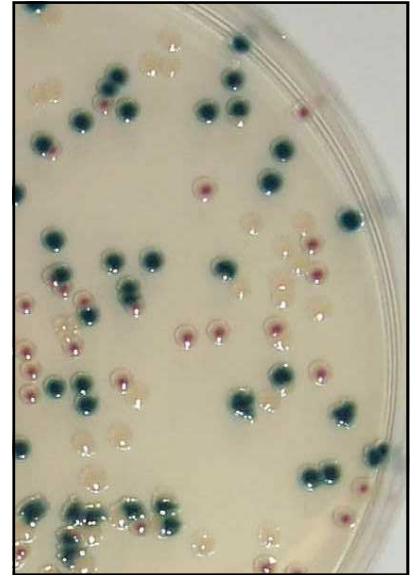


LAB



HAL008

Harlequin™

E.coli / Coliform Medium

- .Dual chromogen
- .Easy identification
- .Differentiate *E.coli* and coliforms on one plate
- .Simultaneous enumeration

Description

This dual chromogenic substrate medium has been developed for the simultaneous enumeration of *Escherichia coli* and coliforms in food and environmental samples. The different colony types are simple to distinguish allowing rapid counting of both *E. coli* and coliforms on a single medium.

Based upon the formulation of Tryptone Bile Agar LAB072, the medium has been modified by the addition of two chromogenic substrates, one to detect the β -glucuronidase enzyme (X-glucuronide) and another to detect the β -galactosidase enzyme (magenta- β -gal). Typical *E. coli* strains possess both enzymes but only cleave the X-glucuronide substrate, thereby producing blue-green colonies. Typical coliforms, however, possess only the β -galactosidase enzyme and produce rose-pink colonies.

The colony types are easily distinguishable, even in the presence of other organisms, or when large numbers are observed, making simultaneous enumeration of *E. coli* and coliforms a quick and simple procedure.

N.B. This product is not available for sale in the USA.

Method For Reconstitution

Weigh 36.6 grams of powder and disperse in 1 litre of de-ionised water. Allow to soak for 10 minutes, swirl to mix and sterilise by autoclaving for 15 minutes at 121°C. Cool to 47°C and mix well before dispensing into Petri dishes. Dry the agar surface prior to use.

Inoculation

Inoculate 0.5 ml of a 1:10 dilution of the sample and spread over the entire surface of the plate. Further dilution may be necessary if large numbers of *E. coli* and/or coliforms are present, to ensure colonies can be easily counted.

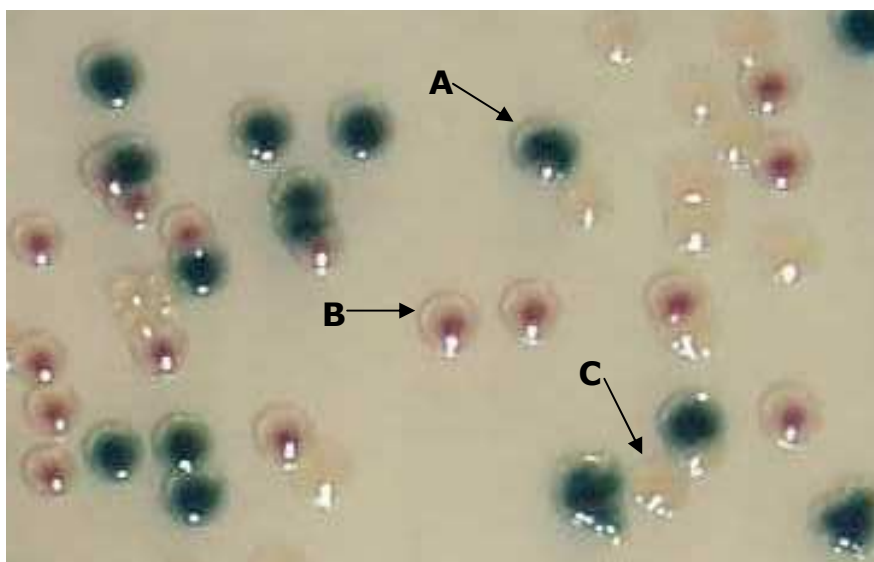
Incubation

Incubate at 37°C for 18-24 hours.

Interpretation

Count all blue-green colonies as presumptive *E. coli*, and calculate the cfu/g. Count all rose-pink colonies as presumptive coliforms, and calculate cfu/g.

Organism	Colony size (mm)	Shape and surface	Colour
<i>Escherichia coli</i>	0.1 - 2.0	Convex, entire, glossy	Blue-green
<i>Enterobacter aerogenes</i>	1.5 - 2.5	Convex, entire, glossy	Rose-pink
<i>Pseudomonas aeruginosa</i>	0.5 - 1.0	Flat, crenated, dull / Convex, entire, glossy	Buff
<i>Enterococcus faecalis</i>	No growth		
<i>Staphylococcus aureus</i>	No growth		



Above: Typical colonies growing on Lab M HAL008 Harlequin™ *E. coli* / Coliform Medium.

A = Typical *Escherichia coli* colony (blue-green)

B = Typical coliform, e.g. *Enterobacter aerogenes*, colony (rose-pink)

C = Typical non-coliform, e.g. *Pseudomonas aeruginosa*, colony (buff)

Minimum Quality Control Organisms

Escherichia coli ATCC 25922

Enterobacter aerogenes ATCC 13048

Staphylococcus aureus ATCC 25923 (inhibited)

References

Baylis, C.L., Patrick, M. (1999). *Comparison of a range of Chromogenic media for enumeration of total Coliforms and Escherichia coli in foods*. Leatherhead International Technical Notes. No.135: 99.

Formulation

Amount/Litre

Tryptone	20.0g
Bile salts No.3	1.5g
X-glucuronide	0.075g
Magenta-β-galactoside	0.1g
Agar	15g

pH 7.2 ± 0.2

Code	Product	Size
HAL008-B2.5	Harlequin™ <i>E.coli</i> / Coliform Medium	2.5kg
HAL008-A	Harlequin™ <i>E.coli</i> / Coliform Medium	500g
HAL008-E36.6	Harlequin™ <i>E.coli</i> / Coliform Medium	sample