**DAFTAR ISI**

**LEMBAR PENGESAHAN ..............................................................** i

**ABSTRAK .........................................................................................** ii

**KATA PENGANTAR ......................................................................** iv

**DAFTAR ISI .....................................................................................** vi

**DAFTAR GAMBAR ........................................................................** ix

**DAFTAR TABEL..............................................................................** x

**DAFTAR LAMPIRAN ....................................................................** xii

**BAB I. Pendahuluan**

* 1. Latar Belakang ............................................................................ 1
  2. Identifikasi masalah ..................................................................... 6
  3. Tujuan Penelitian ......................................................................... 6
  4. Manfaat Penelitian ....................................................................... 7
  5. Kerangka Pemikiran .................................................................... 7
  6. Hipotesis Penelitian ..................................................................... 13
  7. Waktu dan Tempat penelitian ..................................................... 14

**BAB II. Tinjauan Pustaka**

2.1 Kangkung ..................................................................................... 15

2.2 Syarat Tumbuh Tanaman Kangkung ........................................... 18

2.3 **Pencemaran Logam Berat ............................................................ 19**

2.4 **Timbal (Pb**) .................................................................................. **22**

2.5 Sumber Pencemaran Timbal ........................................................ 24

2.6 Pencemaran Lahan Pertanian oleh Timbal.................................. 29

2.7 Metabolisme Timbal (Pb) Pada Tubuh Manusia.......................... 31

2.8 Pengaruh Timbal Bagi Manusia.................................................... 33

2.9 Blansing ....................................................................................... 36

2.10 Suhu dan Waktu Blansing........................................................... 37

2.11 AAS ............................................................................................ 39

**BAB III. Metode Penelitian**

3.1 Bahan dan Alat Penelitian ........................................................... 46

3.1.1 Bahan-bahan .................................................................... 46

3.1.2 Alat-alat............................................................................ 46

3.2 Metode Penelitian ......................................................................... 46

3.2.1 Penelitian Pendahuluan.............................................................. 47

3.2.2 Penelitian Utama........................................................................ 47

* + - * 1. Rancangan Perlakuan ....................................................... 47
        2. Rancangan Percobaan ...................................................... 48
        3. Rancangan Analisis .......................................................... 49
        4. Rancangan Respon ........................................................... 51
  1. Deskripsi Penelitian ................................................................ 51

**BAB IV. Hasil dan Pembahasan**

4.1.Hasil Penelitian Pendahuluan…................................................... 60

4.1.2 Hasil Kadar Timbal Pada Tanah Pertanian................................ 66

4.2 Hasil Penelitian Utama………..................................................... 74

4.2.1 Hasil AAS Pada Kangkung Darat Setelah Proses Blansing..... 74

4.2.2 Pengaruh *Blansing* Terhadap Hasil Kandungan Timbal Pada

Air Sisa Perebusan Kangkung Darat ...................................... 81

**Bab V Kesimpulan dan Saran**

5.1 Kesimpulan .................................................................................. 85

5.2 Saran ............................................................................................. 85

**DAFTAR PUSTAKA .......................................................................** 87

**DAFTAR GAMBAR**

Gambar Halaman

2.1 Kangkung Darat .............................................................. 17

2.2 Timbal.............................................................................. 24

2.3 Sumber Pencemaran Pb di Lingkungan........................... 29

2.4 Diagram Blok Instrumen Spektrofotometer Serapan

Atom ............................................................................... 40

2.5 AAS................................................................................ 45

4.1 Kadar Pb Pada Lokasi Tanaman Kangkung Darat ……. 67

4.2 Kandungan Logam Berat Timbal (Pb) pada Kedalaman

5 cm …………………………………………………… 67

4.3 Kandungan Logam Berat Timbal (Pb) pada Kedalaman

30 cm…………………………………………………... 68

4.4 Hubungan Kadar Timbal pada Tanah dan Kangkung

Darat…………………………………………………… 73

4.5 Hasil Pengukuran Kadar Timbal (Pb) Setelah Proses

Blansing........................................................................... 76

**DAFTAR TABEL**

Tabel Halaman

2.1 Kandungan Gizi Sayuran Kangkung Segar ...................... 17

2.2 Kisaran Logam Berat dalam Cemaran Logam Dalam

Tanah dan Tanaman........................................................... 21

2.3 Lamanya Waktu *Blansing* Terhadap Sayuran.................... 38

3.1 Matriks Percobaan Rancangan Acak Kelompok dengan

Pola Faktorial 3x3 dengan2 kali ulanganTahap

Pertama............................................................................... 49

3.2 Denah (layout) Percobaan Rancangan Acak Kelompok

(RAK) 4x3 dengan 3 kali ulangan Tahap Pertama............ 49

3.3 Analisa Variasi Percobaan Faktorial dengan Metode

Rancangan Acak Kelompok Tahap Pertama .................... 50

4.1. Kadar Pb Pada lokasi tanaman Kangkung Darat............................................................................... 60

4.2. Kandungan Logam Berat Timbal (Pb) pada kedalaman 5 cm 67

4.3. Kandungan Logam Berat Timbal (Pb) pada kedalaman 30 cm 68

4.4. Hasil Pengukuran Kadar Timbal (Pb) dalam ug/kg Setelah Proses

Blansing……………………………………………………. 75

4.5. Pengaruh Lokasi (A) terhadap Variasi Suhu (T) Kadar Timbal (Pb)

Tanaman Kangkung Darat............................................ 78

4.6. Variasi Suhu (T) terhadap Pengaruh Lokasi (A) Kadar Timbal (Pb)

Tanaman Kangkung Darat…………………………… 80

4.7. Tabel Hasil Kadar Timbal pada Air Sisa Blansing Lokasi Kangkung

Darat Terpilih**…………………………………………** 82

**DAFTAR LAMPIRAN**

Lampiran Halaman

1.Pembuatan Larutan StandarTimbal(Pb) .......................92

2.Hasil Rancangan Acak Kelompok..................................101

3. Gambar Alat....................................................................104