

**INTENDED USE**

Pro-Lab PL.520 C.T. Supplement is to be used in combination with Sorbitol MacConkey Agar to enhance the isolation of *Escherichia coli* O157.

**SUMMARY AND EXPLANATION**

*Escherichia coli* serotype O157:H7 is a verotoxin producing (VT-producing) pathogen.<sup>1,2</sup> This serotype has been reported as an etiological agent in sporadic and outbreak cases of haemorrhagic colitis.<sup>3,4,5</sup> It is also associated with haemolytic uraemic syndrome.<sup>6</sup> Certain *E. coli* serotypes other than O157:H7 also produce verotoxin.<sup>7,8,9</sup> However, the diarrhoea caused by these other serotypes is not usually bloody. Additionally, *E. coli* serotype O157:H7 does not ferment sorbitol whereas the majority of other serotypes do ferment sorbitol.<sup>10,11</sup> Therefore, if Sorbitol-MacConkey agar medium is used as a primary screen, the colonies of *E. coli* serotype O157 appear colourless (non-sorbitol fermenting colonies- NSFC) while colonies of other serotypes appear characteristically pink (sorbitol fermenting colonies-SFC).<sup>11</sup>

Other organisms, such as *Proteus* and *Morganella*, also grow as NSFC on SMAC medium. In order to inhibit these organisms, as well as sorbitol fermenting organisms (eg. most non-pathogenic *E. coli*) several supplements have been suggested. Cefixime-Rhamnose (CR)-SMAC was introduced in 1991.<sup>12</sup> Cefixime inhibits *Proteus* (NSFC) and rhamnose is fermented by most *E. coli* except serotype O157. The use of potassium tellurite with Cefixime (CT) for the selection of *E. coli* O157 was examined.<sup>13</sup> The use of tellurite in SMAC increased the isolation of *E. coli* O157 by inhibiting other non sorbitol fermenting organisms with no effects on *E. coli* O157. Pro-Lab PL.520 C.T. Supplement is based on this formulation.

**DESCRIPTION**

Accurate quantities of cefixime and potassium tellurite are lyophilized and provided in individually labelled vials. Each vial is sufficient to supplement 1000 mls of prepared media.

**FORMULA**

Each vial contains:

Cefixime	0.05 mg
Potassium tellurite	2.50 mg

**PROCEDURE**

- To reconstitute each vial of Pro-Lab PL.520, C.T. Supplement add, aseptically, 10 mls of sterile deionized water. After closing the vial, gently agitate to assist reconstitution.
- Prepare Sorbitol MacConkey Agar according to the manufacturer's instructions, autoclave and cool to 50°C to 55°C.

- Add the reconstituted contents of one vial of the C.T Supplement to 1000 mls of prepared media. Mix gently and pour into sterile petri dishes.
- Media may be used immediately. For extended storage at 4°C, eg. up to 7 days, plates should be contained in sealed plastic sleeves or similar packaging.

**IN USE**

- Before using selective medium ensure that plates are dry.
- Inoculate test material onto surface of agar using a sterile inoculating loop or a sterile swab in such a manner as to encourage the growth of isolated colonies.
- Incubate plates at 37°C for 24 hours.
- After incubation (no longer than 24 hours), examine plates for small, round, smooth NSF (non-sorbitol fermenting) colonies.
- Suspect colonies may be tested with the Pro-Lab *E. coli* O157 Latex Test Reagent Kit (PL.070/PL.071). It is an agglutination test kit for the presumptive identification of *E. coli* serogroup O157 antigen on laboratory culture media.

**SAFETY PRECAUTIONS**

- Pro-Lab PL.520 C.T. Supplement is offered only as an *in vitro* material and is in no way intended for a curative or prophylactic purpose.
- During and after use, handle all materials in a manner conforming to Good Laboratory Practices and consider at all times that material under test should be regarded as a potential biohazard if mishandled.

**PRESENTATION**

Pro-Lab PL.520 C.T. Supplement is supplied 10 vials per box (lyophilized).









**STORAGE**

Pro-Lab PL.520 C.T. Supplement must be stored at 2°C to 8°C. Kept under these conditions it may be used up to the date of expiry shown on the product label.

**REFERENCES**

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	= Lot number
	= Catalogue number
	= Manufacturer
	= Authorized Representative in the European Community
	= In vitro diagnostic medical device
	= Temperature limitation
	= Consult instructions for use

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