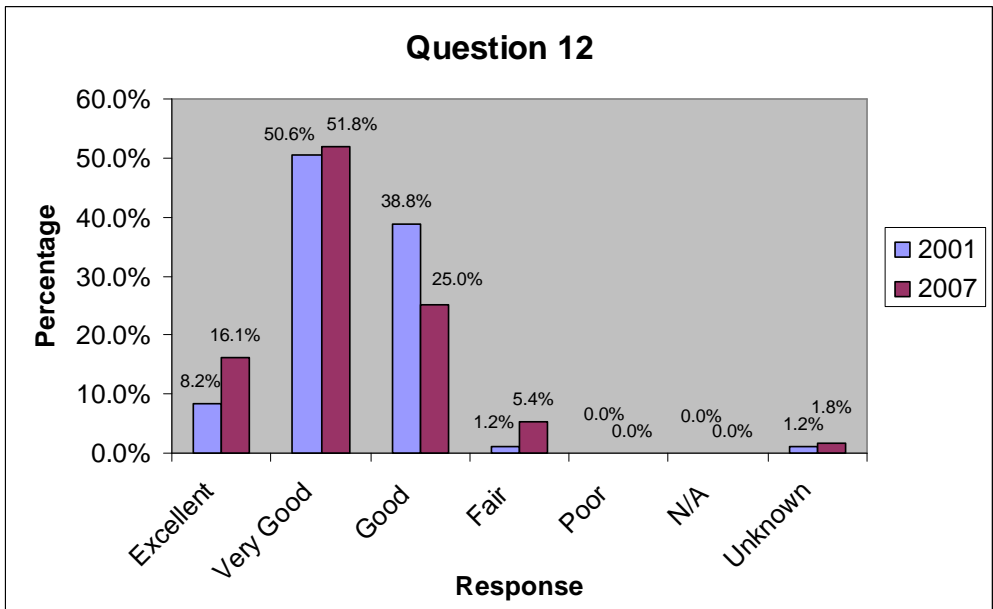
**Question 11**

*How do you rate the types of samples chosen to meet the needs of your laboratory?*



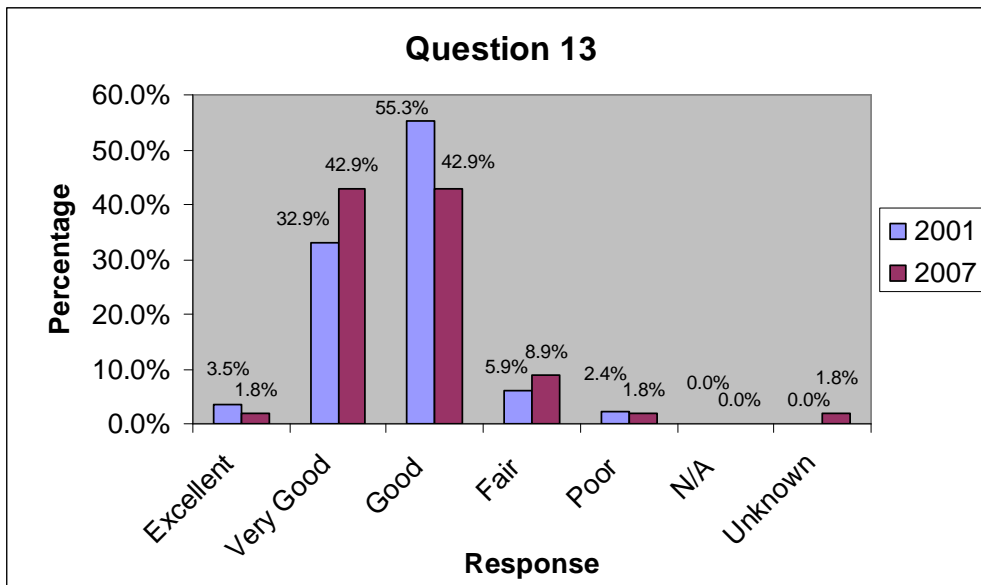
**Question 12**

*How useful and easy to follow are the program instructions and results sheets?*



**Question 13**

*How do you rate the technical commentaries included in the final report?*

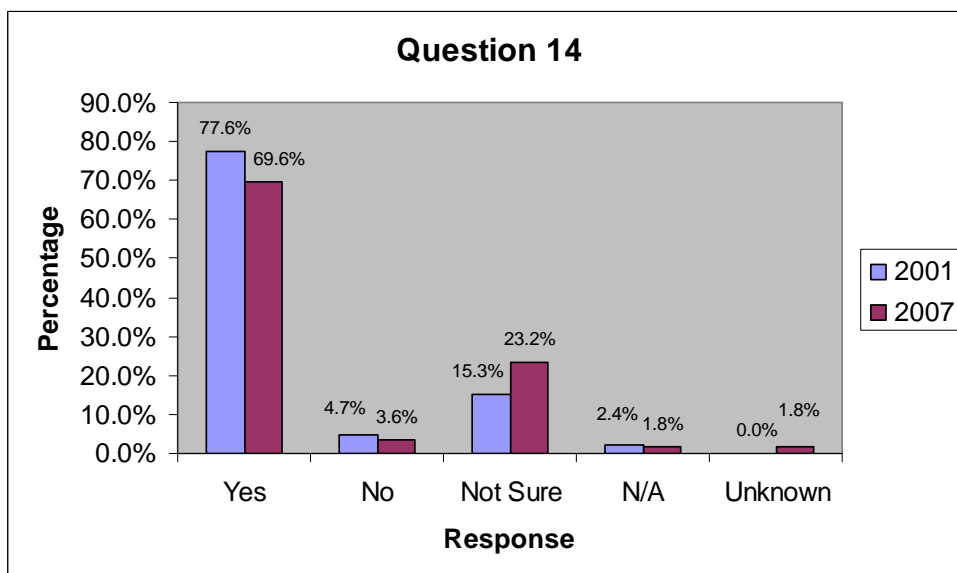


T-Test conducted - Not significant.

**PART 4 - LABORATORY PERFORMANCE AND FOLLOW UP**

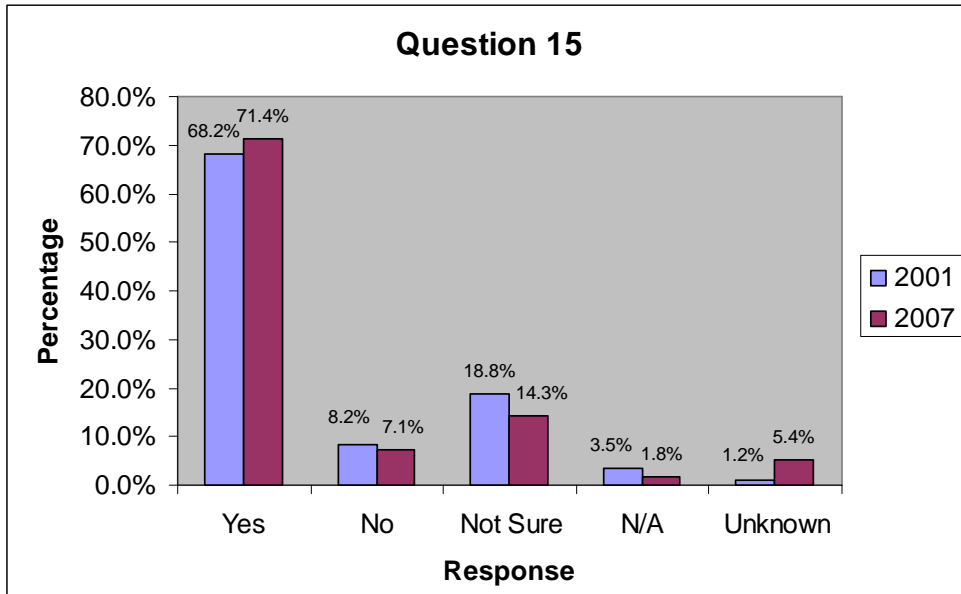
**Question 14**

*Would you be able to explain the range of results reported in a typical program to interested bodies?*



**Question 15**

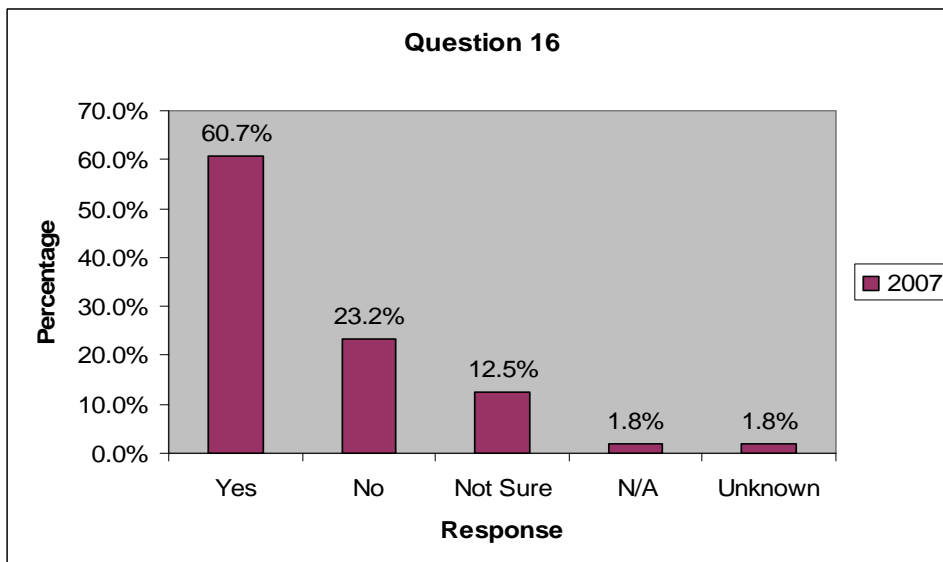
*Would you have sufficient documentation to support your explanation (for question 14)?*



**Question 16**

*Would you be interested in purchasing additional or reference samples for corrective action purposes?*

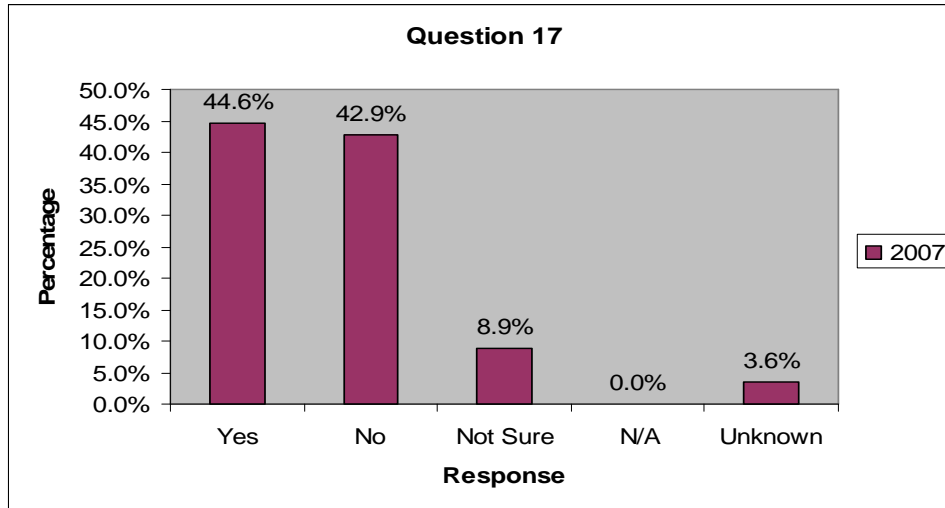
Question 16 is a new question for the 2007 survey; therefore only results from 2007 are presented.



**Question 17**

*Would you be interested in having corrective action results analysed?*

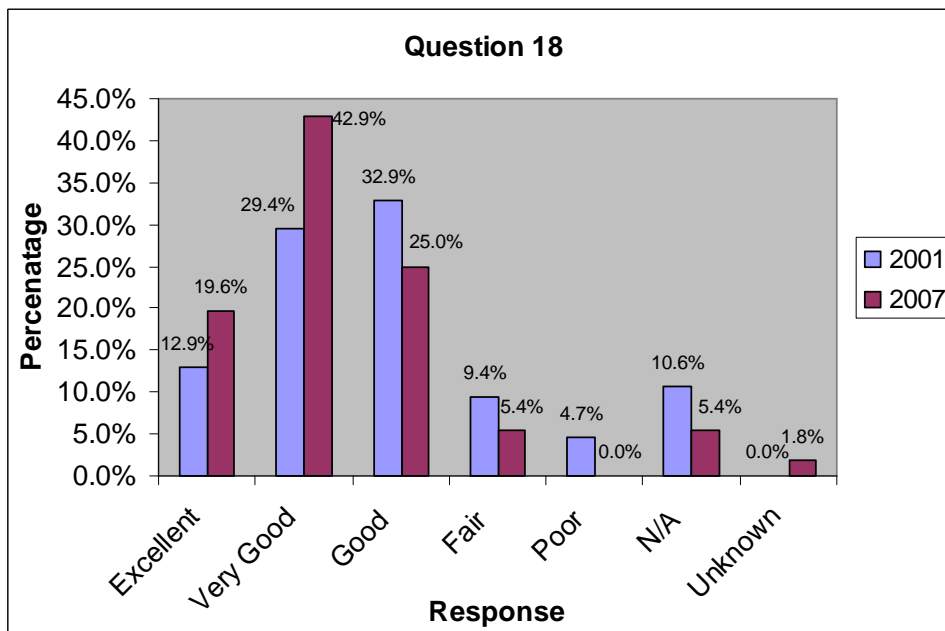
Question 17 is a new question for the 2007 survey; therefore only results from 2007 are presented.



**PART 5 GENERAL**

**Question 18**

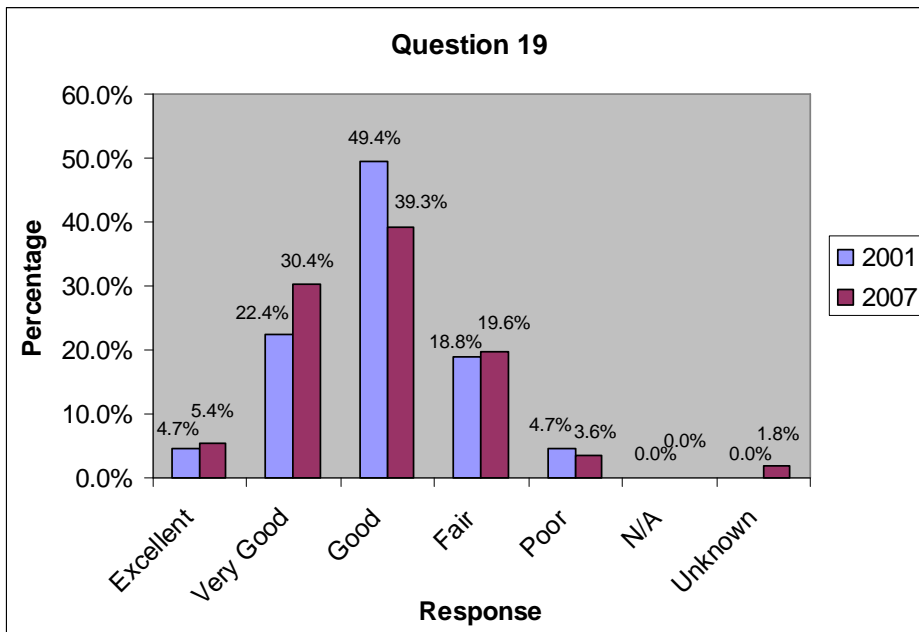
*How useful have you found the programs in demonstrating your testing performance to other bodies?*



T-Test conducted - significant.

**Question 19**

*How do you rate the frequency of the programs to meet the needs of your laboratory?*

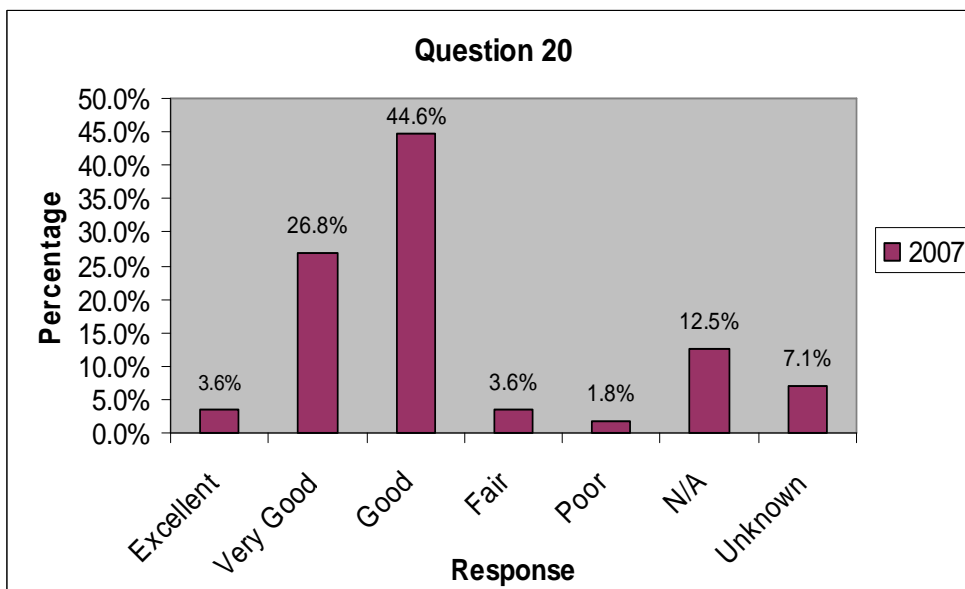


T-Test conducted - Not significant.

**Question 20**

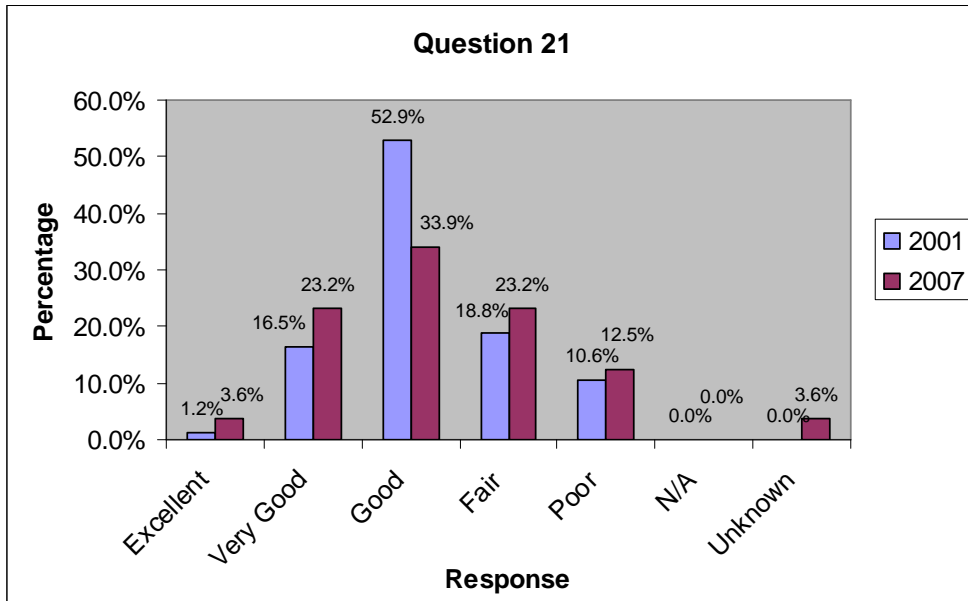
*How do you rate the information on the PTA website?*

Question 20 is a new question for the 2007 survey; therefore only results from 2007 are presented.



**Question 21**

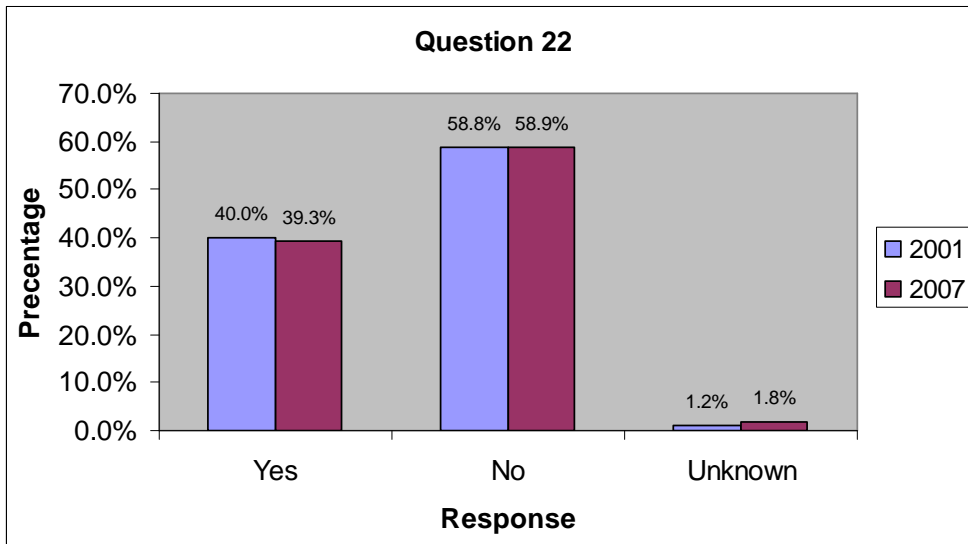
*How do you rate these programs for value for money?*



T-Test conducted - Not significant.

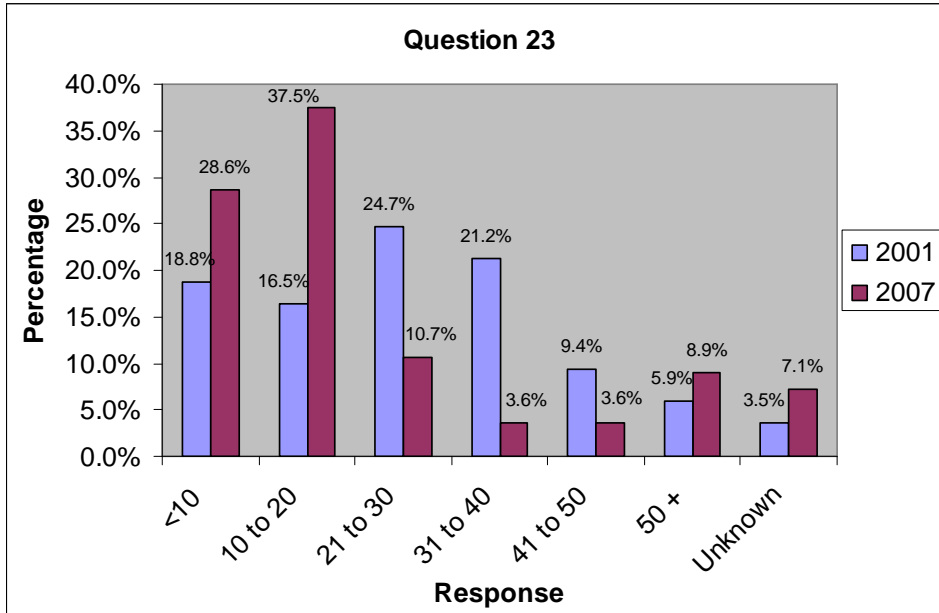
**Question 22**

*Have you recommended participation in PTA programs to other laboratories?*



### Question 23

In how many PTA programs has your laboratory participated?



### Identification of laboratories

There was an optional section at the end of the questionnaire where laboratories could identify themselves. A total of 39 of the 56 respondents (70%) chose to identify themselves. The remainder preferred to stay anonymous.

Two laboratories who provided additional comment did not identify themselves.

### Discussion

Customer satisfaction with the PTA Chemical Waters program appears to fall within the “good” to “very good” categories. Performance appears to have remained generally consistent between 2001 and 2007. This would appear to indicate that there have been no major adverse effects on the quality of the program with the change of proficiency testing activities from being run as a part of the proficiency testing group with NATA to the new subsidiary PTA.

One significant change was noted in question 18, (*How useful have you found the programs in demonstrating your testing performance to other bodies?*) The t-test showed that a significant change has occurred between the 2001 and 2007 surveys. The change appears to be occurring with a shift from “good” to “very good” and “excellent” categories.

This may indicate that the use of the PTA proficiency testing results has taken a greater importance in demonstrating laboratory technical competence.

## Action Plan

An Action Plan has been draw up by PTA management to improve areas where substantial percentages of response was received in the "Fair" to "Poor" categories.

- Action 1 – Strengthening the publicising to laboratories of the availability of additional samples.
- Action 2 – Introduction of a follow up sample and analysis of results service for laboratories with outlier results.
- Action 3 – Development of a PT workshop for PTA customers. The workshop will focus on explaining the analysis of PT results, interpretation of PTA reports, use of the Guide to PTA and how to explain PT results to other parties.
- Action 4 – Expansion of the PTA Chemical Waters Programs. The PTA Chemical Waters program will be expanded over the next 12 months to include up to 12 rounds per year. This will provide a greater level of coverage and frequency of determinations.