## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Composition of sporulation medium for <em>Trichoderma reesei</em></td>
<td>35</td>
</tr>
<tr>
<td>3.2</td>
<td>Composition of inoculum medium for <em>Trichoderma reesei</em></td>
<td>35</td>
</tr>
<tr>
<td>3.3</td>
<td>Composition of growth medium for <em>Aspergillus nidulan</em></td>
<td>36</td>
</tr>
<tr>
<td>3.4</td>
<td>Composition of inoculum medium for <em>Aspergillus nidulan</em></td>
<td>36</td>
</tr>
<tr>
<td>3.5</td>
<td>Composition of growth medium for <em>Cladosporium cladosporioides</em></td>
<td>37</td>
</tr>
<tr>
<td>3.6</td>
<td>Composition of inoculum medium for <em>Cladosporium cladosporioides</em></td>
<td>37</td>
</tr>
<tr>
<td>3.7</td>
<td>Nutrient supplements for screening using PBD for cellulase production</td>
<td>38</td>
</tr>
<tr>
<td>3.8</td>
<td>Spectro photometric values at different glucose concentrations</td>
<td>40</td>
</tr>
<tr>
<td>4.1</td>
<td>Plackett–Burman experimental design matrix for screening of important variables for cellulase production by <em>Trichoderma reesei</em> using mango peel</td>
<td>45</td>
</tr>
<tr>
<td>4.2</td>
<td>Ranges of variables used in RSM for cellulase production by <em>T.reesei</em> using mango peel</td>
<td>47</td>
</tr>
<tr>
<td>4.3</td>
<td>Central Composite Design (CCD) in coded levels with cellulase yield as response by <em>T.reesei</em> using mango peel</td>
<td>47</td>
</tr>
<tr>
<td>4.4</td>
<td>Analyses of variance (ANOVA) for response surface quadratic model for the production of cellulase by <em>T.reesei</em> using mango peel</td>
<td>48</td>
</tr>
<tr>
<td>4.5</td>
<td>Box-Behnken Design in coded levels with cellulase yield as response by <em>Trichoderma reesei</em> using mango peel</td>
<td>52</td>
</tr>
<tr>
<td>4.6</td>
<td>ANOVA for cellulase production in a batch reactor by <em>Trichoderma reesei</em> using mango peel</td>
<td>53</td>
</tr>
<tr>
<td>4.7</td>
<td>Plackett–Burman experimental design matrix for screening of important variables for cellulase production by <em>T.reesei</em> using pineapple peel</td>
<td>59</td>
</tr>
<tr>
<td>4.8</td>
<td>Ranges of the independent variables used in RSM by <em>T.reesei</em> using pineapple peel</td>
<td>61</td>
</tr>
</tbody>
</table>
4.9 Central composite design (CCD) of factors in coded levels with cellulase activity as response by \textit{T. reesei} using pineapple peel

4.10 Analysis of Variance (ANOVA) for response surface quadratic model for the production of cellulase by \textit{T. reesei} using pineapple peel

4.11 Box-Behnken Design in coded levels with cellulase yield as response by \textit{Trichoderma reesei} using pineapple peel

4.12 ANOVA for cellulase production in a batch reactor by \textit{Trichoderma reesei} using pineapple peel

4.13 Plackett–Burman experimental design matrix for screening of important variables for cellulase production by \textit{T. reesei} using pomegranate peel

4.14 Ranges of variables used in RSM by \textit{T. reesei} using pomegranate peel

4.15 Central composite design (CCD) of factors in coded levels for cellulase production by \textit{T. reesei} using pomegranate peel

4.16 Analysis of Variance (ANOVA) for response surface quadratic model for the production of cellulase

4.17 Box-Behnken Design in coded levels with cellulase yield as response by \textit{Trichoderma reesei} using pomegranate peel

4.18 ANOVA for cellulase production in a batch reactor by \textit{Trichoderma reesei} using pomegranate peel

4.19 Plackett–Burman experimental design matrix for screening of important variables for cellulase production by \textit{Aspergillus nidulan} using mango peel

4.20 Ranges of variables used in RSM \textit{Aspergillus nidulan} using mango peel

4.21 Central composite design (CCD) of factors in coded levels with enzyme activity as response \textit{Aspergillus nidulan} using mango peel

4.22 Analysis of Variance (ANOVA) for response surface quadratic model for the production of cellulase
4.23 Box-Behnken Design in coded levels with cellulase yield as response by *Aspergillus nidulan* using mango peel

4.24 ANOVA for cellulase production in a batch reactor by *Aspergillus nidulan* using mango peel

4.25 Plackett–Burman experimental design matrix for screening of important variables for cellulase production by *Aspergillus nidulan* using pineapple peel

4.26 Ranges of variables used in RSM for cellulase production by *Aspergillus nidulan* using pineapple peel

4.27 Central composite design (CCD) of factors in coded levels with enzyme activity as response by *Aspergillus nidulan* using pineapple peel

4.28 Analysis of variance (ANOVA) for response surface quadratic model for the production of cellulase

4.29 Box-Behnken Design in coded levels with cellulase yield as response by *Aspergillus nidulan* using pineapple peel

4.30 ANOVA for cellulase production in a batch reactor by *A. nidulans* using pineapple peel

4.31 Plackett–Burman experimental design matrix for screening of important variables for cellulase production by *Aspergillus nidulan* using pomegranate peel

4.32 Ranges of variables used in RSM for cellulose production by *Aspergillus nidulan* using pomegranate peel

4.33 Central composite design (CCD) of factors in coded levels with enzyme activity as response by *Aspergillus nidulan* using pomegranate peel

4.34 Analysis of Variance (ANOVA) for response surface quadratic model for the production of cellulase by *Aspergillus nidulan* using pomegranate peel.

4.35 Box-Behnken Design in coded levels with cellulase yield as response by
Aspergillus nidulans using pomegranate peel

4.36 ANOVA for cellulase production in a batch reactor by Aspergillus nidulans using pomegranate peel 122

4.37 Plackett–Burman experimental design matrix for screening of important variables for cellulase production by Cladosporium cladosporioides using mango peel 128

4.38 Ranges of variables used in RSM for cellulase production by Cladosporium cladosporioides using mango peel 129

4.39 Central Composite Design (CCD) in coded levels with cellulase yield as response by Cladosporium cladosporioides using mango peel 130

4.40 Analyses of variance (ANOVA) for response surface quadratic model for cellulase production by Cladosporium cladosporioides using mango peel 131

4.41 Box-Behnken Design in coded levels with cellulase yield as response by Cladosporium cladosporioides using mango peel 135

4.42 ANOVA for cellulase production in a batch reactor by Cladosporium cladosporioides using mango peel 136

4.43 Plackett–Burman experimental design matrix for screening of important variables for cellulase production by Cladosporium cladosporioides using pineapple peel 142

4.44 Ranges of variables used in RSM for cellulase production by Cladosporium cladosporioides using pineapple peel 143

4.45 Central Composite Design (CCD) in coded levels with cellulase yield as response by Cladosporium cladosporioides using pineapple peel 144

4.46 Analyses of variance (ANOVA) for response surface quadratic model for the production of cellulase by Cladosporium cladosporioides using pineapple peel 145

4.47 Box-Behnken Design in coded levels with cellulase yield as response by 149
Cladosporium cladosporioides using pineapple peel

4.48 ANOVA for cellulase production in a batch reactor by *Cladosporium cladosporioides* using pineapple peel

4.49 Plackett–Burman experimental design matrix for screening of important variables for cellulase production by *Cladosporium cladosporioides* using pomegranate peel

4.50 Ranges of variables used in RSM for cellulase production by *Cladosporium cladosporioides* using pomegranate peel

4.51 Central Composite Design (CCD) in coded levels with cellulase yield as response by *Cladosporium cladosporioides* using pomegranate peel

4.52 Analyses of variance (ANOVA) for response surface quadratic model for the production of cellulase by *Cladosporium cladosporioides* using pomegranate peel

4.53 Box-Behnken Design in coded levels with cellulase yield as response by *Cladosporium cladosporioides* using pomegranate peel

4.54 ANOVA for cellulase production in a batch reactor by *Cladosporium cladosporioides* using pomegranate peel

5.1 Optimized level of the significant nutrients and process variables for *Trichoderma reesei*

5.2 Optimized level of the significant nutrients and process variables for *Aspergillus nidulan*

5.3 Optimized level of the significant nutrients and process variables for *Cladosporium cladosporioides*

5.4 Model parameters for cellulase production from various cellulosic substrates.