# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Materials and Methods:</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I.</td>
<td>Tests for MRSA identification.</td>
<td>62</td>
</tr>
<tr>
<td>II.</td>
<td>Scheme for Preparing Dilutions of Antimicrobial Agents to be used in Agar Dilution Susceptibility Tests.</td>
<td>65</td>
</tr>
<tr>
<td>III.</td>
<td>The isolates were classified into 4 biotypes in the following way.</td>
<td>69</td>
</tr>
<tr>
<td>IV.</td>
<td>Primers used in the PCR to type the Staphylococcal cassette chromosome <em>mec</em> element (SCCmec) in methicillin-resistant <em>Staphylococcus aureus</em>.</td>
<td>75</td>
</tr>
<tr>
<td>V</td>
<td>Primers used in the PCR to type the Staphylococcal cassette chromosome <em>mec</em> element (SCCmec) in methicillin-resistant <em>Staphylococcus aureus</em>.</td>
<td>78</td>
</tr>
</tbody>
</table>

## Results:

1. Occurrence of total *Staphylococcus aureus* strains isolated from different ecosystems in health and diseases. 84
2. Incidence frequency of *Staphylococcus aureus* isolates in clinical/infected personnel. 85
3. Frequency distribution of *Staphylococcus aureus* isolates among colonized or carrier healthy personnel in hospital and community environment. 86
4. Frequency of *Staphylococcus aureus* from veterinary environment. 86
5. Occurrence frequency of *Staphylococcus aureus* strains from various foods and food handlers. 87
6. Frequency of *Staphylococcus aureus* from different aerosol environment. 87
7. Prevalence of *Staphylococcus aureus* in water sources. 88
8. Characteristics of *Staphylococcus aureus* isolated from various Sources in Health and Diseases. 91
9. Age and Gender distribution of personnel’s in health & diseases in different environments. 92

11a. Prevalence of MRSA isolates among clinical specimens.


12. Resistance profile of *Staphylococcus aureus* strains from nosocomial and community settings.


14. Resistance profile of *Staphylococcus aureus* isolated from food and food handlers.

15. Resistance Frequency of *Staphylococcus aureus* from Air environment.

16. Resistance Frequency of *Staphylococcus aureus* from water environment.

17. Resistance profile of MRSA strains from various sources.


19. Qualitative Distribution of Methicillin-Resistance *Staphylococcus aureus* in different ecosystems.

20. Biotyping: Distribution of drug-resistance *Staphylococcus aureus* isolates by the Crystal Violet Test in diseased and healthy personnel.

21. Biotyping Patterns of Methicillin-Resistant *Staphylococcus aureus* (MRSA) by nature of source among diseased and healthy personnel.

22. Bacteriophage Typing: Phage Typability of methicillin-sensitive and resistant *Staphylococcus aureus* isolates from personnel in health and disease.

23. Phage Typing: Association of Phage groups of Methicillin-Sensitive *Staphylococcus aureus* with source of isolation. Typability by the international basic set of 23 phages.


27. Multiplex PCR SCCmec Assay of MRSA isolates from different Environment sources in health and diseases.

28. General characteristics and RAPD-PCR analysis of MRSA isolates.

29. Pulsed Field Gel Electrophoresis Patterns of selected 71 MRSA strains (Type III & II cassette).