

APPENDIX A

SURVEY FORM

Understanding the thermal comfort performance of Saree

You are kindly invited to participate in a research project Understanding the thermal comfort performance of Saree being conducted by a student at the Technical University of Liberec, Czech Republic. Please read this information sheet carefully and be confident that you understand its contents before deciding whether to participate or not. If you have any questions about the project, please ask the investigators at deepali.dhruvanshi@tul.cz.

This survey aims to study and understand thermo-physiological comfort of traditional Indian womenswear-Saree, as well as to investigate ways to improve the microclimate condition between the saree and the skin.

This survey will take approximately 10 to 15 minutes of your time. Most questions have multiple-choices. Some may ask you to provide a brief response, but long answers are not required. Note that the results of the questionnaire will be used only for scientific research. The results of this study will contribute to improving the design and comfort aspects of the fabric and Saree. Your opinion and additional comments are welcome.

Name: _____

Email Id (optional): _____

Please upload your photo wearing saree (optional)

A. General demographic Information:

- a. Country: _____
- b. Age group:
 - i. 18-25
 - ii. 26-40
 - iii. 41-55
 - iv. More than 55.
- c. Profession:
 - i. Student
 - ii. Employee/ Self-Employed
 - iii. Homemaker
 - iv. Unemployed

B. Information on the current idea about Sarees:

- a. Why do you wear saree? (Because it is _)
 - i. Religious
 - ii. Traditional
 - iii. Fashionable
 - iv. Others (Please specify) _____
- b. What type of style do you usually like draping:
 - i. Backside pleated/open fall (Pallu)
 - ii. Front pleated/open fall (Pallu)
 - iii. Dhoti style
 - iv. Others (Please specify) _____
- c. How many sarees do you buy in a year:
 - i. 1~2 nos.
 - ii. 3~5 nos.

- iii. More than 5
 - iv. Occasionally
- d. Where and how do you prefer buying saree and why?
 - i. Market place/Shops(offline)
 - ii. Online
- e. What kind of design do you prefer for daily wear?
 - i. Plain with or without border
 - ii. Printed
 - iii. Embroidery
 - iv. Others (Please specify) _____

C. Comfort level while wearing saree:

- a. Hot and Humid climate/weather: [average country's climatic condition]
 - i. Easy
 - ii. Normal
 - iii. Difficult
 - iv. Others (Please specify) _____
- b. Cold climate/weather: [average country's climatic condition]
 - i. Easy
 - ii. Normal
 - iii. Difficult
 - iv. Others (Please specify) _____
- c. At what environmental temperature (in degree Celsius) do you feel comfortable:
 - i. From 15 to 20
 - ii. From 21 to 25
 - iii. From 26 to 30
 - iv. From 31 to 35
 - v. More than 36
- d. At what environmental temperature (in degree Celsius) do you feel uncomfortable:
 - i. From 15 to 20
 - ii. From 21 to 25
 - iii. From 26 to 30
 - iv. From 31 to 35
 - v. More than 36
- e. For how long do you wear saree on an average:
 - i. More than 4 hours
 - ii. 2-4 hours
 - iii. 1-2 hours
 - iv. 0-1 hours
- f. Do you think multilayer clothing underneath affects the level of comfort (blouse, petticoat, bra, under-pants)?
 - i. Yes
 - ii. No
 - iii. Maybe
 - iv. Depends on the occasion
- g. Describe the comfort level of saree as a daily wear attire.
 - i. Uncomfortable
 - ii. Comfortable
 - iii. Very comfortable
 - iv. Depends on the profession
- h. What area in the body do you feel stress/distress while wearing saree: -
 - i. Shoulder with fall (pallu)
 - ii. Waist where saree is tucked
 - iii. Both A and B
 - iv. Other (specify) _____
- i. In which part of the body do you feel more heat stress:
 - i. Upper part (blouse side)
 - ii. Lower part (petticoat side)
 - iii. Middle part (waist)

D. Technical understanding of saree material:

- a. What kind of material do you prefer for daily wear?
 - i. Natural fibers such as cotton, silk, bamboo, etc.
 - ii. Synthetic fibers such as polyester & nylon
 - iii. Fiber blends
 - iv. Please mention your favorite_____
- b. What kind of blouse and petticoat do you prefer:
 - i. Blouse attached to saree + cotton petticoat
 - ii. Attached blouse with any kind of petticoat
 - iii. Different fabric blouse + cotton petticoat
 - iv. different fabric blouse different fabric petticoat
- c. What type of fabric do you prefer in terms of thickness:
 - i. Thin
 - ii. Medium
 - iii. Thick
- d. What type of fabric do you prefer in terms of fabric weight
 - i. Light
 - ii. Medium
 - iii. Heavy

E. Describe the best style of saree you prefer to wear or any other related suggestion:

APPENDIX B

LAB TEST READINGS FOR WATER VAPOUR PERMEABILITY FROM **TEXTTEST FX3180 CUPMASTER:**

SARI 1

TEST READING OF 2 LAYERS OF SAMPLE FABRIC						
Pos.	Time (YYYY-MM-DD, HH:MM:SS)	Tare (g)	Weight (g) compensated	Weight alteration (g)	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-29, 11:31:18	0.000	146.0459	0.0000	0	0
1	2020-04-29, 12:30:51	0.000	145.3917	-0.6542	3164	189
2	2020-04-29, 13:31:19	0.000	144.5203	-0.8714	4150	247,9
3	2020-04-29, 14:31:06	0.000	143.5901	-0.9302	4481	2677
4	2020-04-29, 15:31:04	0.000	142.6377	-0.9524	4574	273,2
5	2020-04-29, 16:31:06	0.000	141.6818	-0.9559	4586	273,9
6	2020-04-29, 17:31:06	0.000	140.7249	-0.9569	4593	274,4
7	2020-04-29, 18:31:18	0.000	139.7741	-0.9508	4549	271,7
8	2020-04-29, 19:31:04	0.000	138.8349	-0.9392	4526	270,4
9	2020-04-29, 20:31:04	0.000	137.8982	-0.9367	4496	268,6
10	2020-04-29, 21:31:05	0.000	136.9709	-0.9273	4450	265,8
11	2020-04-29, 22:31:17	0.000	136.0521	-0.9188	4396	262,6
12	2020-04-29, 23:31:10	0.000	135.1482	-0.9039	4347	259,7
13	2020-04-30, 00:31:20	0.000	134.2469	-0.9013	4314	257,7
14	2020-04-30, 01:31:17	0.000	133.3504	-0.8965	4307	257,3
15	2020-04-30, 02:31:18	0.000	132.4584	-0.8920	4280	255,7
16	2020-04-30, 03:31:08	0.000	131.5759	-0.8825	4248	253,8
17	2020-04-30, 04:31:22	0.000	130.6927	-0.8832	4223	252,3
18	2020-04-30, 05:31:22	0.000	129.8261	-0.8666	4160	248,5
19	2020-04-30, 06:31:24	0.000	128.9661	-0.8600	4126	246,5
Average					4098,5	365,3

TEST READING OF 10 LAYERS OF SAMPLE FABRIC						
Pos.	Time (YYYY-MM-DD, HH:MM:SS)	Tare (g)	Weight (g) compensated	Weight alteration (g)	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-29, 11:32:43	0.000	149.7177	0.0000	0	0
1	2020-04-29, 12:32:49	0.000	149.2884	-0.4293	2057	122,9
2	2020-04-29, 13:32:44	0.000	148.7278	-0.5606	2695	161
3	2020-04-29, 14:32:42	0.000	148.1234	-0.6044	2903	173,4
4	2020-04-29, 15:32:42	0.000	147.5029	-0.6205	2978	177,9
5	2020-04-29, 16:32:46	0.000	146.8774	-0.6255	2999	179,2
6	2020-04-29, 17:32:42	0.000	146.2490	-0.6284	3020	180,4
7	2020-04-29, 18:32:40	0.000	145.6211	-0.6279	3016	180,1

8	2020-04-29, 19:32:46	0.000	144.9943	-0.6268	3004	179,4
9	2020-04-29, 20:32:46	0.000	144.3692	-0.6251	3000	179,2
10	2020-04-29, 21:32:47	0.000	143.7481	-0.6211	2980	178
11	2020-04-29, 22:32:39	0.000	143.1332	-0.6149	2958	176,7
12	2020-04-29, 23:32:41	0.000	142.5211	-0.6121	2936	175,4
13	2020-04-30, 00:32:42	0.000	141.9093	-0.6118	2936	175,4
14	2020-04-30, 01:32:44	0.000	141.2927	-0.6166	2958	176,7
15	2020-04-30, 02:32:43	0.000	140.6782	-0.6145	2950	176,3
16	2020-04-30, 03:32:47	0.000	140.0649	-0.6133	2941	175,7
17	2020-04-30, 04:32:42	0.000	139.4555	-0.6094	2929	175
18	2020-04-30, 05:32:42	0.000	138.8503	-0.6052	2905	173,5
19	2020-04-30, 06:32:42	0.000	138.2493	-0.6010	2885	172,3
Average					2752,5	164,425

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TEST READING OF 2 LAYERS OF SAMPLE FABRIC						
Pos	Time (YYYY-MM-DD, HH:MM:SS)	Tare (g)	Weight (g) compensated	Weight alteration (g)	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-29, 11:30:07	0.0000	144.9933	0.0000	0	0
1	2020-04-29, 12:30:19	0.0000	144.1336	-0.8597	4113	245,7
2	2020-04-29, 13:30:05	0.0000	142.9968	-1.1368	5478	327,2
3	2020-04-29, 14:30:04	0.0000	141.7661	-1.2307	5909	353
4	2020-04-29, 15:30:05	0.0000	140.5136	-1.2525	6010	359
5	2020-04-29, 16:30:02	0.0000	139.2598	-1.2538	6023	359,8
6	2020-04-29, 17:30:01	0.0000	138.0070	-1.2528	6015	359,3
7	2020-04-29, 18:30:07	0.0000	136.7734	-1.2336	5911	353,1
8	2020-04-29, 19:30:04	0.0000	135.5533	-1.2201	5861	350,1
9	2020-04-29, 20:30:02	0.0000	134.3416	-1.2117	5819	347,6
10	2020-04-29, 21:30:02	0.0000	133.1467	-1.1949	5736	342,6
11	2020-04-29, 22:30:07	0.0000	131.9715	-1.1752	5633	336,5
12	2020-04-29, 23:30:03	0.0000	130.8145	-1.1570	5560	332,1
13	2020-04-30, 00:30:06	0.0000	129.6681	-1.1464	5498	328,4
14	2020-04-30, 01:30:05	0.0000	128.5271	-1.1410	5478	327,3
15	2020-04-30, 02:30:07	0.0000	127.3973	-1.1298	5420	323,8
16	2020-04-30, 03:30:00	0.0000	126.2837	-1.1136	5356	319,9
17	2020-04-30, 04:30:09	0.0000	125.1741	-1.1096	5313	317,4
18	2020-04-30, 05:30:06	0.0000	124.0890	-1.0851	5213	311,4
19	2020-04-30, 06:30:08	0.0000	123.0161	-1.0729	5147	307,5
Average					5274,65	315,085

TEST READING OF 10 LAYERS OF SAMPLE FABRIC						
Pos	Time (YYYY-MM-DD, HH:MM:SS)	Tare (g)	Weight (g) compensated	Weight alteration (g)	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-29, 11:28:57	0.0000	149.9628	0.0000	0	0
1	2020-04-29, 12:29:03	0.0000	149.5489	-0.4139	1983	118,5
2	2020-04-29, 13:28:57	0.0000	148.9995	-0.5494	2642	157,8
3	2020-04-29, 14:28:52	0.0000	148.4021	-0.5974	2872	171,5
4	2020-04-29, 15:28:53	0.0000	147.7880	-0.6141	2947	176
5	2020-04-29, 16:28:57	0.0000	147.1678	-0.6202	2974	177,6
6	2020-04-29, 17:28:55	0.0000	146.5452	-0.6226	2990	178,6
7	2020-04-29, 18:28:58	0.0000	145.9242	-0.6210	2978	177,9
8	2020-04-29, 19:28:53	0.0000	145.3048	-0.6194	2977	177,9
9	2020-04-29, 20:28:54	0.0000	144.6867	-0.6181	2966	177,2
10	2020-04-29, 21:28:59	0.0000	144.0701	-0.6166	2956	176,6
11	2020-04-29, 22:28:55	0.0000	143.4609	-0.6092	2927	174,9
12	2020-04-29, 23:28:56	0.0000	142.8549	-0.6060	2908	173,7
13	2020-04-30, 00:28:59	0.0000	142.2489	-0.6060	2906	173,6
14	2020-04-30, 01:28:52	0.0000	141.6402	-0.6087	2927	174,9
15	2020-04-30, 02:28:51	0.0000	141.0315	-0.6087	2923	174,6
16	2020-04-30, 03:28:53	0.0000	140.4241	-0.6074	2914	174,1
17	2020-04-30, 04:28:57	0.0000	139.8167	-0.6074	2912	174
18	2020-04-30, 05:28:55	0.0000	139.2148	-0.6019	2891	172,7
19	2020-04-30, 06:28:49	0.0000	138.6169	-0.5979	2875	171,7
				Average	2723,4	162,69

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TEST READING OF 2 LAYERS OF SAMPLE FABRIC						
Pos	Time (YYYY-MM-DD, HH:MM:SS)	Tare (g)	Weight (g) compensated	Weight alteration (g)	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-29, 11:28:39	0.0000	145.5217	0.0000	0	0
1	2020-04-29, 12:28:44	0.0000	143.4775	-2.0442	9799	585,3
2	2020-04-29, 13:28:40	0.0000	140.9029	-2.5746	12372	739,1
3	2020-04-29, 14:28:39	0.0000	138.1712	-2.7317	13116	783,5
4	2020-04-29, 15:28:39	0.0000	135.3994	-2.7718	13305	794,8
5	2020-04-29, 16:28:38	0.0000	132.6210	-2.7784	13340	796,9
6	2020-04-29, 17:28:37	0.0000	131.0464	-1.5746	7560	451,6
7	2020-04-29, 18:28:39	0.0000	129.7520	-1.2944	6210	371
8	2020-04-29, 19:28:35	0.0000	128.4788	-1.2732	6118	365,5
9	2020-04-29, 20:28:36	0.0000	127.2164	-1.2624	6058	361,9
10	2020-04-29, 21:28:42	0.0000	125.9673	-1.2491	5986	357,6

11	2020-04-29, 22:28:38	0.0000	124.7401	-1.2272	5897	352,3
12	2020-04-29, 23:28:43	0.0000	123.5273	-1.2128	5813	347,3
13	2020-04-30, 00:28:37	0.0000	122.3123	-1.2150	5842	349
14	2020-04-30, 01:28:35	0.0000	121.0794	-1.2329	5921	353,7
15	2020-04-30, 02:28:33	0.0000	119.8570	-1.2224	5871	350,7
16	2020-04-30, 03:28:35	0.0000	118.6432	-1.2138	5823	347,9
17	2020-04-30, 04:28:43	0.0000	117.4323	-1.2109	5799	346,4
18	2020-04-30, 05:28:35	0.0000	116.2400	-1.1923	5736	342,6
19	2020-04-30, 06:28:35	0.0000	115.0549	-1.1851	5688	339,8
Average					7312,7	436,845

TEST READING OF 10 LAYERS OF SAMPLE FABRIC						
Pos	Time (YYYY-MM-DD, HH:MM:SS)	Tare (g)	Weight (g) compensated	Weight alteration (g)	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-29, 11:28:09	0.0000	151.4974	0.0000	0	0
1	2020-04-29, 12:28:06	0.0000	151.0797	-0.4177	2007	119,9
2	2020-04-29, 13:28:01	0.0000	150.5173	-0.5624	2703	161,5
3	2020-04-29, 14:28:00	0.0000	149.9062	-0.6111	2934	175,3
4	2020-04-29, 15:28:05	0.0000	149.2755	-0.6307	3023	180,6
5	2020-04-29, 16:28:04	0.0000	148.6401	-0.6354	3051	182,2
6	2020-04-29, 17:28:07	0.0000	147.9994	-0.6407	3073	183,6
7	2020-04-29, 18:28:05	0.0000	147.3602	-0.6392	3070	183,4
8	2020-04-29, 19:28:04	0.0000	146.7211	-0.6391	3069	183,3
9	2020-04-29, 20:28:02	0.0000	146.0826	-0.6385	3067	183,2
10	2020-04-29, 21:28:06	0.0000	145.4467	-0.6359	3049	182,1
11	2020-04-29, 22:28:03	0.0000	144.8187	-0.6280	3017	180,2
12	2020-04-29, 23:28:04	0.0000	144.1952	-0.6235	2992	178,7
13	2020-04-30, 00:28:05	0.0000	143.5615	-0.6337	3041	181,7
14	2020-04-30, 01:28:00	0.0000	142.9118	-0.6497	3123	186,6
15	2020-04-30, 02:28:04	0.0000	142.2615	-0.6503	3118	186,3
16	2020-04-30, 03:28:06	0.0000	141.6143	-0.6472	3105	185,5
17	2020-04-30, 04:28:06	0.0000	140.9677	-0.6466	3104	185,4
18	2020-04-30, 05:28:03	0.0000	140.3288	-0.6389	3069	183,4
19	2020-04-30, 06:28:05	0.0000	139.6925	-0.6363	3053	182,4
Average					2833,4	169,265

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TEST READING OF 2 LAYERS OF SAMPLE FABRIC						
Pos	Time (YYYY-MM-DD, HH:MM:SS)	Tare (g)	Weight (g) compensated	(g) Weight alteration	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]

0	2020-04-27, 13:52:42	0.0000	147.0963	0.0000	0	0
1	2020-04-27, 14:52:24	0.0000	146.4639	-0.6324	3051	182,2
2	2020-04-27, 15:52:38	0.0000	145.5858	-0.8781	4199	250,8
3	2020-04-27, 16:52:40	0.0000	144.6238	-0.9620	4615	275,7
4	2020-04-27, 17:52:40	0.0000	143.6312	-0.9926	4764	284,6
5	2020-04-27, 18:52:39	0.0000	142.6293	-1.0019	4810	287,4
6	2020-04-27, 19:52:38	0.0000	141.6266	-1.0027	4814	287,6
7	2020-04-27, 20:52:40	0.0000	140.6293	-0.9973	4784	285,8
8	2020-04-27, 21:52:39	0.0000	139.6410	-0.9883	4745	283,5
9	2020-04-27, 22:52:39	0.0000	138.6586	-0.9824	4716	281,7
10	2020-04-27, 23:52:38	0.0000	137.6775	-0.9811	4711	281,4
11	2020-04-28, 00:52:29	0.0000	136.7043	-0.9732	4683	279,8
12	2020-04-28, 01:52:35	0.0000	135.7377	-0.9666	4632	276,7
13	2020-04-28, 02:52:35	0.0000	134.7802	-0.9575	4596	274,6
14	2020-04-28, 03:52:37	0.0000	133.8323	-0.9479	4547	271,7
15	2020-04-28, 04:52:39	0.0000	132.8846	-0.9477	4546	271,6
16	2020-04-28, 05:52:25	0.0000	131.9523	-0.9323	4493	268,4
17	2020-04-28, 06:52:29	0.0000	131.0200	-0.9323	4470	267
18	2020-04-28, 07:52:35	0.0000	130.0955	-0.9245	4430	264,7
19	2020-04-28, 08:52:40	0.0000	129.1785	-0.9170	4395	262,6
20	2020-04-28, 09:52:39	0.0000	128.2631	-0.9154	4395	262,6
Average				4304,571429	257,1619048	

TEST READING OF 10 LAYERS OF SAMPLE FABRIC						
Pos	Time (YYYY-MM-DD, Tare HH:MM:SS)	Weight (g)	Weight compensated	(g) Weight (g)	alteration WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-27, 13:53:59	0.0000	149.1847	0.0000	0	0
1	2020-04-27, 14:53:36	0.0000	148.7330	-0.4517	2182	130,4
2	2020-04-27, 15:54:02	0.0000	148.1168	-0.6162	2937	175,4
3	2020-04-27, 16:54:01	0.0000	147.4554	-0.6614	3176	189,7
4	2020-04-27, 17:54:01	0.0000	146.7735	-0.6819	3273	195,5
5	2020-04-27, 18:54:00	0.0000	146.0871	-0.6864	3296	196,9
6	2020-04-27, 19:54:03	0.0000	145.3978	-0.6893	3306	197,5
7	2020-04-27, 20:53:57	0.0000	144.7132	-0.6846	3292	196,6
8	2020-04-27, 21:53:57	0.0000	144.0295	-0.6837	3282	196
9	2020-04-27, 22:53:59	0.0000	143.3472	-0.6823	3273	195,5
10	2020-04-27, 23:53:59	0.0000	142.6643	-0.6829	3278	195,8
11	2020-04-28, 00:53:35	0.0000	141.9908	-0.6735	3254	194,4
12	2020-04-28, 01:53:38	0.0000	141.3178	-0.6730	3228	192,8
13	2020-04-28, 02:53:35	0.0000	140.6487	-0.6691	3214	192
14	2020-04-28, 03:54:00	0.0000	139.9798	-0.6689	3189	190,5

15	2020-04-28, 04:53:56	0.0000	139.3177	-0.6621	3182	190,1
16	2020-04-28, 05:53:37	0.0000	138.6628	-0.6549	3160	188,8
17	2020-04-28, 06:53:38	0.0000	138.0097	-0.6531	3134	187,2
18	2020-04-28, 07:53:40	0.0000	137.3591	-0.6506	3121	186,5
19	2020-04-28, 08:54:00	0.0000	136.7086	-0.6505	3105	185,5
20	2020-04-28, 09:53:57	0.0000	136.0639	-0.6447	3097	185
Average					2999	179,147619

SARI 5

TEST READING OF 2 LAYERS OF SAMPLE FABRIC						
Pos	Time (YYYY-MM-DD, Tare HH:MM:SS)	Weight (g)	Weight compensated (g)	(g) Weight alteration	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-27, 13:50:32	0.0000	146.5821	0.0000	0	0
1	2020-04-27, 14:50:28	0.0000	145.9485	-0.6336	3045	181,9
2	2020-04-27, 15:50:23	0.0000	145.0836	-0.8649	4157	248,3
3	2020-04-27, 16:50:29	0.0000	144.1311	-0.9525	4564	272,7
4	2020-04-27, 17:50:25	0.0000	143.1550	-0.9761	4690	280,2
5	2020-04-27, 18:50:28	0.0000	142.1714	-0.9836	4717	281,8
6	2020-04-27, 19:50:27	0.0000	141.1903	-0.9811	4711	281,4
7	2020-04-27, 20:50:29	0.0000	140.2111	-0.9792	4698	280,6
8	2020-04-27, 21:50:25	0.0000	139.2461	-0.9650	4637	277
9	2020-04-27, 22:50:20	0.0000	138.2878	-0.9583	4606	275,2
10	2020-04-27, 23:50:25	0.0000	137.3292	-0.9586	4595	274,5
11	2020-04-28, 00:50:26	0.0000	136.3762	-0.9530	4573	273,2
12	2020-04-28, 01:50:28	0.0000	135.4380	-0.9382	4501	268,9
13	2020-04-28, 02:50:25	0.0000	134.5125	-0.9255	4446	265,6
14	2020-04-28, 03:50:33	0.0000	133.5896	-0.9229	4420	264
15	2020-04-28, 04:50:34	0.0000	132.6742	-0.9154	4393	262,4
16	2020-04-28, 05:50:23	0.0000	131.7753	-0.8989	4328	258,5
17	2020-04-28, 06:50:27	0.0000	130.8784	-0.8969	4300	256,9
18	2020-04-28, 07:50:27	0.0000	129.9950	-0.8834	4240	253,3
19	2020-04-28, 08:50:29	0.0000	129.1206	-0.8744	4195	250,6
20	2020-04-28, 09:50:29	0.0000	128.2500	-0.8706	4179	249,6
Average					4190,238095	250,3142857

TEST READING OF 10 LAYERS OF SAMPLE FABRIC						
Pos	Time (YYYY-MM-DD, Tare HH:MM:SS)	Weight (g)	Weight compensated (g)	(g) Weight alteration	WVTR [g/m ² /d]	WVTR [gr/ft ² /h]
0	2020-04-27, 13:51:30	0.0000	150.8882	0.0000	0	0
1	2020-04-27, 14:51:21	0.0000	150.4445	-0.4437	2135	127,5

2	2020-04-27, 15:51:27	0.0000	149.8433	-0.6012	2881	172,1
3	2020-04-27, 16:51:26	0.0000	149.1859	-0.6574	3156	188,6
4	2020-04-27, 17:51:25	0.0000	148.5084	-0.6775	3253	194,3
5	2020-04-27, 18:51:25	0.0000	147.8251	-0.6833	3280	195,9
6	2020-04-27, 19:51:25	0.0000	147.1405	-0.6846	3286	196,3
7	2020-04-27, 20:51:30	0.0000	146.4543	-0.6862	3289	196,5
8	2020-04-27, 21:51:25	0.0000	145.7750	-0.6793	3265	195,1
9	2020-04-27, 22:51:24	0.0000	145.0965	-0.6785	3258	194,6
10	2020-04-27, 23:51:25	0.0000	144.4149	-0.6816	3271	195,4
11	2020-04-28, 00:51:21	0.0000	143.7375	-0.6774	3255	194,5
12	2020-04-28, 01:51:25	0.0000	143.0653	-0.6722	3223	192,5
13	2020-04-28, 02:51:25	0.0000	142.3993	-0.6660	3197	191
14	2020-04-28, 03:51:29	0.0000	141.7361	-0.6632	3180	190
15	2020-04-28, 04:51:27	0.0000	141.0752	-0.6609	3174	189,6
16	2020-04-28, 05:51:20	0.0000	140.4229	-0.6523	3137	187,4
17	2020-04-28, 06:51:24	0.0000	139.7714	-0.6515	3124	186,6
18	2020-04-28, 07:51:29	0.0000	139.1254	-0.6460	3096	185
19	2020-04-28, 08:51:29	0.0000	138.4843	-0.6411	3077	183,8
20	2020-04-28, 09:51:26	0.0000	137.8437	-0.6406	3077	183,8
				Average	2981,619048	178,1190476

APPENDIX C

LAB TEST READINGS FOR THERMAL RESISTANCE FROM **CHILD THERMAL MANIKIN- THERMDAC VERSION-V8.4.3.18**

SARI 1

Ambient Sensors					AVERAGE
Ambient	Units	Avg	Avg	Avg	
Avg Amb Temp	degC	20,69	20,21	20,64	20,5133333
Amb 1	degC	20,67	20,24	20,75	20,5533333
Amb 2	degC	20,71	20,18	20,52	20,47
RH	%RH	53,5	55,8	52,7	54
Windspeed	m/sec	0,06	0,05	0,03	0,04666667
Water Temp	°C	30,49	29,73	33,57	31,2633333

Manikin Zones		RCT			
Manikin Zones		Average			
Face		0,082	0,083	0,083	0,08266667
Head		0,105	0,106	0,108	0,10633333
R Upper Arm		0,278	0,272	0,276	0,27533333
L Upper Arm		0,263	0,28	0,314	0,28566667
R Forearm		0,091	0,093	0,103	0,09566667
L Forearm		0,136	0,138	0,139	0,13766667
R Hand		0,082	0,083	0,108	0,091
L Hand		0,085	0,084	0,083	0,084
Chest		0,291	0,243	0,268	0,26733333
Back		0,275	0,226	0,265	0,25533333
R Thigh		0,502	0,433	0,46	0,465
L Thigh		0,329	0,357	0,366	0,35066667
R Calf		0,171	0,172	0,164	0,169
L Calf		0,184	0,178	0,165	0,17566667
R Foot		0,093	0,091	0,094	0,09266667
L Foot		0,11	0,099	0,103	0,104
Manikin Zones		RCF			
Manikin Zones		Average			
Face		-0,004	-0,003	-0,003	-0,0033333
Head		-0,005	-0,004	-0,002	-0,0036667
R Upper Arm		0,156	0,138	0,142	0,14533333
L Upper Arm		0,173	0,181	0,215	0,18966667
R Forearm		0,016	0,018	0,028	0,02066667
L Forearm		0,048	0,05	0,051	0,04966667
R Hand		-0,006	-0,005	0,02	0,003
L Hand		0,004	0,003	0,002	0,003

Chest		0,194	0,136	0,161	0,16366667
Back		0,175	0,116	0,155	0,14866667
R Thigh		0,422	0,345	0,372	0,37966667
L Thigh		0,25	0,27	0,279	0,26633333
R Calf		0,083	0,084	0,076	0,081
L Calf		0,099	0,093	0,08	0,09066667
R Foot		0,01	0,008	0,011	0,00966667
L Foot		0,028	0,017	0,021	0,022
Manikin Zones		Heat Flux Generated			
Manikin Zones		Average			
Face		175,7	178,5	173,2	175,8
Head		136	140,5	133,1	136,533333
R Upper Arm		51,6	54,5	52,1	52,733333
L Upper Arm		54,6	53	45,7	51,1
R Forearm		158	159,4	140,2	152,533333
L Forearm		106,3	108	104,1	106,133333
R Hand		175,1	179,9	133,2	162,733333
L Hand		171,7	178,9	174,7	175,1
Chest		49,6	61,2	53,9	54,9
Back		52	65,7	54,2	57,3
R Thigh		28,6	34,2	31,3	31,366667
L Thigh		43,7	41,6	39,3	41,533333
R Calf		83,9	86,2	87,9	86
L Calf		78	83,3	87,4	82,9
R Foot		154,7	163,3	153,8	157,266667
L Foot		131,2	150,9	139,9	140,666667

SARI 2

Ambient Sensors					Average
Ambient	Units	Avg	Avg	Avg	
Avg Amb Temp	degC	20,6	20,47	20,18	20,416667
Amb 1	degC	20,57	20,53	20,16	20,42
Amb 2	degC	20,63	20,4	20,21	20,413333
RH	%RH	53,7	53,9	55,9	54,5
Windspeed	m/sec	0,05	0,05	0,01	0,036667
Water Temp	°C	33,76	34,51	34,91	34,393333

Manikin Zones	RCT				
Manikin Zones	Average				
Face		0,081	0,084	0,085	0,08333333
Head		0,106	0,107	0,108	0,107
R Upper Arm		0,27	0,264	0,29	0,27466667
L Upper Arm		0,36	0,328	0,328	0,33866667

R Forearm		0,102	0,102	0,102	0,102
L Forearm		0,139	0,135	0,145	0,13966667
R Hand		0,097	0,1	0,095	0,09733333
L Hand		0,086	0,088	0,089	0,08766667
Chest		0,299	0,303	0,298	0,3
Back		0,279	0,273	0,273	0,275
R Thigh		0,499	0,497	0,672	0,556
L Thigh		0,434	0,38	0,447	0,42033333
R Calf		0,175	0,166	0,157	0,166
L Calf		0,174	0,181	0,177	0,17733333
R Foot		0,102	0,089	0,094	0,095
L Foot		0,104	0,117	0,098	0,10633333
Manikin Zones	RCF				
Manikin Zones	Average				
Face		-0,005	-0,002	-0,001	-0,0026667
Head		-0,004	-0,003	-0,002	-0,003
R Upper Arm		0,136	0,13	0,156	0,14066667
L Upper Arm		0,261	0,229	0,229	0,23966667
R Forearm		0,027	0,027	0,027	0,027
L Forearm		0,051	0,047	0,057	0,05166667
R Hand		0,009	0,012	0,007	0,00933333
L Hand		0,005	0,007	0,008	0,00666667
Chest		0,192	0,196	0,191	0,193
Back		0,169	0,163	0,163	0,165
R Thigh		0,411	0,409	0,584	0,468
L Thigh		0,347	0,293	0,36	0,33333333
R Calf		0,087	0,078	0,069	0,078
L Calf		0,089	0,096	0,092	0,09233333
R Foot		0,019	0,006	0,011	0,012
L Foot		0,022	0,035	0,016	0,02433333
Manikin Zones	Heat Flux Generated				
Manikin Zones	Average				
Face		177,8	174,7	175,2	175,9
Head		135,6	136,4	137,7	136,566667
R Upper Arm		53,3	55	51,1	53,1333333
L Upper Arm		40,1	44,4	45,2	43,2333333
R Forearm		141,7	143,1	145,5	143,433333
L Forearm		105	108,5	102,9	105,466667
R Hand		149,2	146,5	157,2	150,966667
L Hand		170,8	166,2	168,3	168,433333
Chest		48,5	48,3	50	48,9333333
Back		51,6	53,2	54,3	53,0333333
R Thigh		28,9	29,3	22,1	26,7666667
L Thigh		33,3	38,3	33,3	34,9666667
R Calf		82,3	87,7	94,4	88,1333333
L Calf		83,2	80,4	83,8	82,4666667

R Foot		141,8	164	158,8	154,866667
L Foot		139	124,3	152,2	138,5

SARI 3

Ambient Sensors					Average
Ambient	Units	Avg	Avg	Avg	
Avg Amb Temp	degC	20,48	20,22	20,51	20,4033333
Amb 1	degC	20,48	20,21	20,58	20,4233333
Amb 2	degC	20,47	20,22	20,44	20,3766667
RH	%RH	53,7	55,1	53,5	54,1
Windspeed	m/sec	0,05	0,03	0,02	0,0333333
Water Temp	°C	30,66	29,31	35,21	31,7266667

Manikin Zones	RCT				
Manikin Zones	Average				
Face		0,081	0,085	0,084	0,0833333
Head		0,103	0,104	0,107	0,1046667
R Upper Arm		0,274	0,267	0,267	0,2693333
L Upper Arm		0,302	0,253	0,38	0,3116667
R Forearm		0,086	0,119	0,094	0,0996667
L Forearm		0,157	0,149	0,159	0,155
R Hand		0,078	0,106	0,093	0,0923333
L Hand		0,089	0,093	0,084	0,0886667
Chest		0,286	0,279	0,26	0,275
Back		0,254	0,241	0,275	0,2566667
R Thigh		0,386	0,383	0,458	0,409
L Thigh		0,307	0,364	0,41	0,3603333
R Calf		0,161	0,159	0,17	0,1633333
L Calf		0,174	0,155	0,173	0,1673333
R Foot		0,098	0,096	0,11	0,1013333
L Foot		0,102	0,097	0,104	0,101
Manikin Zones	RCF				
Manikin Zones	Average				
Face		-0,005	-0,001	-0,002	-0,0026667
Head		-0,007	-0,006	-0,003	-0,0053333
R Upper Arm		0,14	0,133	0,133	0,1353333
L Upper Arm		0,203	0,154	0,281	0,2126667
R Forearm		0,011	0,044	0,019	0,0246667
L Forearm		0,069	0,061	0,071	0,067
R Hand		-0,01	0,018	0,005	0,0043333
L Hand		0,008	0,012	0,003	0,0076667
Chest		0,179	0,172	0,153	0,168
Back		0,144	0,131	0,165	0,1466667

R Thigh		0,298	0,295	0,37	0,321
L Thigh		0,22	0,277	0,323	0,27333333
R Calf		0,073	0,071	0,082	0,07533333
L Calf		0,089	0,07	0,088	0,08233333
R Foot		0,015	0,013	0,027	0,01833333
L Foot		0,02	0,015	0,022	0,019
Manikin Zones	Heat Flux Generated				
Manikin Zones	Average				
Face		180,9	174,9	173,5	176,433333
Head		141,6	141,7	135,7	139,666667
R Upper Arm		53	55,5	54,3	54,266667
L Upper Arm		48,2	58,6	38,2	48,333333
R Forearm		169,4	124,4	154,9	149,566667
L Forearm		93,2	99,8	91,3	94,766667
R Hand		187,7	140,1	157,3	161,7
L Hand		164,9	159,9	174,7	166,5
Chest		51	53,2	55,9	53,366667
Back		57,3	61,4	52,7	57,133333
R Thigh		37,7	38,6	31,6	35,966667
L Thigh		47,4	40,6	35,4	41,133333
R Calf		90,5	93,1	85,3	89,633333
L Calf		83,7	95,8	83,8	87,766667
R Foot		148,9	154,4	132,3	145,2
L Foot		142,4	152,4	140,3	145,033333

SARI 4

Ambient Sensors					Average
Ambient	Units	Avg	Avg	Avg	
Avg Amb Temp	degC	20,74	20,53	20,47	20,58
Amb 1	degC	20,78	20,52	20,54	20,613333
Amb 2	degC	20,69	20,53	20,39	20,536667
RH	%RH	53,3	55	53,7	54
Windspeed	m/sec	0,05	0,05	0,03	0,043333
Water Temp	°C	34,51	35,17	30,99	33,556667

Manikin Zones	RCT				
Manikin Zones	Average				
Face		0,081	0,081	0,084	0,082
Head		0,106	0,106	0,103	0,105
R Upper Arm		0,264	0,309	0,265	0,27933333
L Upper Arm		0,315	0,334	0,126	0,25833333
R Forearm		0,096	0,093	0,095	0,09466667
L Forearm		0,127	0,135	0,155	0,139

R Hand		0,104	0,08	0,08	0,088
L Hand		0,084	0,084	0,091	0,08633333
Chest		0,287	0,312	0,254	0,28433333
Back		0,266	0,264	0,229	0,253
R Thigh		0,56	0,458	0,374	0,464
L Thigh		0,338	0,306	0,335	0,32633333
R Calf		0,157	0,156	0,138	0,15033333
L Calf		0,165	0,164	0,153	0,16066667
R Foot		0,097	0,102	0,088	0,09566667
L Foot		0,109	0,119	0,096	0,108
Manikin Zones	RCF				
Manikin Zones	Average				
Face		-0,005	-0,005	-0,002	-0,004
Head		-0,004	-0,004	-0,007	-0,005
R Upper Arm		0,13	0,175	0,131	0,14533333
L Upper Arm		0,216	0,235	0,027	0,15933333
R Forearm		0,021	0,018	0,02	0,01966667
L Forearm		0,039	0,047	0,067	0,051
R Hand		0,016	-0,008	-0,008	0
L Hand		0,003	0,003	0,01	0,00533333
Chest		0,18	0,205	0,147	0,17733333
Back		0,156	0,154	0,119	0,143
R Thigh		0,472	0,37	0,286	0,376
L Thigh		0,251	0,219	0,248	0,23933333
R Calf		0,069	0,068	0,05	0,06233333
L Calf		0,08	0,079	0,068	0,07566667
R Foot		0,014	0,019	0,005	0,01266667
L Foot		0,027	0,037	0,014	0,026
Manikin Zones	Heat Flux Generated				
Manikin Zones	Average				
Face		176,3	179,1	173,5	176,3
Head		135	136,5	141,6	137,7
R Upper Arm		54,2	46,8	55	52
L Upper Arm		45,5	43,5	115,8	68,2666667
R Forearm		150,4	156,9	153,5	153,6
L Forearm		113,4	108,9	95,2	105,833333
R Hand		137,7	182,2	183,6	167,833333
L Hand		171,8	176,1	161,8	169,9
Chest		50	46,8	57,4	51,4
Back		53,7	54,8	63,5	57,33333333
R Thigh		25,5	31,7	38,9	32,03333333
L Thigh		42,5	47,4	43,4	44,43333333
R Calf		90,9	92,7	105,9	96,5
L Calf		86,6	88,8	95,2	90,2
R Foot		146,9	141,6	165,7	151,4
L Foot		131,8	122,1	151,3	135,066667

SARI 5

Ambient Sensors					Average
Ambient	Units	Avg	Avg	Avg	
Avg Amb Temp	degC	20,59	20,34	20,42	20,45
Amb 1	degC	20,67	20,36	20,56	20,53
Amb 2	degC	20,51	20,33	20,28	20,3733333
RH	%RH	52,6	53,4	56,3	54,1
Windspeed	m/sec	0,05	0,05	0,02	0,04
Water Temp		32,16	33,94	33,18	33,0933333

Manikin Zones	RCT				
Manikin Zones	Average				
Face		0,082	0,083	0,087	0,084
Head		0,105	0,108	0,108	0,107
R Upper Arm		0,274	0,292	0,247	0,271
L Upper Arm		0,302	0,288	0,134	0,24133333
R Forearm		0,106	0,108	0,092	0,102
L Forearm		0,12	0,117	0,153	0,13
R Hand		0,102	0,1	0,11	0,104
L Hand		0,083	0,08	0,087	0,08333333
Chest		0,251	0,326	0,276	0,28433333
Back		0,236	0,256	0,234	0,242
R Thigh		0,443	0,484	0,449	0,45866667
L Thigh		0,396	0,385	0,402	0,39433333
R Calf		0,173	0,173	0,162	0,16933333
L Calf		0,165	0,17	0,163	0,166
R Foot		0,108	0,101	0,089	0,09933333
L Foot		0,116	0,115	0,093	0,108
Manikin Zones	RCF				
Manikin Zones	Average				
Face		-0,004	-0,003	0,001	-0,002
Head		-0,005	-0,002	-0,002	-0,003
R Upper Arm		0,14	0,158	0,113	0,137
L Upper Arm		0,203	0,189	0,035	0,14233333
R Forearm		0,031	0,033	0,017	0,027
L Forearm		0,032	0,029	0,065	0,042
R Hand		0,014	0,012	0,022	0,016
L Hand		0,002	-0,001	0,006	0,00233333
Chest		0,144	0,219	0,169	0,17733333
Back		0,126	0,146	0,124	0,132
R Thigh		0,355	0,396	0,361	0,37066667
L Thigh		0,309	0,298	0,315	0,30733333

R Calf		0,085	0,085	0,074	0,08133333
L Calf		0,08	0,085	0,078	0,081
R Foot		0,025	0,018	0,006	0,01633333
L Foot		0,034	0,033	0,011	0,026
Manikin Zones	Heat Flux Generated				
Manikin Zones	Average				
Face		177,1	177,9	167,3	174,1
Head		137,1	135,7	135,4	136,066667
R Upper Arm		52,7	50,3	59,2	54,0666667
L Upper Arm		47,9	51	108,7	69,2
R Forearm		136,5	136,6	159,5	144,2
L Forearm		121,3	127	95,8	114,7
R Hand		142,4	147,6	132,9	140,966667
L Hand		175,9	187,1	168,9	177,3
Chest		57,6	45,2	53	51,9333333
Back		61	57,4	62,3	60,2333333
R Thigh		32,6	30,3	32,5	31,8
L Thigh		36,4	38,2	36,4	37
R Calf		83,5	84,6	89,9	86
L Calf		87,5	86,6	90	88,0333333
R Foot		133,5	145,2	165,2	147,966667
L Foot		124,8	128,1	158,7	137,2