INTI
National Institute of
Industrial Technology

CITIL
Technological Research
Center of Milk Industry

TRIAL REPORT

<u>Argentina, May 2001</u>

A - <u>OBJECT:</u>

Comparison between **CHROMagar™ ECC** method for the detection and enumeration of *Escherichia coli* and coliforms and versus FIL-IDF N°73B method (1998) for the enumeration of coliforms - Part 1 (enumeration at 30°C in samples of raw milk, butter and cheese).

B - <u>SUPPLIED MATERIAL:</u>

◇ **CHROMagar™ ECC** dose: 250 ml.

C - <u>METHODOLOGY:</u>

◇ <u>Enumeration of total coliforms</u>:
  FIL-IDF N°73B: 1998 Norm - Part 1.

◇ <u>Detection and enumeration of *Escherichia coli* and coliforms</u>
  CHROMagar™ ECC method. Incubation at 37°C during 24h.

D - <u>RESULTS:</u>

-A- *Raw milk samples:*

Samples	FIL-IDF 73B: 1998 method ($\log_{10}$. UFC/ml.)	CHROMagar™ ECC method ($\log_{10}$ UFC/ml.)
1	2,18	2,04
2	2,57	2,66
3	2,78	2,78
4	2,18	2,34
5	3,08	2,70
6	2,76	2,81
7	2,28	2,41
8	3,32	3,00
9	4,78	4,45
10	2,82	3,08

Statistical comparison:

Correlation coefficient	**0,9240**
Average ($\log_{10}$) UFC/ml (FIL-IDF 73B: 1998 method)	2,8750±0,7679
Variation coefficient (FIL-IDF 73B: 1998 method)	26,7110
Average ($\log_{10}$) UFC/ml (CHROMagar™ ECC method)	2,8270±0,6502
Variation coefficient (CHROMagar™ ECC method)	23,0000
Sample volume	10

-B- Butter samples:

Samples	FIL-IDF 73B: 1998 method ($\log_{10}$. UFC/gr.)	CHROMagar™ ECC method ($\log_{10}$.UFC/gr.)
1	3,78	4,40
2	3,08	4,34
3	3,11	3,23
4	3,15	3,28
5	3,98	4,20
6	3,83	4,23
7	2,11	2,43
8	1,90	2,26
9	1,70	2,20
10	2,00	2,00

Statistical comparison:

Correlation coefficient	**0,8701**
Average ($\log_{10}$) UFC/gr (FIL-IDF 73B: 1998 method)	2,8640±0,8696
Variation coefficient (FIL-IDF 73B: 1998 method)	30,3630
Average ($\log_{10}$) UFC/gr (CHROMagar™ ECC method)	3,2570±0,9827
Variation coefficient (CHROMagar™ ECC method)	30,1730
Sample volume	10

-C- Cheese samples:

Samples	FIL-IDF 73B: 1998 method ($\log_{10}$. UFC/gr.)	CHROMagar™ ECC method ($\log_{10}$.UFC/gr.)
1	2,23	2,61
2	2,96	3,15
3	2,04	1,70
4	2,45	3,32
5	4,41	4,50
6	3,57	3,95
7	3,70	3,97
8	3,68	3,93
9	2,00	2,00
10	2,00	2,00

Statistical comparison:

Correlation coefficient	**0,9001**
Average ($\log_{10}$) UFC/gr (FIL-IDF 73B: 1998 method)	2,9040±0,8814
Variation coefficient (FIL-IDF 73B: 1998 method)	30,3510
Average ($\log_{10}$) UFC/gr (CHROMagar™ ECC method)	3,1130±0,9887
Variation coefficient (CHROMagar™ ECC method)	31,7600
Sample volume	10