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Section: <b>Technical Manual</b>	Subject Title: <b><i>E. coli</i> O157 Latex Test (Oxoid)</b>	
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### ***E. coli* O157 LATEX TEST (OXOID)**

#### **Principle**

The Latex test will demonstrate by slide agglutination, *E. coli* strains possessing the O157 antigen. Sorbitol MacConkey Agar (SMAC) should be used as the primary screen. Non-sorbitol fermenting colonies (NSF) are tested with the latex reagents, to determine if the isolate belongs to the O157 serogroup, and is therefore a potential vero-cytotoxin (VT) producing strain.

#### **Reagents**

DR621 Test Latex - consists of latex particles sensitized with specific rabbit antibody reactive with the O157 antigen.

DR622 Control Latex - consists of latex particles sensitized with pre-immune rabbit globulins.

#### **Storage**

Do not freeze. Store at 2<sup>0</sup>C - 8<sup>0</sup>C. Do not use kit beyond the expiry date.

#### **Procedure**

NSF colonies may be taken from SMAC plates or alternatively NSF isolates may be inoculated onto non-selective agar media for testing.

It is necessary to test up to 10 separate NSF colonies to ensure a high probability of detection from mixed cultures.

- 1) Bring the latex reagents to room temperature. Make sure the latex suspensions are mixed by vigorous shaking. Expel any latex from the dropper pipette for complete mixing.
- 2) Dispense 1 drop of the Test latex onto a circle of the black slide. Place it close to the edge of the circle.

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- 3) Add some loopfuls or a pasteur pipette drop of saline to the circle. Ensure that the latex and saline do not mix at this stage.
- 4) Using a loop, pick off a portion of the colony to be tested and carefully emulsify in the saline drop.
- 5) Mix the Test latex and suspension together and spread to cover most of the reaction area using the loop. Flame the loop.
- 6) Rock the slide in a circular motion, observing for agglutination. Do not rock the card for more than 1 minute and do not use a magnifying glass.
- 7) If no agglutination occurs, then proceed to test other NSF colonies if these are present.
- 8) If agglutination with the test reagent does occur, then it is necessary to test a further portion of the colony with the control reagent to ensure that the isolate is not an autoagglutinating strain.
- 9) When finished, dispose of the reaction slide into disinfectant.

### **Interpretation**

- a) Positive result - Agglutination of the Test latex occurs within 1 minute. No agglutination of the Control latex. \*Perform biochemical tests to confirm that the organism is an *E. coli* strain.
- b) Negative result - no agglutination of the Test latex.
- c) Non-interpretable result - clumping of the Control latex.

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