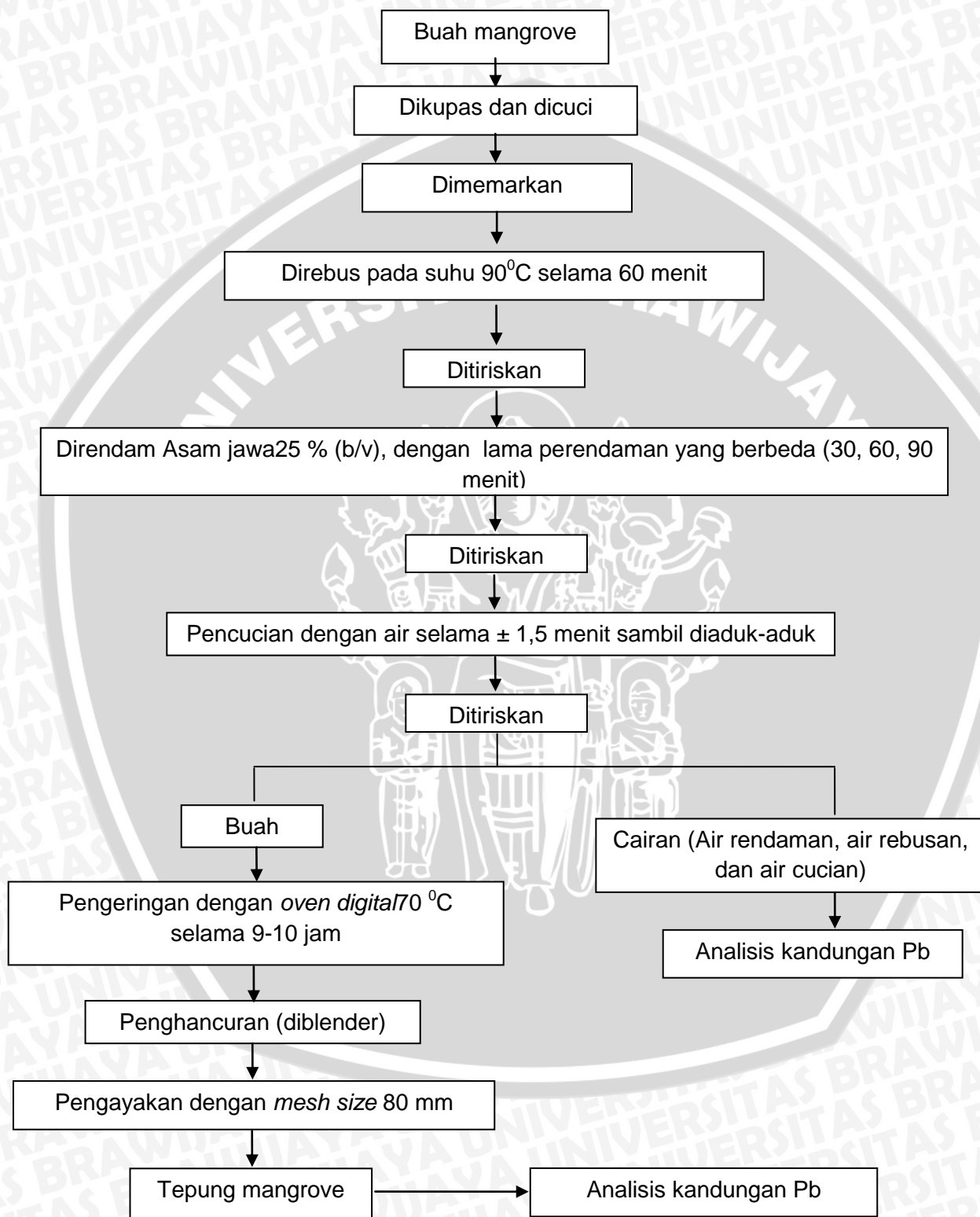
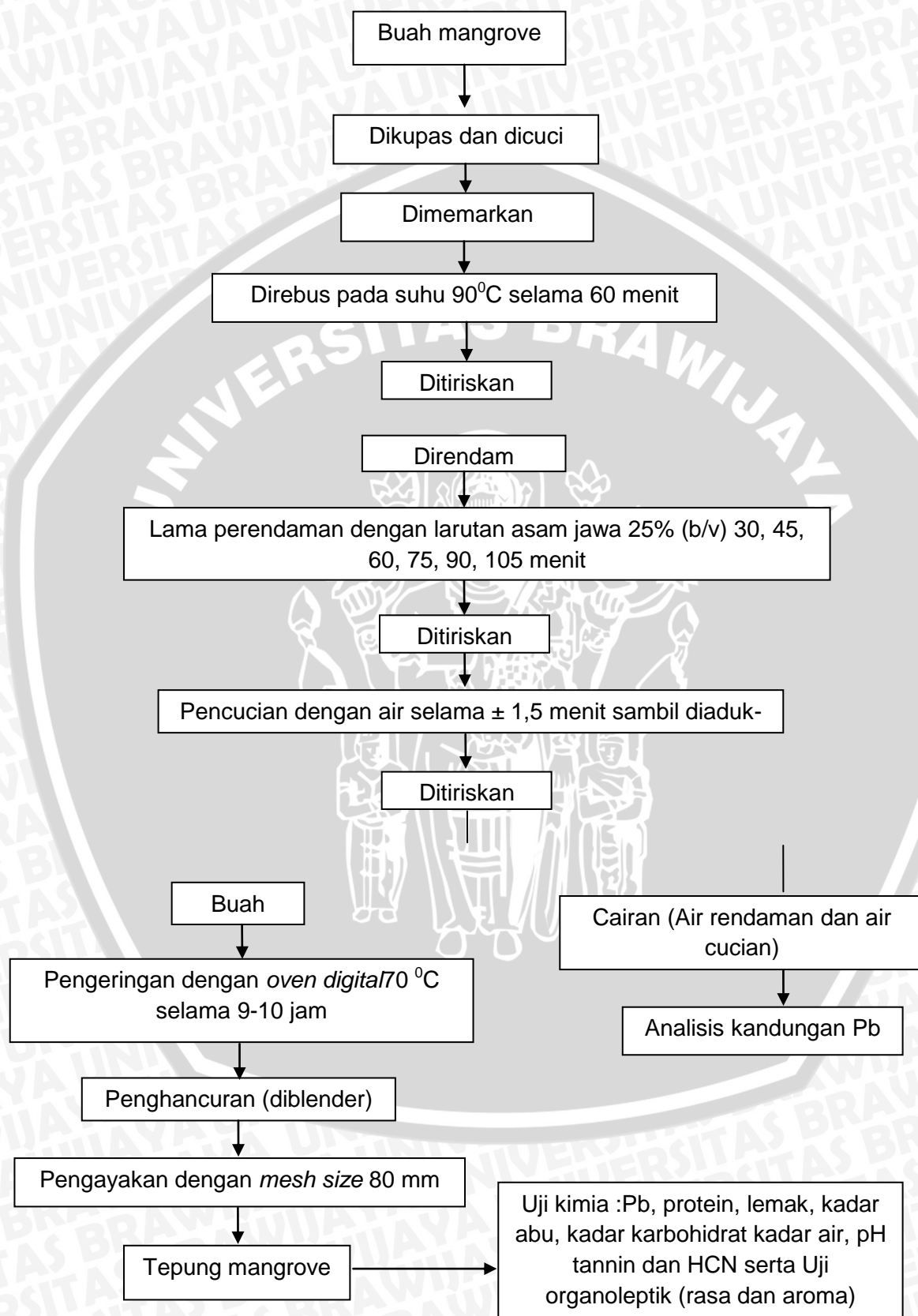


LAMPIRAN

Lampiran 1. Prosedur Penelitian Pendahuluan 2



Lampiran 2. Diagram alir Pembuatan Tepung Mangrove *Avicennia alba*



Lampiran 3. Data Kadar Pb

- Kadar Pb tepung buah *Avicennia alba*

| PERLAKUAN | ULANGAN | | | | Total | Rerata |
|-----------|---------|-------|-------|-------|-------|--------|
| | I | II | III | IV | | |
| Kontrol | 1,041 | 1,026 | 0,98 | 1,018 | | |
| A (30) | 0,698 | 0,765 | 0,611 | 0,796 | 2,87 | 0,72 |
| B (45) | 0,636 | 0,576 | 0,593 | 0,612 | 2,417 | 0,60 |
| C (60) | 0,489 | 0,526 | 0,503 | 0,499 | 2,017 | 0,50 |
| D (75) | 0,429 | 0,397 | 0,415 | 0,386 | 1,627 | 0,41 |
| E (90) | 0,403 | 0,345 | 0,306 | 0,369 | 1,423 | 0,36 |
| F(105) | 0,336 | 0,302 | 0,278 | 0,257 | 1,173 | 0,29 |

- Kadar Pb air rendaman

| PERLAKUAN | ULANGAN | | | | Total | Rerata |
|-----------|---------|-------|-------|-------|-------|--------|
| | I | II | III | IV | | |
| A (30) | 0,341 | 0,366 | 0,298 | 0,223 | 1,228 | 0,31 |
| B (45) | 0,356 | 0,453 | 0,443 | 0,565 | 1,817 | 0,45 |
| C (60) | 0,459 | 0,492 | 0,503 | 0,499 | 1,953 | 0,49 |
| D (75) | 0,529 | 0,597 | 0,615 | 0,586 | 2,327 | 0,58 |
| E (90) | 0,703 | 0,645 | 0,606 | 0,669 | 2,623 | 0,66 |
| F(105) | 0,736 | 0,702 | 0,778 | 0,757 | 2,973 | 0,74 |

- Kadar Pb air cucian

| PERLAKUAN | ULANGAN | | | | Total | Rerata |
|-----------|---------|-------|--------|-------|--------|--------|
| | I | II | III | IV | | |
| A (30) | 0,231 | 0,166 | 0,2958 | 0,123 | 0,8158 | 0,20 |
| B (45) | 0,256 | 0,296 | 0,243 | 0,265 | 1,06 | 0,27 |
| C (60) | 0,313 | 0,292 | 0,356 | 0,299 | 1,26 | 0,32 |
| D (75) | 0,329 | 0,397 | 0,415 | 0,386 | 1,527 | 0,38 |
| E (90) | 0,467 | 0,445 | 0,406 | 0,469 | 1,787 | 0,45 |
| F(105) | 0,489 | 0,502 | 0,434 | 0,556 | 1,981 | 0,50 |



Lampiran 4. Hasil Analisis Sidik Ragam Kadar Pb

One-way ANOVA: kadar pb versus konsentrasi

| ANOVA | | | | | |
|----------------|----------------|----|-------------|--------|------|
| Pb_Tepung | | | | | |
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | .512 | 5 | .102 | 56.926 | .000 |
| Within Groups | .032 | 18 | .002 | | |
| Total | .545 | 23 | | | |

Homogeneous Subsets

| Pb_Tepung | | | | | | | |
|------------------|------------|---|-------------------------|-------|-------|-------|-------|
| | Perla kuan | N | Subset for alpha = 0.05 | | | | |
| | | | 1 | 2 | 3 | 4 | 5 |
| Tukey | 105 | 4 | .2932 | | | | |
| HSD ^a | 90 | 4 | .3558 | .3558 | | | |
| | 75 | 4 | | .4068 | | | |
| | 60 | 4 | | | .5043 | | |
| | 45 | 4 | | | | .6042 | |
| | 30 | 4 | | | | | .7175 |
| | Sig. | | .338 | .549 | 1.000 | 1.000 | 1.000 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4,000.

Keterangan : - df = Degree Freedom (derajat bebas)

- F = Fisher

- Sig = Signifikan

Lampiran 5. Data dan Hasil Analisis Perlakuan Terbaik (Zeleny, 1982)

| Parameter | A | B | C | D | E | F |
|--------------|------|------|------|------|------|------|
| air rendaman | 0,31 | 0,45 | 0,49 | 0,58 | 0,66 | 0,74 |
| air cucian | 0,2 | 0,27 | 0,32 | 0,38 | 0,45 | 0,50 |
| Tepung | 0,72 | 0,6 | 0,50 | 0,41 | 0,36 | 0,29 |

| | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|
| dk rendaman | 0,419 | 0,608 | 0,662 | 0,784 | 0,892 | 1,000 |
| dk cucian | 0,400 | 0,540 | 0,640 | 0,760 | 0,900 | 1,000 |
| dk tepung | 0,403 | 0,483 | 0,580 | 0,707 | 0,806 | 1,000 |

| | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|
| Λ | 0,333 | 0,333 | 0,333 | 0,333 | 0,333 | 0,333 |
| L1 | 0,593 | 0,456 | 0,373 | 0,250 | 0,134 | 0,000 |
| L2 | 0,117 | 0,070 | 0,047 | 0,021 | 0,007 | 0,000 |
| L maksimal | 0,200 | 0,172 | 0,140 | 0,098 | 0,065 | 0,000 |
| Jumlah | 0,910 | 0,699 | 0,559 | 0,368 | 0,206 | 0,000 |

| Parameter | A | B | C | D | E | F |
|--------------|-------|-------|-------|-------|-------|-------|
| air rendaman | 0,140 | 0,203 | 0,221 | 0,261 | 0,297 | 0,333 |
| air cucian | 0,133 | 0,180 | 0,213 | 0,253 | 0,300 | 0,333 |
| Tepung | 0,134 | 0,161 | 0,193 | 0,236 | 0,269 | 0,333 |
| Jumlah | 0,407 | 0,544 | 0,627 | 0,750 | 0,866 | 1,000 |
| L1 | 0,593 | 0,456 | 0,373 | 0,250 | 0,134 | 0,000 |

| Parameter | A | B | C | D | E | F |
|--------------|-------|-------|-------|-------|-------|-------|
| air rendaman | 0,038 | 0,017 | 0,013 | 0,005 | 0,001 | 0,000 |
| air cucian | 0,040 | 0,024 | 0,014 | 0,006 | 0,001 | 0,000 |
| Tepung | 0,040 | 0,030 | 0,020 | 0,010 | 0,004 | 0,000 |
| L2 | 0,117 | 0,070 | 0,047 | 0,021 | 0,007 | 0,000 |

| Parameter | A | B | C | D | E | F |
|--------------|-------|-------|-------|-------|-------|-------|
| air rendaman | 0,194 | 0,131 | 0,113 | 0,072 | 0,036 | 0,000 |
| air cucian | 0,200 | 0,153 | 0,120 | 0,080 | 0,033 | 0,000 |
| Tepung | 0,199 | 0,172 | 0,140 | 0,098 | 0,065 | 0,000 |
| L maksimal | 0,200 | 0,172 | 0,140 | 0,098 | 0,065 | 0,000 |

Keterangan : dk = Derajat kerapatan

L = Jumlah derajat kerapatan dari semua parameter pada masing- masing perlakuan



Lampiran 6. Hasil Analisis ANOVA Parameter Organoleptik Rasa dan Aroma dari Tepung Buah *Avicennia alba*

One-way ANOVA: Rasa versus konsentrasi

ANOVA

| Rasa | | | | | |
|----------------|----------------|----|-------------|-------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | .192 | 5 | .038 | 5.583 | .003 |
| Within Groups | .124 | 18 | .007 | | |
| Total | .316 | 23 | | | |

Homogeneous Subsets

Rasa

| | Konsentrasi | N | Subset for alpha = 0.05 | |
|------------------------|-------------|---|-------------------------|--------|
| | | | 1 | 2 |
| Tukey HSD ^a | 30 | 4 | 4.4300 | |
| | 45 | 4 | 4.5225 | 4.5225 |
| | 60 | 4 | 4.5825 | 4.5825 |
| | 75 | 4 | | 4.6325 |
| | 90 | 4 | | 4.6525 |
| | 105 | 4 | | 4.7000 |
| | Sig. | | | .148 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4,000.



One-way ANOVA: Aroma versus konsentrasi

ANOVA

| Aroma | | | | | |
|----------------|----------------|----|-------------|---------|------|
| | Sum of Squares | df | Mean Square | F | Sig. |
| Between Groups | 6.664 | 5 | 1.333 | 295.463 | .000 |
| Within Groups | .081 | 18 | .005 | | |
| Total | 6.746 | 23 | | | |

Homogeneous Subsets

Aroma

| | Konsentrasi | N | Subset for alpha = 0.05 | | | | | |
|------------------------|-------------|---|-------------------------|--------|--------|--------|--------|--------|
| | | | 1 | 2 | 3 | 4 | 5 | |
| Tukey HSD ^a | 30 | 4 | 3.7400 | | | | | |
| | 45 | 4 | | 3.9600 | | | | |
| | 60 | 4 | | | 4.4500 | | | |
| | 75 | 4 | | | | 4.8800 | | |
| | 90 | 4 | | | | | 5.0200 | |
| | 105 | 4 | | | | | | 5.1200 |
| | Sig. | | | 1.000 | 1.000 | 1.000 | .078 | .328 |

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 4,000.



Lampiran 7. Data Analisis Perlakuan Terbaik (Konsentrasi Larutan Asam Jawa 25%) Terhadap Parameter

- **Kadar Air**

| Perlakuan | Kadar Air |
|------------|-----------|
| Kontrol | 3,55 |
| Waktu 105' | 3,39 |

- **Kadar Abu**

| Perlakuan | Kadar Abu |
|------------|-----------|
| Kontrol | 1,80 |
| Waktu 105' | 1,21 |

- **Kadar Lemak**

| Perlakuan | Kadar Lemak |
|------------|-------------|
| Kontrol | 0,84 |
| Waktu 105' | 0,64 |

- **Kadar Protein**

| Perlakuan | Kadar Protein |
|------------|---------------|
| Kontrol | 4,62 |
| Waktu 105' | 3,7 |

- **Kadar Karbohidrat**

| Perlakuan | Kadar Karbohidrat |
|------------|-------------------|
| Kontrol | 89 |
| Waktu 105' | 87,52 |

- **Kadar Asam Sianida (HCN)**

| Perlakuan | Kadar HCN |
|------------|-----------|
| Kontrol | 4,79 |
| Waktu 105' | 3,66 |

- **Kadar Tannin**

| Perlakuan | Kadar Tannin |
|------------|--------------|
| Kontrol | 577 |
| Waktu 105' | 240 |



Lampiran 8. Dokumentasi



1. Pohon Mangrove *Avicennia alba*



2. Buah Mangrove *Avicennia alba*



3. Pentil Buah *Avicennia alba*



4. Batang *Avicennia alba*



5. Kulit Pohon *Avicennia alba*



6. Akar *Avicennia alba*



7. Sedimen



8. Tanah



Lampiran 9. Dokumentasi Poses Pembuatan Tepung Mangrove
Avicennia alba



1. Buah Mangrove *Avicennia alba*



2. Buah Mangrove Setelah dikupas



3. Dimemarkan



4. Ditimbang



5. Dicampur dengan Aquades



6. Perebusan



7. Penirisan I



8. Pencampuran dengan Larutan Asam Jawa



9. Perendaman dengan Larutan Asam Jawa



10. Penirisan II



11. Pengovenan



12. Penepungan



13. Tepung Buah *Avicennia alba*

