```
1 1 :
                                                  11:
                                             %
             %
                                                            :
  .(Comfort)
)
                  (
                    (1997)
```

() () () () (Loops) (g/m^2) Junya Hu, et.al ()

	·
()	
	. Harriet Meinander, () MinnaVarheenmaa
Ana Cristina () Broega, Maria Elisabete Cabecosilva,	
	Jowa State
	() University, university extension, july
. ()	
	. ()

(2011) Song Gonca Ozcelik & Nilgon) Ozdil)) Alla Arafa Badr modal, bambo)

								-
Jowa	State Universit		, ,					
			()		•			
								-
					•			
								-
	•							
		:		_	•			
Dugal	ho I						:	
Buecl		() and	Eradriak					
		() and	Predick					
						:		
					Subhash C Anand	:		_
	·	:		_		-	()
							•	,
.() ASTM,							
`	()			_				
	, ,							
					()		:	_
Hussa	ain and Tremblay-							
		() Lutter,					
			:					
						:		-
	.()							

```
( )
                                                                    ( )
        )
                       ( )
                )
                                         ( )
                                                                                              ( )
                           ( )
                                                          .(2002–02–D 3597) ASTM
                                                                                              ( )
(% .)
                                                                  (1981–1002) ASTM
                                                                                              ( )
                                                                                              ( )
                                                                         (1993-2589)
                       %
                                                                                              ( )
                                                                %
                                                                                     )
                                                         %
                                                                               %
(
      )
                                                                                              ( )
                                                             1993AATCC (
تم حساب قيمة كا^{1} لخاصيتي نفاذية الهواء ونسبة الرطوبة ويوضح جدول(7) ذلك.
                                                   Microsoft
                                                                     )
                                                                                             Excel
```

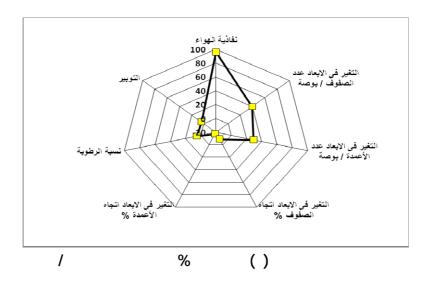
								:	
			%						
			70			1 1			
-							/	%	
							/	/	
								%	
							/	% /	
								<u>'</u>	
								/	
								%	
									:
	/	/	%	%	%		%		
%		% .			% .		% .	%	
									:
					.(.) = (.)	()		-
					.(.) = (.)	()		-
()			()		()		
						,	`		
						(.)		
				•					
		:							
		•				()			
			/			()			
		()	/			()	()		
•		()				/	()		

	•
. %	
. %	
. /	

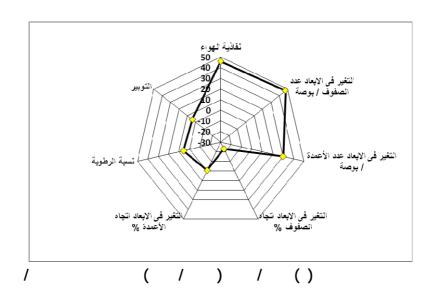
.

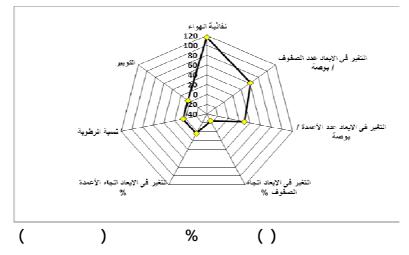
: / (.) : / % () (.)

(.) (.)

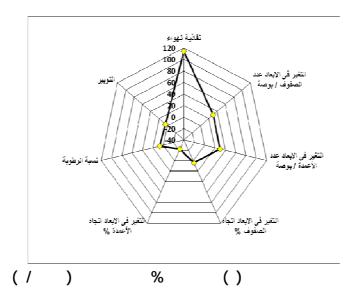


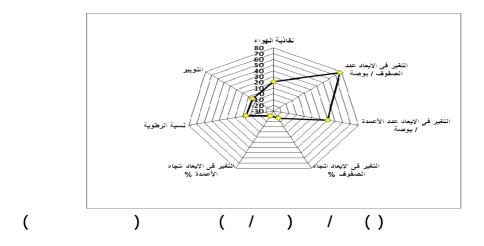
.

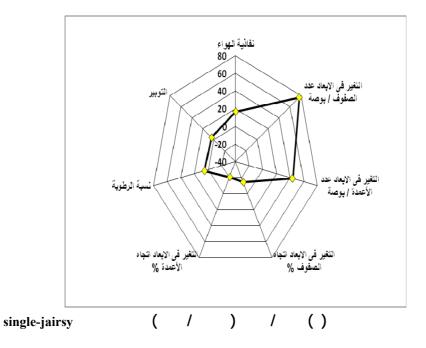


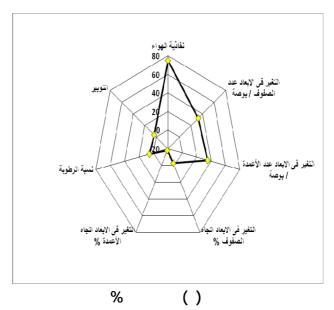


```
:( / )
                                              ()
                                       %
   ( )
                        ( )
                 (
                        Amar
                                               (1988)
                 ()
  ( /
        ) /
                 :Jairsy
        ( )
                               ( / ) / ()
                                     :(
( )
                ()
         %
```









```
)
                                                     )
          (Cotton / Lycra)
/
                                %
        :(1997)
                    :(
                            )
                                               Fabric
                                                                    (Cover)
                                                                               Tightness
                                                                                 (Fiber)
                                                                             .(Tightness)
                    :(
                            )
                                                                                      %
                          SPSS
                                                      /
                                                                %
        ":(
                )
                     .( )
```

- Bueche and Fredrick J. (1980): "Introduction to physics for scientist's engineer" 3rd edition, New York.
- GoncaOzcelik&NilgonOzdil harsh environments (pp.99- 13 5). Philadelphia, PA: Taylor & Francis. (2012): "Study on Sensorial Comfort of Textile Materials" Engineer University, Textile Engineering Department, Izmir, Turkey, 2012.
- Guowen Song (2011): "study on improving comfort in clothin", University of Alberta, Canada, Wood head Publishing Series in Textiles No. 106, January, 2011.
- Harriet Meinander&MinnaVarheenmaa (2002):
 "Study on Clothing and Textiles for disabled and elderly people" Technical Research Center of Finland, 2002.
- Hussain, M. M., & Tremblay-Lutter, J. F. (1996):
 "A test method for measuring liquid penetration through fibrous materials. In 5. S. Johnson & S.
 2. Mansdorf (Vol. Eds.), Performance of protective clothing: Vol. 5. ASTM STP 1237 (pp. 142-1 56).
- Jowa State University, University Extension (2003): "Consumer Choices: Selecting Clothes for older People in your care", July 2003
- Junya Hu, Yi Li, Quanhai, Li Xinxing Hu (2001): "Study on Characterization of sensory comfort of apparel products", The Hong Kong Polytechnic University, 2001
- Mustafa El Okeily (1998): "Heat Transfer through textile fabrics, mathematical modeling", volume 12, issue 9, pp 1187.
- Subhash C Anand (2011): "Technical fabric structures— 2. Knitted fabrics" Faculty of Technology, Bolton Institute, Deane Road, Bolton BL3 5AB, UK...

- Alla Arafa Badr (2013): "Thermal Comfort Properties of Bamboo Knitted Fabrics", Indian Textile Journal, June,.
- Amar A.S.A. and Mustafa El-Okeily (1988): "Heat Transfer through Textile Fabrics: Mathematical Model", Faculty of Engineering, Alexandria University, August, 1988, volume 12
- Ana Cristina Broega and Maria ElisabeteCabeço Silva (2012): "study on The Comfort Performance Of Wool Light Fabrics Based On Subjective, Objective Evaluation
- ASTM. (1996). Standard method for air permeability of textile fabrics (D737- 96). Conshohocken, PA: American Society for Testing and Materials
- Badr A., Elokeily M. and Farag R, (2012):
 "Performance of natural cellulosic fibers and regenerated cellulosic fibers in physiological comfort of knitted fabric", faculty of Engineering, Mansoura University, March,

Effectiveness of Mechanical and Physical Properties of knitted Structure for Clothes Comfort

Ebtessam Ibrahim Mohammed, Monna Mousa Ghaleb

Textiles and Clothing - Home Economics Department - Faculty of Specific Education- Alexandria University

ABSTRACT

This study was conducted to investigate the effectiveness of physical and mechanical properties of knitted fabrics that provide physiological, psychological comfort and verify the functionality and aesthetic performance. Seven types of knitted fabrics which are used in clothes production at Kabo Company for Clothes and Textiles in Alexandria were investigated. The investigated fabrics were selected from materials of pure cotton 100% and mixed cotton with Lycra with different textiles structures representing seven samples. The specimens were investigated due to air permeability, ratio of piling, humidity, and changeable in dimension of columns and rows directions. In accordance with the statistical analysis, results showed that textile structure of cotton 100% (Rib 2/2) is the best sample which has minor of piling, besides distinction in mechanical properties which provide comfort in addition to stability of dimensions which highly verify air permeability. Secondly; sample of mixed cotton with Lycra (single jersey) and the less samples provides comfort was mixed cotton with Lycra, (rib 1/1) where results revealed weakness in dimensional stability and lack of air permeability.