

## **SUMMARY**

In this project I made a series of accessories for a target market; with the merger of I recycled textiles, yarns and 100% wool felt. To carry out series of accessories I used 100% wool felt with artificial fibers in a lower percentage, proposing an innovative fashion. To create designs the accessories I have done previous research, technical and quality control, taking into account the trend accessories and colors; for after this; perform different designs, infiltrating them each parameter; continue doing prototype chips that help make these accessories and post production sheets, which have completed the steps taken and bite used to form each of the accessories. This series features a variety accessories such as: bags, wallets, necklaces, wall, earrings and headbands; They have a unique and innovative design that keeps up with fashion and originality. The accessories for the most part is the hand made. This series on how many accessories with 12 copies. In this work, a cost analysis was performed to raise awareness; the product will be accepted in the market for its low costs and have innovative designs.

## **INTRODUCTION**

To carry out this work I have divided into 2 parts which are: theoretical and practical part.

## **THEORETICAL PAR**

### **CHAPTER I. THEORETICAL**

#### **BASES**

This chapter describes each of the theoretical bases, its division and importance to each of the accessories to make; making known the right words in what is fashion design.

#### **CHAPTER II. LANA**

In this chapter we find the introduction of wool, its features, we also have shear, techniques, composition, properties, classification and structure as it consists of three main parts: The bark; Cortex and medulla.

#### **CHAPTER III. NON-WOVEN**

Here I talk about the introduction, nonwovens, its definition, types of ligaments: plain, twill and satin; Knitting that two warp and weft; their identification, classification is divided in two by blanket formation and consolidation of the blanket.

#### **CHAPTER IV. Felting.**

Here we find everything about the felting wool, definition, strength, its uses, techniques that are paramount within this work, which is three in needle felting, wet felting and mechanical felting.

#### **CHAPTER V TEXTILE AND THREADS**

This chapter is of great importance because all the textile materials to be used, their introduction,

classification by origin is as follows: plant, animal, mineral, synthetic. Its properties as the preparation, manufacturing and finishing. The defining characteristics, composition, thickness, elasticity, regularly expressed using standard formulas.

## **PART PRACTICE**

CHAPTER VI, design and development of prototypes.

The design is the previous process of mental configuration such as: observe, evaluate, plan and build; here we also find the prototypes of each accessory, the bite that was used in each and whether a card that lists all the parameters for the preparation thereof.

## **CHAPTER VII. ELABORATION PROCESS**

This chapter describes the development processes taking place in each fixture, considering that each has different specifications.

## **CHAPTER VIII. QUALITY CONTROL**

The three resistors necessary was done in what is fashion accessories; to give an excellent quality control resistances are: Rub resistance, washing resistance and resistance to breakage.

## **CHAPTER IX. COST ANALYSIS**

Accessories costs that are determined by the sum of Fixed costs and variable costs detailed;

Development costs are also performed in the process defined in each of the accessories. CHAPTER X. CONCLUSIONS AND RECOMMENDATIONS.

## **INTRODUCTION**

The process is achieved by friction felt pressure + + wetting. This process modifies the structure of the fiber and causes irreversibly interlock, forming a fabric structure.

## **DEFINITION**

According to Rosario Diaz (2007):

Felt is a nonwoven fabric in sheet form, whose main characteristic is that to manufacture, this material is not woven, ie not arising from the crossing of warp and weft, as with fabrics, due to their characteristics fiber. (P. 78)

## **RESISTANCE**

AI Aging: felt or plush does not deteriorate with age its elasticity, strength and other characteristics are preserved for years.

b. To wear, deterioration and Use: The wool is mainly composed of keratin, a substance which in turn is part of the compounds of nails, horns and hooves of animals. this substance gives the felt their abrasion resistance.

c. A Temperature: flexibility, elasticity and resistance felt allow a range of heat resistance ranging from 20 ° to 80 ° C can reach 120 °.

d. A Chemicals: The felt or plush resists acidic substances and alkaline is damaged. It is not damaged by hydrocarbons and other chemicals.

to. Compression: The felt or plush may be pressed for very long periods of time and upon release will return to its original shape on a very short period of time.

b. A Tension: Felt in its dimensions remain despite being stretched to their full strength and elongation alone to suffer this stress is continuous and for very long periods of time.

### QUALITY CONTROL.

To perform quality control of accessories, take the data from the Book Industry and the Textile Quality Control Fidel Eduardo Lockuán Wash (VI Ennoblecimiento Textil).

A good quality control in each of the accessories should perform the following types of resistance:

- Rub resistance
- Resistance to washing
- Breaking strength
- Resistance to light.

Taking the box rating:

### Rating Chart

Table 5: Evaluation of lightfastness.

VALORES	DOMINIO
5	EXCELENTE
4	MUY BUENA
3	BUENA
2	REGULAR
1	MALO

Fuente: Autor

### RUB RESISTANCE

Abrasion is merely suffering wear a body because of its friction against a surface.

It is important to test the tissue resistance to abrasion or rubbing, to have ideas of durability during use.

The abrasion can be classified as follows:

a) a flat area Plana.- when a sample is subjected to the action of rubbing.

b) In the Dobles.- for example, the kind of wear that occurs in the neck and the folds of a garment.

c) With flexión.- friction in this case it is accompanied by bending forces. (Lockuán Wash F., 2012).

To carry out this test a prototype felt 10x10cm was taken.

Table 6: Rating rub resistance.

PASADAS	TIEMPO
20p	0.76s
30p	16.22s

<b>40p</b>	<b>18.62s</b>
<b>50p</b>	<b>24.81s</b>
<b>60p</b>	<b>29.81s</b>

**Fuente:** Autor

## RESULTS:

After making a thorough test, (20 to 60) passes; I could see that the felt has high resistance to rubbing, as I showed a negative result; at least 60 passes, in a time of 29.81segundos, showing that the felt is a suitable material for this type of accessory. I value was in the range of 5 for their excellent result.

Wash resistance.

The values are determined in the different ranges of strength.

The process was determined for the resistance to washing is:

Place in a bowl water with regular detergent following the instructions accompanying the product.

- The weight of the sample was taken
- The sample is folded horizontally flat
- Washing was performed for 10 minutes
- Rinsing was performed
- And the color match was found

Result: there is a wash fastness with a value of 5, since there is no detail of the sample

## WASH RESISTANCE.

Description:

The tissue sample was treated in a steel container with the detergent solution without chemical bleaching agent, with distilled water for 45 min.

## RESULTS

Bleed is the dye that migrates effect washing tintured fibers, the measurement shows the ability of the fiber to the dye and the sample taken Very little migration was determined when the temperature is lower, but when the temperature is high any loss is not noticed.

## BREAKING STRENGTH 7.3.

It means tensile strength to the necessary force applied in a direction parallel to the plane of the fabric achieve breakage. It is the most important functional property of tissues and together with the elongation at break is widely to control the quality of fabrics.

When the fabric is stretched in one direction under the effect of a force, first ripple decreases in said direction, then the cords of the structure starting load endurance and the relative elongation of the fabric is reduced. Meanwhile, the warp and weft exercise you were together in the bonding points. (Lockuán Wash F., 2012, p. 50).

Description: conducting the breaking strength was taken as a felt 20x20cm prototype; and the initial weight is 6.2 kg (block); then go putting more weight to achieve the breakage.

Results:

Faced with the different types of weights placed determined that the maximum weight of 23.8 pounds was placed there was the total rupture of the sample, however deformation occurred since the first weight of 13.8 pounds, giving incrementally.

$$\underline{X = 16.09 \text{ USD}}$$

$$1 \text{ DÍA} = 8 \text{ HORAS}$$

$$8 \text{ H} \quad 16.09 \text{ USD}$$

$$1 \text{ H} \quad X$$

**COST ANALYSIS.**

Costs for this series of accessory took into account the amount of fixed costs and variable costs. As fixed costs are known to the Manpower and design. Variable costs are the Raw Materials and Materials Extras.

$$\underline{X = 2.011 \text{ USD}}$$

To calculate the number of accessories was taken as a basis one of each type (earrings, necklaces. Apply, headbands, purses and wallets), made with recycled and wires technique Enfientramiento wool material. And then a table with all accessories costs is presented as the actual calculation.

To calculate the cost Design.- design takes into account the hourly cost of a designer based on an average wage 650USD, with a Jordanian 8 hours and 22 working days per month.

$$650 \text{ USD} \quad 22 \text{ DÍAS}$$

$$X \quad 1 \text{ DÍA}$$

$$\underline{X = 29.55 \text{ USD}}$$

$$1 \text{ DÍA} = 8 \text{ HORAS}$$

$$8 \text{ H} \quad 29.55 \text{ USD}$$

$$1 \text{ H} \quad X$$

**COST OF PRODUCTION OF ACCESSORIES**

$$\text{FIXED COSTS} = \text{MO} + \text{DESIGN}$$

$$\underline{X = 3.693 \text{ USD}}$$

Work.- hand was taken into account the cost per hour based on the basic salary established by law in 2015, to 354 USD, with a Jordanian 8 hours and 22 working days per month craftsman.

**Variables.-** costs are taken into account raw material and other costs of materials used in the production of accessories.

$$354 \text{ USD} \quad 22 \text{ DÍAS}$$

$$X \quad 1 \text{ DÍA}$$

To calculate the cost of the raw material to be used in the preparation of each accessory, it weighed each of the glasses felt (100% wool) to be used for the

development of the respective design.

### **CALCULATION OF THE GLASS FELT:**

4 USD ----- 1KILO----- LAVADA  
(WO)

85gr x copa de fieltro

1 kg ----- 1000gr

x----- 85gr

**x = 0.085kg**

1kg (WO lavada) -----4USD

0.085kg ----- x

**x = 0.34USD**

### **COSTS OF TEXTILE AND THREADS.**

To calculate the cost of recycled materials and the development of each accessory thread will proceed despite every fabric and thread to use, to get the cost.

### **HILO DE BORDAR**

1 cono ----- 9.99gr ----- 0.80USD

9.99gr ----- 0.80USD

0.98gr ----- x

**x=0.078USD**

### **TELA INDÚ**

1 (10x10 cm) retaso ----- 4.25gr -----  
0.08USD

4.25gr ----- 0.08USD

1.73gr ----- x

**x=0.032USD**

### **LANA POLIÉSTER**

1 ovillo ----- 5.35gr ----- 1.15USD

5.35gr ----- 1.15USD

1.19gr ----- x

**x=0.2557USD**

### **GUAÍPE**

1 bola ----- 3.49gr ----- 0.25USD

3.49gr ----- 0.25USD

1.36gr ----- x

**x=0.0974USD**

### **BOLAS DE FIELTRO**

50 bola ----- 7.5USD

50b ----- 7.5USD

1b ----- x

**x=0.15USD**

Fieltro		
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Source: Author

### RAW MATERIAL IN KG.

To calculate the raw material is taken into account the price per kilo of each material used in the garment, multiplying by the kilo weight of each piece, as I explain in the above data.

(FELT = 0.34, embroidery thread = 0.078, = 0.032 INDU FABRIC, WOOL = 0.255, GUAPE 0.097Y felt balls = = 0.15).

Table 10: Weight of Textile Material Recycling and Hilo.

MATERIA PRIMA	PESO EN GR	KG
<b>PESO DE FIELTRO + MATERIAL TEXTIL E HILO</b>		
Fieltro 100% WO + Lana	20.5gr	0.0205
Fieltro 100% WO + Hilo	21gr	0.021
Fieltro 100% WO + Tela	29.5gr	0.0295
Fieltro 100% WO + Guape	38gr	0.038
Bola de	1gr	0.001

RAW MATERIAL IN DOLLARS. To calculate the price of mixed textile + felt the weight plus the cost was taken into account, considering the above calculations.

Table 11: Cost of raw material per kilo.

MATERIA PRIMA	DETALLE	COSTO
<b>MATERIA PRIMA DIRECTA</b>		
Fieltro 100% WO + Lana	0.34 +0.26	0.60
Fieltro 100% WO + Hilo	0.34+0.078	0.418
Fieltro 100% WO + Tela	0.34+0.032	0.372
Fieltro 100% WO + Guape	0.34+0.097	0.437
Bola de Fieltro	1 bola	0.15

Source: Author

### OTHER MATERIALS

These extra materials are used in the production of accessories such as:

Table 12: Other materials.

MATERIA PRIMA
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<b>INDIRECTA</b>		
Cierres	3*0.35	1.05
Botones	13 * 0.08	1.04
Reatas (1m)	0.05*6	0.30
Aguja	2*0.10	0.20
Silicona	1*0.10	0.10
Tela	5*0.08	0.40
Tijera	1	2.15
Marcador	1	0.86
Cadenas	3*0.15	0.45
Ganchos de arete	4*0.03	0.12
Alfiler	2*0.05	0.10
Binchas	2*0.10	0.20
Ganchos	2*0.08	0.16
Cinturón	2*1.00	2.00
<b>Total</b>		<b>8.25USD</b>

Source: Author

#### INDIRECT PRODUCTION COSTS.

Electric Power (Straight Machine).

Recta.- machine to calculate the cost of the machine was taken into account the value of return.

Electricity: 0.082 USD / KWH

3 liners and 3 start closing it took 1.30 hours was performed.

Straight machine operates at 110V, your engine is DXE 1 / 2HP.

**TABLA 13:** Consumo energía eléctrica

<b>CONSUMO</b>			
<b>Maquinaria</b>	<b>USD / KWH</b>	<b>TOTAL KWH</b>	<b>TOTAL USD</b>
Máquina Recta	0.03075	4.875	0.1499

**Fuente:** Autor

#### DEPRECIACIÓN DE MAQUINARÍA.

COSTO DE MÁQUINA RECTA= 750USD

DEPRECIACIÓN ANUAL= VALOR MAQUINARÍA / VIDA ÚTIL (8AÑOS)

DEPRECIACIÓN MENSUAL= DEPRECIACIÓN ANUAL (12 MESES)

DEPRECIACIÓN DIARIA= DEPRECIACIÓN MENSUAL (30 DÍAS)

ANUAL = 750 / 8 AÑOS = 93.75

MENSUAL = 93.75 / 12 = 7.8125

DIARIA = 7.812 / 30 = 0.2604

DÍA 0.2604 \* 1 DÍA = **0.2604**

**TABLA 14:** Costos indirectos de fabricación

	KISS	1,51	0,60	0,4103	1,00	3,52	2,11	5,63
<b>TOTAL</b>		<b>49,77</b>	<b>12,20</b>	<b>4,92</b>	<b>12,00</b>	<b>78,89</b>	<b>47,33</b>	<b>126,22</b>

<b>TOTAL COSTOS INDIRECTOS DE FABRICACIÓN</b>	
<b>DETALLE</b>	<b>SUBTOTAL</b>
Máquina Recta	\$0.1499
Depreciación de Maquinaria	\$0.2604
<b>TOTAL</b>	<b>\$0.4103</b>

**Fuente:** Autor

#### DETERMINATION OF INCOME OR PROFIT

To determine the gain or profit and the selling price of each product is taken as a basis the total costs incurred in each product is assigned a percentage of profit with the market for these products was established a 60%.

**TABLA 39:** Ganancia

COSTO UNITARIO DE FABRICACIÓN							GANANCIA	
CATEGORÍA	NOMBRE	MO	MP	CIF	OTROS	COSTO TOTAL	60%	PRECIO VENTA
BOLS	BOLITAS	5,87	3,86	0,4103	1,00	11,14	6,68	17,82
	HOJITAS	7,60	2,09	0,4103	1,00	11,10	6,66	17,76
CARTERAS	FLORECI TA	6,27	1,07	0,4103	1,00	8,75	5,25	14,00
	BOTONC ITA	4,54	0,73	0,4103	1,00	6,68	4,01	10,69
COLL ARES	TIRITAS	3,84	0,31	0,4103	1,00	5,56	3,34	8,90
	ALY	3,78	0,31	0,4103	1,00	5,50	3,30	8,80
ARETES	PONKIS	2,44	0,71	0,4103	1,00	4,56	2,74	7,30
	ROSITA S	3,22	0,78	0,4103	1,00	5,41	3,25	8,66
APLIQ UES	LINDA	4,66	0,60	0,4103	1,00	6,67	4,00	10,67
	HEART	3,78	0,94	0,4103	1,00	6,13	3,68	9,81
Z C	TULY	2,26	0,20	0,4103	1,00	3,87	2,32	6,19

**Fuente:** Autor

#### CONCLUSIONS AND RECOMMENDATIONS

#### CONCLUSIONS

1. The mechanical felting technique through temperature, allowed the development of materials for women, maintaining a level of quality as the material made of wool free of impurities.

2. Following trends (De La Fressange, 2012, p.74). It developed a series of accessories that offer new options when dressing, with a variety of exclusive design, taking into account the quality of preparation of each accessory, and generating a proposed color contrast.

3. The number of accessories is performed satisfactorily, it consists of 12 units online MASS MARKET; with a variety of designs and recycled fabric, which bring elegance to the modern woman (Sheets pp. 146-158)

4. Based on research (Generated Results pp. 104 -108) the best felting technique is mechanical, so it is optimal for the production of accessories, because the passage of time does not lose its shape. However the 2 techniques such as those of needles and Wet are not so desirable, so it involves more time and preparation to form a cup of felt.

5. According to the analysis of quality (pp. 107) held at each of the fixtures reaches determine the felt gave the best results in all tests, such as breaking strength, tear (p 110. ) occurred weighing 23.8 pounds; washing, (. p 110), to 30° bleeding is low, the higher temperature less bleeding; light, (p. 111), upon exposure of up to 5 days no presence of deterioration and rub, (p. 108), 60 past the fiber deterioration was noted.

6. In detail the costs (pg. 111) of each of the accessories, to get both with this established unit costs, as the cost of the whole range of accessories, the costs vary from one to another; due to the greater or less complexity involved in developing.

## **RECOMMENDATIONS**

1. At the time of writing accessories is recommended that a very detailed quality control. To avoid product failures, choosing accessory design should take the silhouette of the person into account. If greater stylization of the figure (. Short Stature pp 37-42) desired, you can choose a medium attachment and adjustable handle for the bag does not look over the figure and has a balance.

2. I recommend that textile materials used in the production of accessories, are made from recycled brightly colored, for more attractive and that with the passage of time using the following materials as the first day.

3. If the accessories required before or after its preparation in terms of finishes, quality assurance and contribute to the design process, its implementation is highly recommended as they contribute to the exclusivity of the accessories, plus durability.

4. Water Enfientramiento technique is the least desirable of the three techniques, so it takes more time and labor, also cannot determine its durability over time, so do not achieves a compact uniform.