Process analysis of the Thermochromic Paint

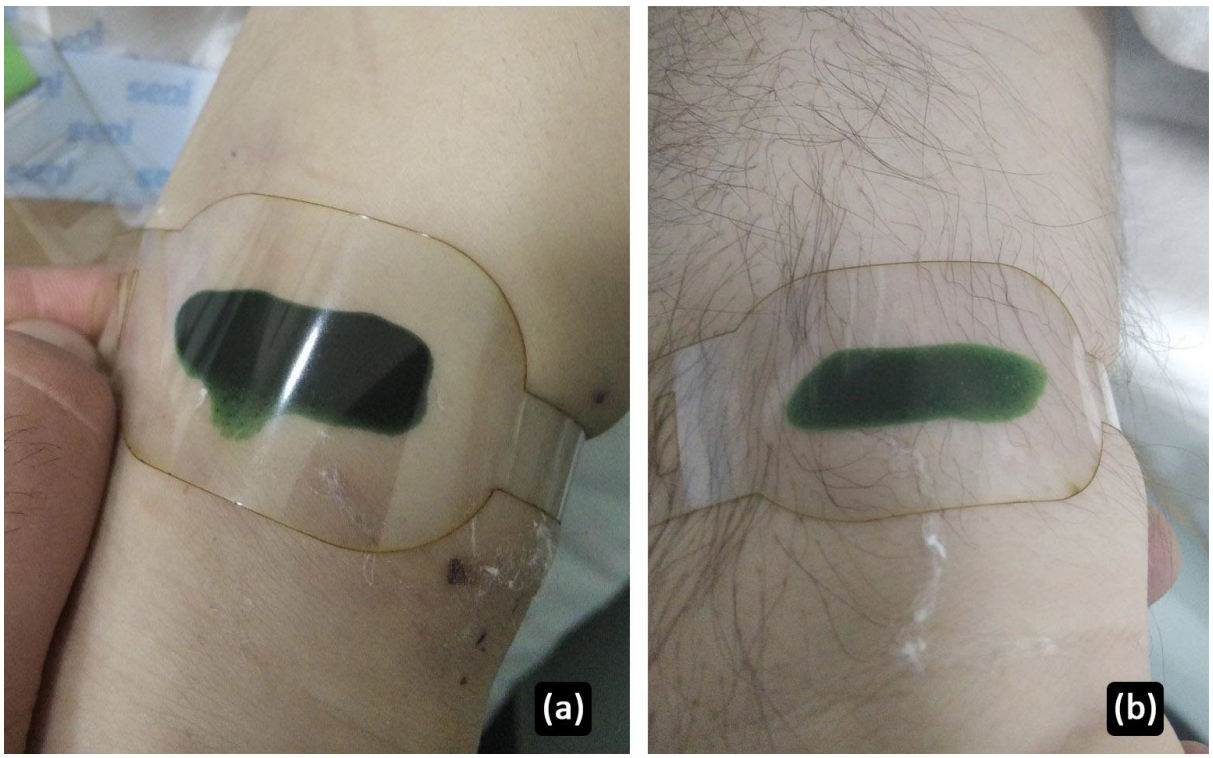

Figure S1: Process analysis of the thermochromic paint material **a)** body temperature 37.2 °C; **b)** body temperature 37.5 °C;

Process analysis of the PLA Tri-Color Thermochromic Filament

#1	Model #1 Cube block	
	30x30mm	
Time (s)	Temp #1 (37.2°C)	Temp #2 (37.5°C)
Specimen 1.1	12	12
Specimen 1.2	30	28
Specimen 1.3	65	62
Specimen 1.4	115	112
Specimen 1.5	490	480

Table S1. Results for measuring colour change for Model #1 (Cube block) with 3D printing tri-colour change filament in hospital conditions.

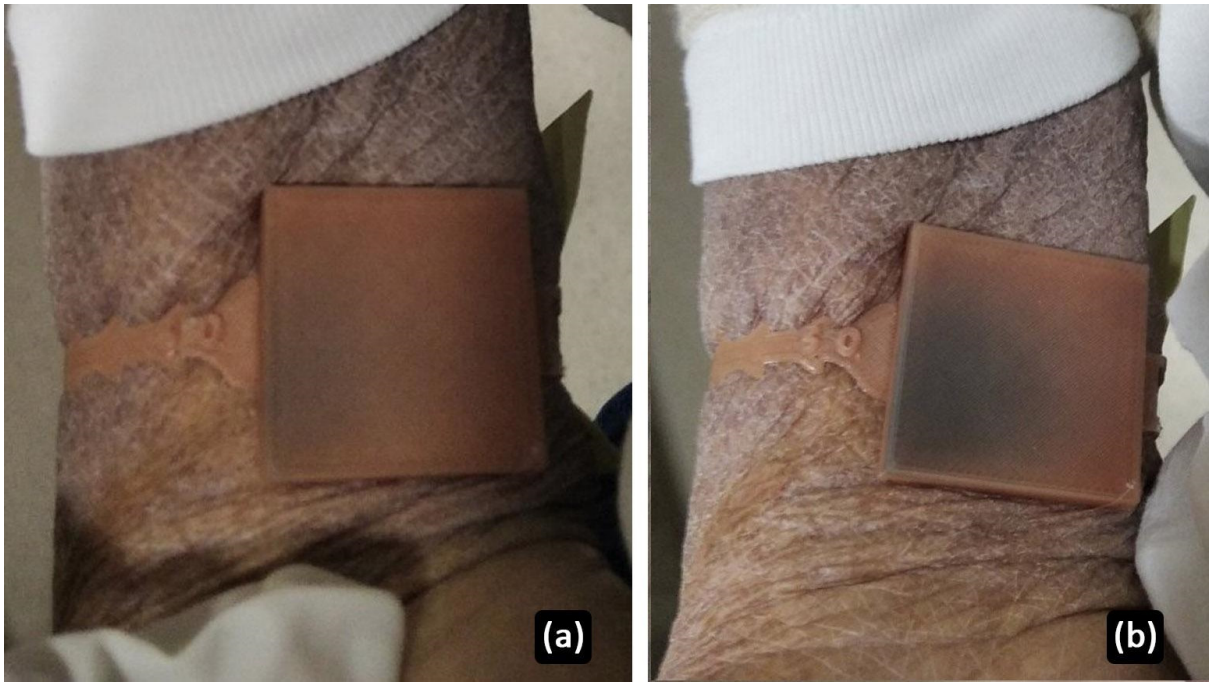

Figure S2: Process analysis of the PLA tri-colour change filament material for body temperature 37.5°C for Model #1 Cube block **a)** Specimen 1.1; **b)** Specimen 1.5;

#2	Model #2 Stepped pyramid	
	30x30mm	
Time (s)	Temp #1 (37.2°C)	Temp #2 (37.5°C)
Specimen 2.1	5	5
Specimen 2.2	27	25
Specimen 2.3	45	45
Specimen 2.4	63	60
Specimen 2.5	118	115

Table S2. Results for measuring colour change for Model #2 (Stepped pyramid) with 3D printing tri-colour change filament in hospital conditions.

#3	Model #3 Cube block with subtracted pyramid

	30x30mm	
Time (s)	Temp #1 (37.2°C)	Temp #2 (37.5°C)
Specimen 3.1	13	11
Specimen 3.2	40	40
Specimen 3.3	50	49
Specimen 3.4	102	115
Specimen 3.5	180	205

Table S3. Results for measuring colour change for Model #3 (Cube block with subtracted pyramid) with 3D printing tri-colour change filament in hospital conditions.

#4	**Model #4 Pyramid with a subtracted pyramid**	
	30x30mm	
Time (s)	Temp #1 (37.2°C)	Temp #2 (37.5°C)
Specimen 4.1	10	9
Specimen 4.2	26	23
Specimen 4.3	37	34
Specimen 4.4	55	52
Specimen 4.5	84	81

Table S4. Results for measuring colour change for Model #4 (Pyramid with a subtracted pyramid) with 3D printing tri-colour change filament in hospital conditions.