DIAMOND’S MEDIUM MODIFIED

INTENDED USE
Remel Diamond’s Medium Modified is a liquid medium recommended for use in qualitative procedures for the cultivation of *Trichomonas vaginalis* from clinical specimens.

SUMMARY AND EXPLANATION
In 1954, Kean et al. demonstrated that culture could reveal *T. vaginalis* infections missed by microscopic examination alone.1 Diamond’s Medium was developed by Diamond in 1957 for clinical diagnostic use.2 In 1980, The Centers for Disease Control and Prevention modified the original Diamond’s Medium by replacing sheep serum with horse serum, increasing the concentration of maltose, cysteine, and ascorbic acid, eliminating agar, and adding antibiotics to suppress the growth of bacteria and fungi.3 The authors of this formulation demonstrated, by serial dilution, that *T. vaginalis* could be recovered from an inoculum containing as few as a single organism. Culture, with >80% sensitivity, is considered the “gold standard” method for the detection of *T. vaginalis*.4

PRINCIPLE
Casein peptone, cysteine, and yeast extract provide amino acids, nitrogen, sulfur, carbon, and vitamins to support the growth of *T. vaginalis*. Maltose is the energy source and horse serum provides essential growth factors. Penicillin, streptomycin, and amphotericin B collectively suppress the growth of a wide range of urogenital flora without inhibiting the growth of *T. vaginalis*.

REAGENTS (CLASSICAL FORMULA)*

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casein Peptone</td>
<td>24.0 g</td>
</tr>
<tr>
<td>Yeast Extract</td>
<td>12.0 g</td>
</tr>
<tr>
<td>Maltose</td>
<td>6.0 g</td>
</tr>
<tr>
<td>Streptomycin</td>
<td>1.5 g</td>
</tr>
<tr>
<td>Cysteine L-Hydrochloride</td>
<td>1.2 g</td>
</tr>
<tr>
<td>L-Ascorbic Acid</td>
<td>0.24 g</td>
</tr>
<tr>
<td>Amphotericin B</td>
<td>2.0 mg</td>
</tr>
<tr>
<td>Penicillin</td>
<td>1,000,000 U</td>
</tr>
<tr>
<td>Horse Serum</td>
<td>120.0 ml</td>
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<tr>
<td>Demineralized Water</td>
<td>900.0 ml</td>
</tr>
</tbody>
</table>

pH 6.5 ± 0.2 @ 25°C

*Adjusted as required to meet performance standards.

PROCEDURE
1. Inoculate the specimen as soon as possible after it is received in the laboratory. If a liquid specimen is received (i.e., urine sediment or vaginal secretions), inoculate several drops into Diamond’s Medium Modified. If material is being cultured from a swab, swirl the swab in the medium, cut off the protruding portion of the swab, and replace the cap, loosely.

2. Incubate aerobically at 33-37°C for up to 5 days.

3. Examine the medium microscopically for the presence of motile organisms.

QUALITY CONTROL
All lot numbers of Diamond’s Medium Modified have been tested using the following quality control organisms and have been found to be acceptable. Testing of control organisms should be performed in accordance with established laboratory quality control procedures. If aberrant quality control results are noted, patient results should not be reported.

CONTROL
- *Trichomonas vaginalis* ATCC® 30001
- *Candida albicans* ATCC® 10231
- *Escherichia coli* ATCC® 25922
- *Staphylococcus aureus* ATCC® 25923

INCUBATION
- Aerobic, up to 72 h @ 33-37°C

RESULTS
- Motile organisms observed
- Inhibition (partial to complete)

BIBLIOGRAPHY

Refer to the front of Remel *Technical Manual of Microbiological Media* for General Information regarding precautions, product storage and deterioration, specimen collection, storage and transportation, materials required, quality control, and limitations.

ATCC® is a registered trademark of American Type Culture Collection.

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