Testing for dissociated resistance in staphylococci

A detailed explanation of constitutive and inducible resistance is given in the following chapter on the BSAC website:

**Interpretative reading: recognizing the unusual and inferring resistance mechanisms from resistance phenotypes**

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**MLSB resistance: Interpretation of susceptibility testing results**

<table>
<thead>
<tr>
<th>Erythromycin</th>
<th>Clindamycin</th>
<th>Interpretation</th>
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<tbody>
<tr>
<td>S</td>
<td>S</td>
<td>Type 1: Organism susceptible to both erythromycin and clindamycin</td>
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<tr>
<td>R</td>
<td>R</td>
<td>Type 2: Organism resistant to erythromycin and clindamycin (constitutive MLSB)</td>
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<tr>
<td>R</td>
<td>S</td>
<td>Type 3: May have inducible resistance (inducible MLSB)</td>
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Detection of inducible MLSB resistance in isolates susceptible to clindamycin, but resistant to erythromycin:
1. Inoculate an ISA plate with a suspension of organism to give semi-confluent growth (see BSAC Disc Diffusion Method for Antimicrobial Susceptibility testing).
2. Place a 5 μg erythromycin disc and a 2 μg clindamycin disc 15mm apart edge to edge.
3. Incubate at 35-37°C for 18-20 h.
4. Examine the zones of inhibition for blunting as shown below.

Organisms exhibiting blunting

Isolate has MLSB and clindamycin should be used with caution (if at all).

NB.
Disc on the left 5 μg erythromycin, disc on right 2 μg clindamycin