

Exploring Bioplastics

Lara Khayat & Malak Joulani



SAMPLE 1

Ingredient List

| | | | | |
|---|---|---|--|---------|
|  |  |  |  | QR CODE |
| 60ml of water | 45g of gelatine | 0g of glycerine | 6ml of soap | |

Preperation Steps



Material Assessments

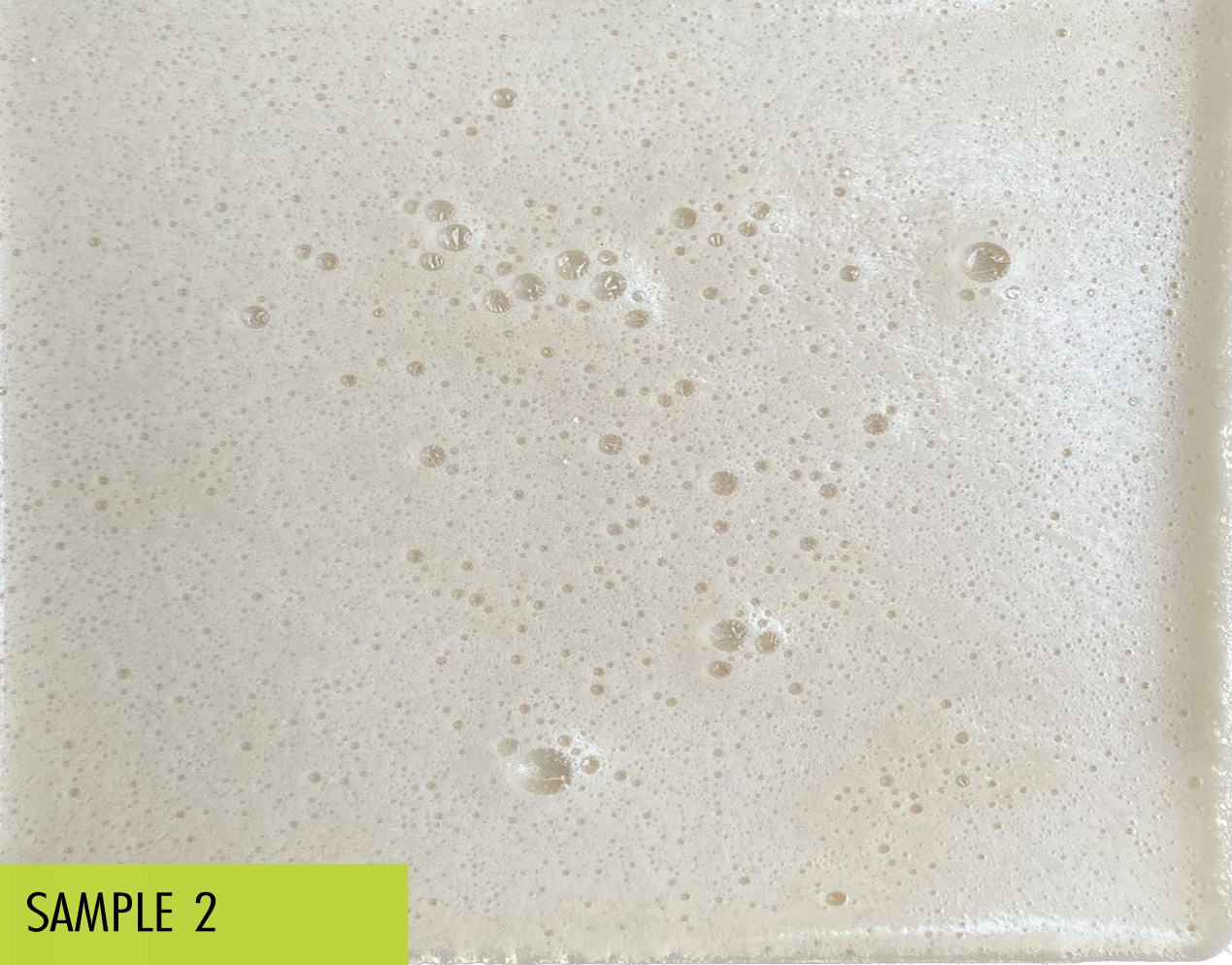
| | | | | | | | |
|---------|--------------------------|-------------|--------------------------|--------|--------------------------|-------------|--------------------------|
| hard | <input type="checkbox"/> | soft | <input type="checkbox"/> | opaque | <input type="checkbox"/> | transparent | <input type="checkbox"/> |
| smooth | <input type="checkbox"/> | rough | <input type="checkbox"/> | tough | <input type="checkbox"/> | ductile | <input type="checkbox"/> |
| matte | <input type="checkbox"/> | glossy | <input type="checkbox"/> | light | <input type="checkbox"/> | heavy | <input type="checkbox"/> |
| elastic | <input type="checkbox"/> | not elastic | <input type="checkbox"/> | fibred | <input type="checkbox"/> | not-fibred | <input type="checkbox"/> |
| strong | <input type="checkbox"/> | weak | <input type="checkbox"/> | | | | |

Forming Technique mold



References
https://issuu.com/nat_arc/docs/bioplastic_cook_book_3/2?ff&experiment=last-page

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SAMPLE 2

Ingredient List



60ml of water



45g of gelatine



15g of glycerine



6ml of soap

QR CODE

Preperation Steps



Material Assessments

| | | | |
|---------|-------------------------------------|-------------|-------------------------------------|
| hard | <input type="checkbox"/> | soft | <input checked="" type="checkbox"/> |
| smooth | <input checked="" type="checkbox"/> | rough | <input type="checkbox"/> |
| matte | <input checked="" type="checkbox"/> | glossy | <input type="checkbox"/> |
| elastic | <input type="checkbox"/> | not elastic | <input type="checkbox"/> |
| strong | <input type="checkbox"/> | weak | <input type="checkbox"/> |

| | | | |
|--------|-------------------------------------|-------------|-------------------------------------|
| opaque | <input type="checkbox"/> | transparent | <input checked="" type="checkbox"/> |
| tough | <input type="checkbox"/> | ductile | <input checked="" type="checkbox"/> |
| light | <input checked="" type="checkbox"/> | heavy | <input type="checkbox"/> |
| fibred | <input type="checkbox"/> | not-fibred | <input checked="" type="checkbox"/> |

Forming Technique mold



References
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SAMPLE 3

Ingredient List



60ml of water



45g of gelatine



30g of glycerine



6ml of soap

QR CODE

Preparation Steps



Material Assessments

| | | | |
|---------|-------------------------------------|-------------|-------------------------------------|
| hard | <input type="checkbox"/> | soft | <input checked="" type="checkbox"/> |
| smooth | <input checked="" type="checkbox"/> | rough | <input type="checkbox"/> |
| matte | <input checked="" type="checkbox"/> | glossy | <input type="checkbox"/> |
| elastic | <input type="checkbox"/> | not elastic | <input type="checkbox"/> |
| strong | <input type="checkbox"/> | weak | <input type="checkbox"/> |

| | | | |
|--------|-------------------------------------|-------------|--------------------------|
| opaque | <input checked="" type="checkbox"/> | transparent | <input type="checkbox"/> |
| tough | <input checked="" type="checkbox"/> | ductile | <input type="checkbox"/> |
| light | <input checked="" type="checkbox"/> | heavy | <input type="checkbox"/> |
| fibred | <input checked="" type="checkbox"/> | not-fibred | <input type="checkbox"/> |

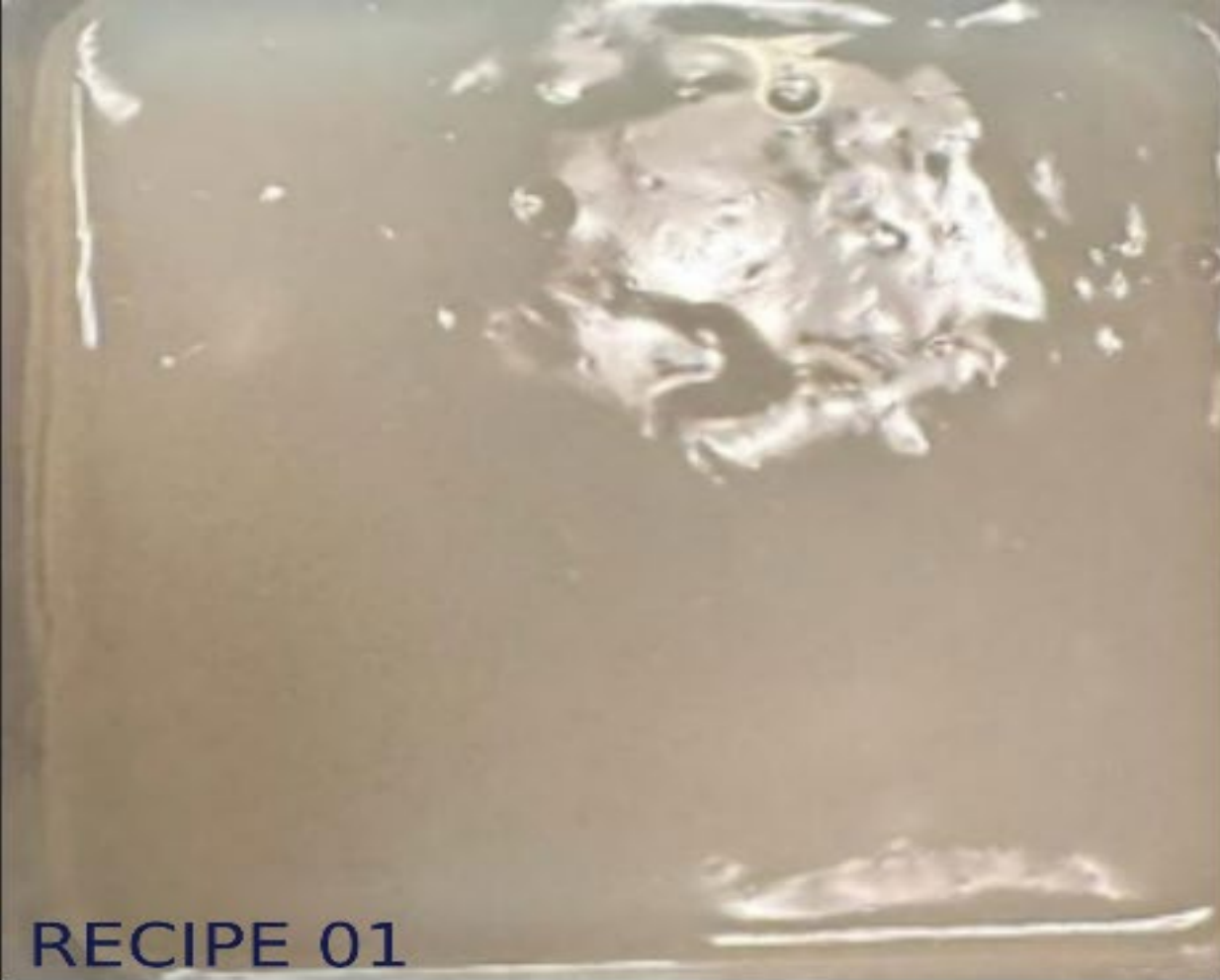
Forming Technique mold



References

https://issuu.com/nat_arc/docs/bioplastic_cook_book_3/2?ff&experiment=last-page

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Ingredient List



20g starch



80ml water



20g glycerine



20ml vinegar

QR CODE

Preparation Steps



Material Assessments

hard soft
smooth rough
matte
elastic glossy

opaque transparent
tough
light ductile
heavy



RECIPE 01

Forming Technique



References

https://issuu.com/nat_arc/docs/bioplasic_cook_book_3



Ingredient List



20g starch



80ml water



0g glycerine



20ml vinegar

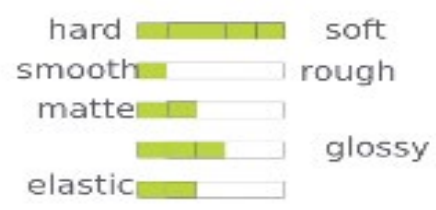


QR CODE

Preparation Steps



Material Assessments



RECIPE 02

Forming Technique



References
https://issuu.com/nat_arc/docs/bioplastic_cook_book_3

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RECIPE 03

Forming Technique

References
https://issuu.com/nat_arc/docs/bioplasic_cook_book_3

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Ingredient List



20g starch



60ml water



20g glycerine



20ml vinegar



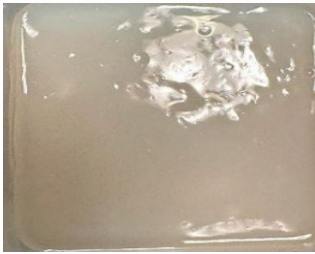
QR CODE

Preperation Steps



Material Assessments

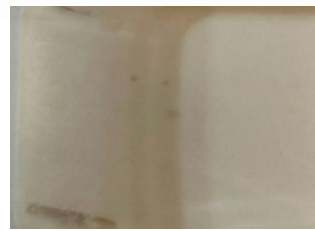




S-1



S-2



S-3

Starch based samples

S1,2,3



G-1



G-2



G-3

Gelatin based samples

G1,2,3

S-1
 20 gr starch
 20 gr glycerine
 80ml water
 20ml vinegar

S- 2
 20 gr starch
 0gr glycerine
 80ml water
 20ml vinegar

S- 3
 20 gr starch
 20 gr glycerine
 60ml water
 20ml vinegar

QR CODE

Drying Method

air dry:

air dry:

air dry:



Temperature

room temperture

room temperture

room temperture

Time period

5days

3days

2days

G-1
 45 gr gelatin
 0 gr glycerine
 60ml water
 6ml soap

G- 2
 45 gr gelatin
 15 gr glycerine
 60ml water
 6ml soap

G- 3
 45 gr gelatin
 30 gr glycerine
 60ml water
 6ml soap

air dry:

air dry:

air dry:



Temperature

room temperture

room temperture

room temperture

Time period

5day

5day

5day

Observations about the materials and their effects (starch based) Observations about the materials and their effects: (gelatin based)

- 1) glycerine helps the starch to dissolve
- 2) water makes it softer and more flexible
- 3) glycerine makes it dry faster

- 1) very easy to make
- 2) 10 minutes preparation
- 3) it takes it's shape easily
- 4) it does not break

Thank you 😊