

# CHROMagar™ *Y. enterocolitica*



## MEDIUM PURPOSE

Chromogenic medium for detection and direct differentiation of pathogenic *Yersinia enterocolitica*.

Among the *Yersinia* genus, *Yersinia enterocolitica* is one of the most common food borne pathogen. In several countries, *Y. enterocolitica* has eclipsed *Shigella* and approaches *Salmonella* and *Campylobacter* as the predominant cause of acute bacterial gastroenteritis. Its ability to grow at refrigeration temperature makes it an increasing concern in terms of food safety. This germ most commonly affects young individuals. However, only a few strains of *Y. enterocolitica* cause illness in humans.

## COMPOSITION

The product is composed of a powder base (B) and 1 supplement (S).

Product	=	Base (B)	+	Supplement (S)
Total g/L		41.3 g/L		0.1 g/L
Composition g/L		Agar 15.0 Peptones 20.0 Salts 5.0 Chromogenic mix 1.3		Selective mix 0.1
Aspect		Powder Form		Powder Form
STORAGE		15/30°C		2/8°C
FINAL MEDIA pH		7.0 +/- 0.2		

## PREPARATION (Calculation for 1L)

<p><b>Step 1</b> Preparation of the base CHROMagar <i>Y. enterocolitica</i> (B)</p>	<ul style="list-style-type: none"> <li>Disperse slowly 41.3g of powder base in 1L of purified water.</li> <li>Stir until agar is well thickened.</li> <li>Heat and bring to boil (100°C) while swirling or stirring regularly. DO NOT HEAT TO MORE THAN 100°C. DO NOT AUTOCLAVE AT 121°C.</li> </ul> <p><b>Warning 1:</b> If using an autoclave, do so without pressure.</p> <p><b>Advice 1:</b> For the 100°C heating step, mixture may also be brought to a boil in a microwave oven: after initial boiling, remove from oven, stir gently, then return to oven for short repeated bursts of heating until complete fusion of the agar grains has taken place (large bubbles replacing foam).</p> <ul style="list-style-type: none"> <li>Cool in a water bath to 47°C +/- 2°C.</li> </ul>	<p><b>Final Media</b>    <b>HELPING CALCULATION</b></p> <table border="1"> <tbody> <tr> <td>1 L</td> <td>100mg into 1 ml of sterile water</td> </tr> <tr> <td>5 L</td> <td>500mg 5 ml of sterile water</td> </tr> <tr> <td>25L</td> <td>2500mg into 25 ml of sterile water</td> </tr> </tbody> </table>	1 L	100mg into 1 ml of sterile water	5 L	500mg 5 ml of sterile water	25L	2500mg into 25 ml of sterile water
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<p><b>Step 2</b> Preparation of the Supplement (S)</p>	<ul style="list-style-type: none"> <li>Prepare a stock solution of the supplement (S): Add 100mg to 1ml of purified water.</li> <li>Swirl well until complete dissolution. Filter sterilise at 0.45 µm.</li> </ul> <p><b>Warning 2:</b> This supplement stock solution should be used immediately after preparation, or can be stored at -20°C and used within 15 days.</p>	<p><b>Final Media</b>    <b>HELPING CALCULATION</b></p> <table border="1"> <tbody> <tr> <td>1 L</td> <td>Add 1ml of supplement to the base</td> </tr> <tr> <td>5 L</td> <td>Add 5ml of supplement to the base</td> </tr> <tr> <td>25L</td> <td>Add 25ml of supplement to the base</td> </tr> </tbody> </table>	1 L	Add 1ml of supplement to the base	5 L	Add 5ml of supplement to the base	25L	Add 25ml of supplement to the base
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<p><b>Step 3</b> Mixing of the prepared mix (B) and the prepared supplement (S)</p>	<ul style="list-style-type: none"> <li>Add 1ml of the prepared supplement solution to the prepared base cooled at 47°C +/- 2°C.</li> <li>Swirl gently to homogenize.</li> <li>Pour into sterile Petri dishes.</li> <li>Let it solidify and dry.</li> </ul>	<p><b>Final Media</b>    <b>HELPING CALCULATION</b></p> <table border="1"> <tbody> <tr> <td>1 L</td> <td>Add 1ml of supplement to the base</td> </tr> <tr> <td>5 L</td> <td>Add 5ml of supplement to the base</td> </tr> <tr> <td>25L</td> <td>Add 25ml of supplement to the base</td> </tr> </tbody> </table>	1 L	Add 1ml of supplement to the base	5 L	Add 5ml of supplement to the base	25L	Add 25ml of supplement to the base
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<p><b>Storage</b></p>	<ul style="list-style-type: none"> <li>Store in the dark before use.</li> <li>Prepared media plates can be kept for one day at room temperature.</li> <li>Plates can be stored for up to one month under refrigeration (2/8°C) if properly prepared and protected from light and dehydration.</li> </ul>							

## INOCULATION

Related samples can be processed by direct streaking on the plate, as well as prior appropriate enrichment step.

- If the agar plate has been refrigerated, allow to warm to room temperature before inoculation.
- Streak sample onto plate.
- Incubate in aerobic conditions at 30°C for 24-36 hours.

### Typical Samples

e.g. All types of samples  
\*\*\*  
Possible enrichment step  
Direct streaking  
or spreading technique

# CHROMagar™ *Y. enterocolitica*

Instructions For Use

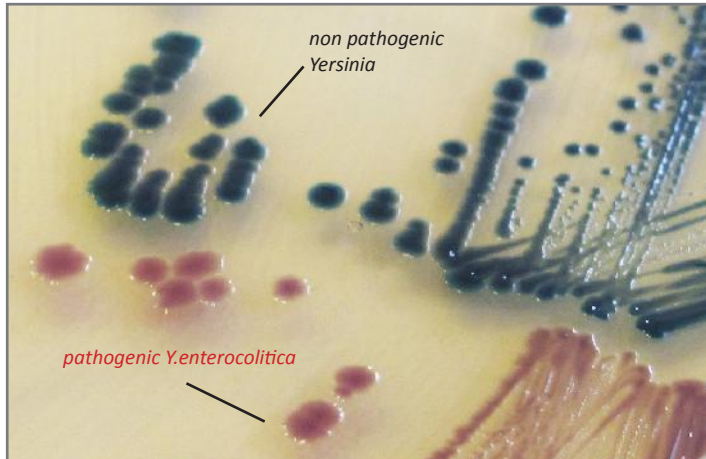
ENGLISH

Instructions For Use

## INTERPRETATION

Microorganism	Typical colony appearance
Pathogenic <i>Y. enterocolitica</i>	→ mauve
Other <i>Yersinia</i> spp	→ metallic blue or inhibited
Other Enterobacteriaceae	→ metallic blue or inhibited
Gram positive bacteria	→ inhibited

### Typical colony appearance



The pictures shown are not contractual.

## PERFORMANCE & LIMITATIONS

- Some *Y. enterocolitica* could have a poor or no growth on the media. Some rare strains of non-pathogenic *Yersinia* could appear as mauve colonies (*Y. bercovieri*, *Y. mollareti*, *Y. kristensenii*, *Y. rohdei* etc).
- Final confirmation as pathogenic *Y. enterocolitica* must be done by appropriate methods.

## QUALITY CONTROL

Please perform Quality Control according to the use of the medium and the local QC regulations and norms. Good preparation of the medium can be tested, isolating the ATCC strains below:

Microorganism	Typical colony appearance
<i>Y. enterocolitica</i> pYV+ ATCC® 23715	→ mauve
<i>Y. enterocolitica</i> pYV- biotype 1A	→ metallic blue
<i>E. coli</i> ATCC® 25922	→ inhibited
<i>E. faecalis</i> ATCC® 29212	→ inhibited
<i>Pseudomonas</i> ATCC® 9027	→ inhibited
<i>Citrobacter</i> ATCC® 8090	→ partially inhibited

## WARNINGS

- Do not use plates if they show any evidence of contamination or any sign of deterioration.
- Do not use the product beyond its expiry date or if product shows any evidence of contamination or any sign of deterioration.
- For *in vitro* diagnostic use. This laboratory product should be used only by trained personnel in compliance with good laboratory practices.
- Any change or modification in the procedure may affect the results.
- Any change or modification of the required storage temperature may affect the performance of the product.
- Unappropriate storage may affect the shelf life of the product.
- Recap the bottles/vials tightly after each preparation and keep them in a low humidity environment, protected from moisture and light.
- For a good microbial detection: collection and transport of specimen should be well handled and adapted to the particular specimen according to good laboratory practices.

## DISPOSAL OF WASTE





After use, all plates and any other contaminated materials must be sterilized or disposed of by appropriate internal procedures and in accordance with local legislations. Plates can be destroyed by autoclaving at 121°C for at least 20 minutes.



## REFERENCES

Please refer to our website page «Publications» for scientific publications about this particular product.

Web link: <http://www.chromagar.com/publication.php>

## IFU/LABEL INDEX

-  Quantity of powder sufficient for X liters of media
-  Expiry date
-  Required storage temperature
-  Store away from humidity

 Pack Size = 5000 ml  = **Ordering References** YE492 = Base YE492(B) Weight: 206.5gr + Supplement YE492(S) Weight: 0.5gr

CHROMagar™ and Rambach™ are trademarks created by Dr A. Rambach  
ATCC® is a registered trademark of the American Type Culture Collection  
NT-EXT-071 V3 / 21-Oct-13

### Need some Technical Documents?

Available for download on [www.CHROMagar.com](http://www.CHROMagar.com)

- Certificate of Analysis (CoA) --> One per Lot
- Material Safety Data Sheet (MSDS)