Appendices

Appendix I

Interview schedule to elicit information from sports shops (Market survey)

1. Name of the interviewee:

2. Name of the shop :
   Address :

3. What are the types of sportswear available in your shop?
   - T-shirt
   - Jersey
   - Shorts
   - Tract suit
   - Lower
   - Gloves
   - Wrist band
   - Knee pad
   - Sock
   - shoes
   - any other

4. What type of material is used for the available T-shirt?
   - Cotton
   - Polyester
   - Polylycra
   - Viscose
   - Bamboo
   - Any other

5. What is the most preferable yarn count by the consumer for T-shirt?
   - 20’s
   - 30’s
   - 40’s

6. Which of the following knitting structure is commonly used for T-shirts?
   - Single jersey
   - Inter lock
   - Honey comb
   - Rib
   - Any other

7. What is the size of the T-shirt preferred by the consumer?
   - S
   - M
   - L
   - XL
   - XXL

8. What colour is most preferred by the consumers?
   - Blue
   - Yellow
   - Orange
   - Red
   - Green
   - Any other

9. Is there any special finishes applied on T-shirt?
   - Anti microbial finish
   - Fragrance finish
   - UV finish
   - Any other

10. What is the response of the consumer towards special finished T-shirt?
    - Good
    - Fair
    - Poor
Appendix - 2

Elicit information regarding sportswear among the selected college going boys (Consumer survey)

1. Particular about the interviewee:
   Name:  Age :  Class:  College :

2. What type of outdoor sports activity do you involved in?
   Athletics  □  Foot ball  □  Cricket  □  Kabadi  □  Basket ball  □
   Volley ball  □  Tennis  □  Hockey  □  any other  □

3. How many hours do you spent playing in the ground in hour?
   2  □  3  □  4  □  5  □  6  □

4. What type of sportswear do you prefer during outdoor games?
   T-shirt  □  shorts  □  track suit  □  any other  □

5. Do you know about the yarns used for T-shirt manufacturing?
   Yes  □  No  □

6. If yes which one of the following yarn?
   Cotton  □  Polyester  □  Polylcra  □  Viscose  □  Bamboo  □  Any other  □

7. Do you know about the knitting structure commonly used for T-shirts?
   Yes  □  No  □

8. If yes, mention the type of following structure do you know?
   Single jersey  □  Inter lock  □  Honey comb  □  Rib  □  Any other  □

9. What size of T-shirt do you prefer?
   S  □  M  □  L  □  XL  □  XXL  □

10. Which colour do you prefer for T-shirt?
    Blue  □  Yellow  □  Orange  □  Red  □  Green  □  Any other  □

11. What type of skin problems do you faced while playing?
    Skin allergy  □  Rashes  □  Skin irritation  □  Tanning  □  Any other  □

12. Are you aware of natural dye and functional finishes such as antimicrobial, fragrance and UV finish?
    Yes  □  No  □

13. Do you have any special finished garments for sportswear?
    Yes  □  No  □
Appendix - 3
Visual evaluation of 100%cotton, 100%bamboo and 50:50 bamboo/cotton unfinished and dyed samples

<table>
<thead>
<tr>
<th>Fabric samples</th>
<th>General appearance</th>
<th>Brilliance of color</th>
<th>Evenness of dyeing</th>
<th>Texture</th>
<th>Luster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Good</td>
<td>Fair</td>
<td>Poor</td>
<td>Bright</td>
<td>Medium</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
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<tr>
<td>CM</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AA</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>AM</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Appendix - 4

Visual inspection of the microencapsulated finished 50:50 bamboo/cotton sample before and after wash

<table>
<thead>
<tr>
<th>Fabric Samples</th>
<th>General appearance</th>
<th>Evenness of finishing</th>
<th>Texture</th>
<th>Luster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Good</td>
<td>Fair</td>
<td>Poor</td>
<td>Even</td>
</tr>
<tr>
<td>Aen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aen10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aen20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aen30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix-5

Subjective evaluation of T-Shirt

<table>
<thead>
<tr>
<th>T-shirt</th>
<th>Comfort</th>
<th>Absorbency</th>
<th>Cooling effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Medium</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Aen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aen10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aen20</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Appendix-6

Grading of all MMT indices (Yao et al. 2006)

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<th>Index</th>
<th>Grade</th>
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<td>1</td>
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<tr>
<td>Wetting time (s)</td>
<td>Top</td>
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<tr>
<td></td>
<td>≥120</td>
</tr>
<tr>
<td></td>
<td>No wetting</td>
</tr>
<tr>
<td>Absorption rate(%)</td>
<td>Top</td>
</tr>
<tr>
<td></td>
<td>0-10</td>
</tr>
<tr>
<td></td>
<td>Very slow</td>
</tr>
<tr>
<td>Max wetted radius(mm)</td>
<td>Top</td>
</tr>
<tr>
<td></td>
<td>0-7</td>
</tr>
<tr>
<td></td>
<td>No wetting</td>
</tr>
<tr>
<td>Spreading speed (mm/s)</td>
<td>Top</td>
</tr>
<tr>
<td></td>
<td>0-1</td>
</tr>
<tr>
<td></td>
<td>Very slow</td>
</tr>
<tr>
<td>One-way transport Capacity (R)</td>
<td>Poor</td>
</tr>
<tr>
<td>Management capability (OMMC)</td>
<td>Poor</td>
</tr>
</tbody>
</table>

172
Appendix - 7

Unfinished samples

C

B

A

Dyed samples

CA

BA

AA

Finished samples

Cn

Bn

An

Ce

Be

Ae

Microencapsulated samples

Aen

Washed samples

Cen10

Cen20

Cen30
# TEST REPORT

**Lab Sample No**: CCO- 4807

**Name and address of the Customer**: M/s AVinashilingam University for women, Coimbatore

**Sample Forwarding letter No. & Date**: 15/07/2013

**Date of Receipt of Sample**: 15/07/2013

**Buyer's Name & address (Optional)**

- **Customer sample Ref.**: Students Name- P.C. Jenisarani
- **Sample Description**: Bamboo/Cotton Finished with eucalyptus
- **Sample colour**: -

**Date/s of Testing**: 15/07/2013-25/07/2013

<table>
<thead>
<tr>
<th>Item Tested</th>
<th>Knitted Fabric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra violet protection factor (UPF) test</td>
<td></td>
</tr>
<tr>
<td>AS/NZS-4399:1966</td>
<td></td>
</tr>
<tr>
<td>UPF mean</td>
<td>92.03</td>
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<tr>
<td>T(UVA) %</td>
<td>1.38</td>
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<td>T(UV) %</td>
<td>1.11</td>
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<tr>
<td>UPF Rating</td>
<td>50.7</td>
</tr>
</tbody>
</table>

---

K. SENTHILKUMAR

**Quality Assurance Officer (LAM)**

---

Sample is not drawn by Textile Committee. Results relate only to the sample tested.

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Complaints, if any, will be entertained only by the Textile Committee for Testing Services.

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Head Office: Textiles Committee, (Govt. of India, Ministry of Textiles) P. Balu Road, Prabhadevi Chowk, Prabhadevi, MUMBAI, 400 023. Tel: 091+022+6632755 Fax: 091+022+66327564 E-mail: tclabmumbai@gmail.com

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**Regional Laboratory**

**TEXTILES COMMITTEE**

(Govt. of India, Ministry of Textiles)

Textile Testing Services

8 & 9, Thiru Vi.Ka. Nagar, 1st Street, College Road,
Tirupur - 641 002. (TN) Tel : 91 421 2201402 Fax : 91 421 2202500
Email : tolrupur@detsonline.in, tolrupur@yahoo.co.in

---

**TEST REPORT**

<table>
<thead>
<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultra violet protection factor (UPF) test</td>
<td>Knitted Fabric</td>
</tr>
</tbody>
</table>

AS/NZS-4399:1966

| UPF mean | 59.34 |
| T(UVA) % | 1.92 |
| T(UVB) % | 1.60 |
| UPF Rating | 58.31 |

Date: 31/10/2013

K. Vijayalakshmi

Quality Assurance Officer (Laboratories)

---

Note: Tested at I.L.Q. Mumbai

ISO: 17025 Accredited Laboratory
# TEST REPORT

**Date:** 31/10/2013

<table>
<thead>
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<th>Item Tested:</th>
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</thead>
<tbody>
<tr>
<td>Ultra violet protection factor (UPF) test</td>
<td>Knitted Fabric</td>
</tr>
<tr>
<td>AS/NZS-4399:1966</td>
<td></td>
</tr>
</tbody>
</table>

| UPF mean | 47.99 |
| T(UVA) % | 2.35 |
| T(UBV) % | 1.95 |
| UPF Rating | 47.61 |

---

K. Vijayakumar  
Quality Assurance Officer (Laboratories)

---

Note: tested at H.Q. Mumbai

---

ISO: 17025 Accredited Laboratory
TEST REPORT

Date: 31/10/2013

Lab Sample No: CCO- 9083
Name and address of the Customer: M/s AVinashilingam University for women, Coimbatore

Date of Receipt of Sample: 25/10/2013
Buyer's Name & address (Optional): Students Name P.C. Jeninamani

Customer sample Ref: Encapsulated dyed Knitted fabric after 30 wash

Sample Description: Knitted fabric

Sample colour: 

Date/s of Testing: 25/10/2013- 31/10/2013

Item Tested: Knitted Fabric
Ultra violet protection factor (UPF) test AS/NZS-4399:1996

UPF mean: 33.80
T(UVA) %: 3.52
T(UVB) %: 2.98
UPF Rating: 31.44

K.Vijayalakumar
Quality Assurance Officer (Laboratories)

Note: tested at H.Q. Mumbai

ISO : 17025 Accredited Laboratory

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Complaints, if any, are to be received within 45 days of issue of the report.

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