



The EQUAL Scheme for Indicator Organisms

Isolation Methods Survey August 2005



In August of this year you may recall that we undertook a 'mini' Isolation Methods Survey.

Participants were asked to indicate which was their most frequently used method by ticking **only one box** of four available for each parameter. Three boxes represented the top three methods, as identified by the very comprehensive Isolation Methods Survey undertaken a year earlier, in August 2004 and the fourth represented all the others.

It was never our intention to link participants' EQA results to methods. So the fact that in some laboratories, the most frequently used method may be a reflection of the most frequently examined sample type, but not necessarily the method used for all of their EQA samples, does not invalidate the survey.

The intention was always to simply monitor underlying shifts and trends in methodology, so that when assessing their own results, participants would be aware of whether their method was used by the majority or only a minority of participants. The justification for keeping it simple is so that we can repeat it regularly, prior to each User Group Meeting, without imposing an undue burden on either you or us.

158 (63%) participants returned questionnaires. Charts 1 – 6 illustrate, for each parameter, the percentage of respondents in each of the four method categories.

Tables 1 – 6 compare, for each parameter, the percentages of respondents in the four method categories in the 2004 and 2005 surveys.

The two surveys were not directly comparable, since not all laboratories that responded in 2004 responded in 2005 and vice versa, although 111 laboratories participated in both. Also, the 2004 survey included laboratories in totals for more than one method, where they used more than one, whereas in 2005, laboratories were included only in the total for the method which they used most frequently. Nevertheless, the comparisons are interesting and highlight some notable points of difference between the coliform parameters and the others.

For coliform bacteria and *E. coli*

- there is no clear 'top' method in use, but the top two methods are used by almost the same percentages of respondents.
- in 2004, the percentage of respondents in the 'other' category was higher than that in the top two methods categories. An additional 16 coliform and 23 *E. coli* methods were in use.
- the percentages of respondents in the top three categories have changed very little between 2004 and 2005, but there was a noticeable decrease in the percentage of respondents in the 'other' category in 2005. It is not known whether there has been a genuine decrease in the number of methods used or whether it is a reflection of the different participants responding in the two surveys.

For the other parameters there is, in each case, a clear 'top' method in use by the majority of participants. In particular, for enterococci, over 90% of respondents agree on the most frequently used method and around 70% for *Pseudomonas aeruginosa*, *Clostridium perfringens* and colony counts.

We are grateful to all those who participated in the surveys and hope you find these results useful.

Sheila Eaton
November 2005

Chart 1 : Coliform bacteria

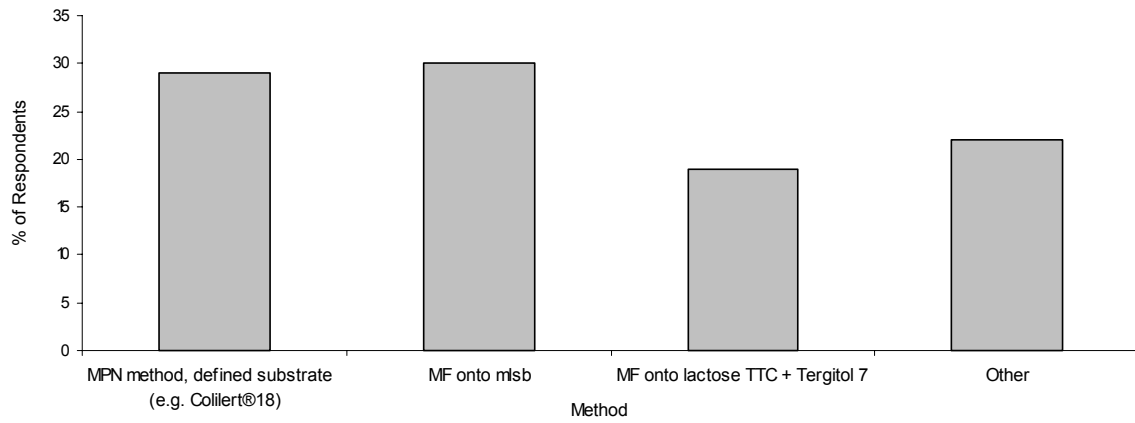


Chart 2 : *E. coli*

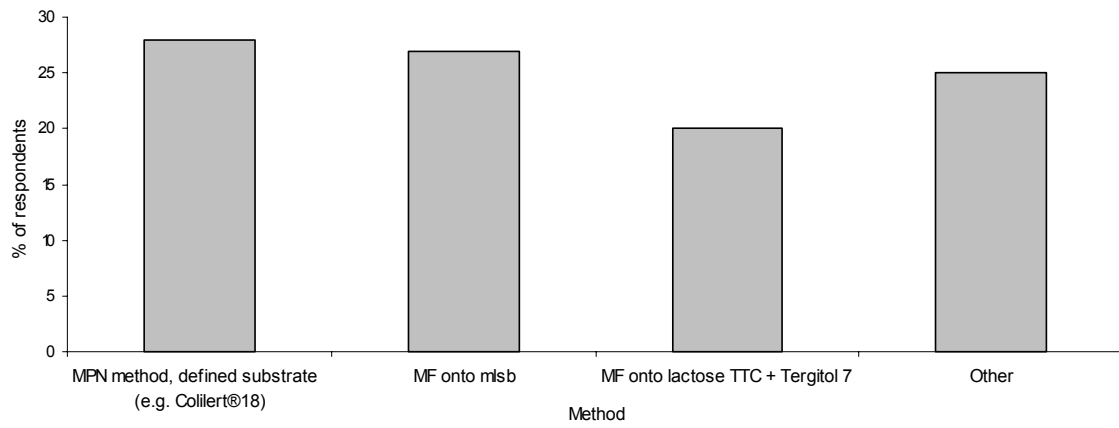


Chart 3 : Enterococci

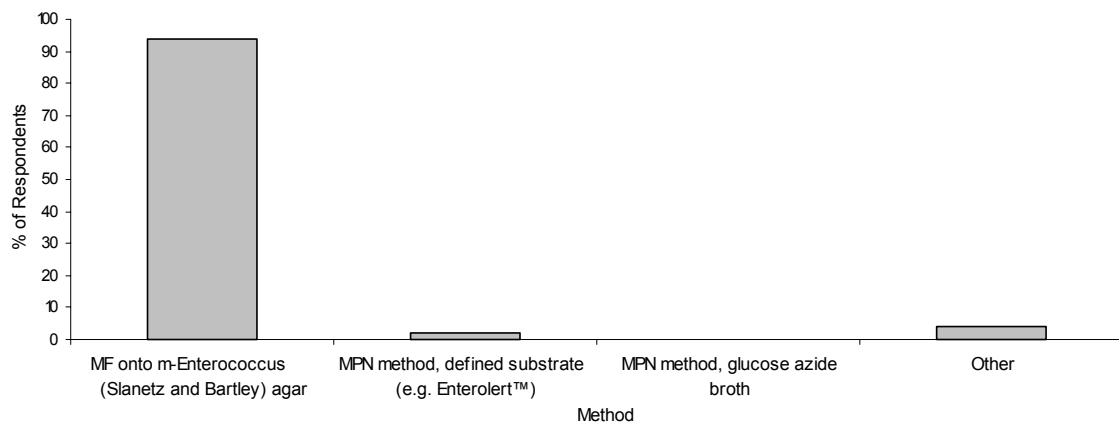


Chart 4 : *Pseudomonas aeruginosa*

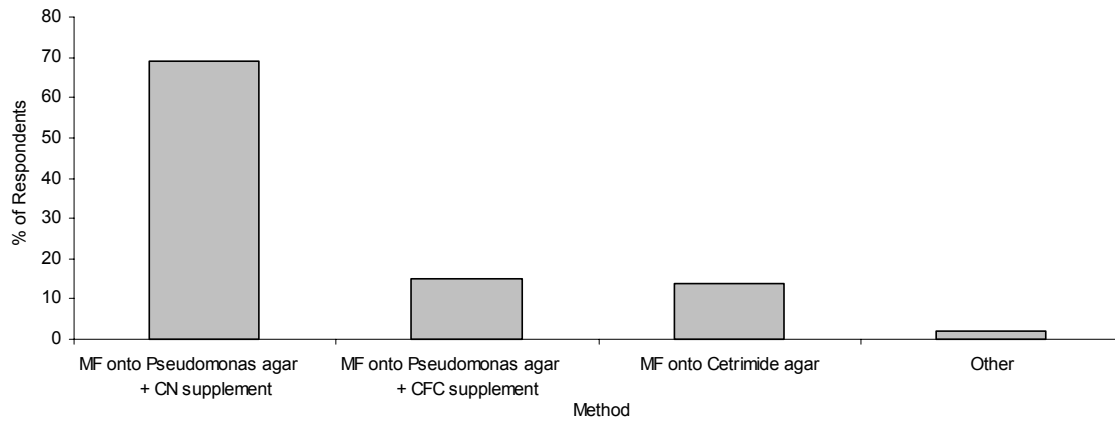


Chart 5 : *Clostridium perfringens*

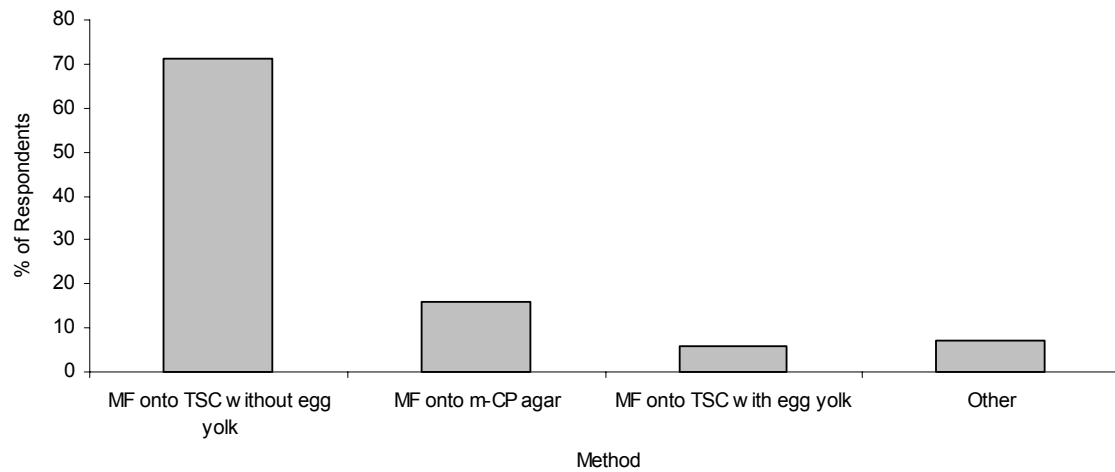


Chart 6 : Colony counts

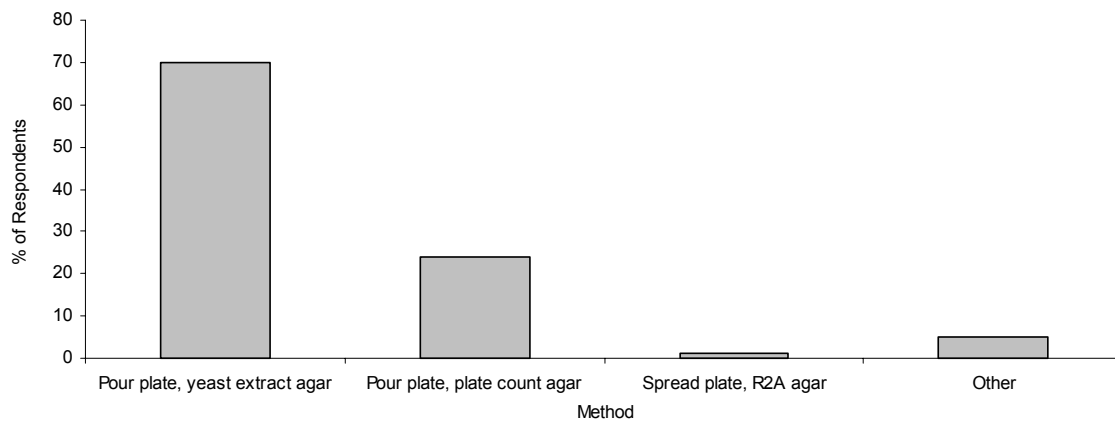


Table 1 : Coliform bacteria

Method	% survey respondents using method	
	2004	2005
MPN defined substrate (e.g. Colilert® 18)	34	29
MF onto mlsb	34	30
MF onto LTCC + Tergitol 7	14	19
Other	39	22
	2004	2005
Total number of respondents	167	156

34 respondents in 2004 were using 2 methods and were included in totals for both.

Table 2 : *E. coli*

Method	% survey respondents using method	
	2004	2005
MPN defined substrate (e.g. Colilert® 18)	34	28
MF onto mlsb	30	27
MF onto LTCC + Tergitol 7	14	20
Other	42	25
	2004	2005
Total number of respondents	169	157

35 respondents in 2004 were using 2 methods and were included in totals for both.

Table 3 : Enterococci

Method	% survey respondents using method	
	2004	2005
MF onto m-Enterococcus (Slanetz and Bartley) agar	91	94
MPN defined substrate (e.g. Enterolert®)	6	2
MPN glucose azide broth	3	0
Other	8	4
	2004	2005
Total number of respondents	160	147

11 respondents in 2004 were using 2 methods and were included in totals for both.

Table 4 : *Pseudomonas aeruginosa*

Method	% survey respondents using method	
	2004	2005
MF onto <i>Pseudomonas</i> agar +CN supplement	71	69
MF onto <i>Pseudomonas</i> agar +CFC supplement	18	15
MF onto Cetrimide agar	8	14
Other	3	2
	2004	2005
Total number of respondents	145	134

There were no respondents in 2004 using two methods for this parameter.

Table 5 : *Clostridium perfringens*

Method	% survey respondents using method	
	2004	2005
MF onto TSC agar without egg yolk	65	71
MF onto m-CP agar	13	16
MF onto TSC agar with egg yolk	11	6
Other	12	7
	2004	2005
Total number of respondents	142	135

There were only two respondents in 2004 using two methods.

Table 6 : Colony counts

Method	% survey respondents using method	
	2004	2005
Pour plate, yeast extract agar	74	70
Pour plate, plate count agar	17	24
Spread plate, R2A agar	2	1
Other	7	5
	2004	2005
Total number of respondents	164	152