## DAFTAR ISI

#### LEMBAR PERSYARATAN ........................................................................ i

#### TANDA PERSETUJUAN SKRIPSI ........................................................... ii

#### SURAT PERNYATAAN .............................................................................. iii

#### ABSTRAK ..................................................................................................... iv

***ABSTRACT*** *....................................................................................................* v

#### KATA PENGANTAR .................................................................................. vi

#### DAFTAR ISI .................................................................................................. viii

#### DAFTAR TABEL ......................................................................................... x

#### DAFTAR GAMBAR ..................................................................................... xi

#### DAFTAR LAMPIRAN ................................................................................ xii

#### BAB I PENDAHULUAN ............................................................................ 1

1.1 Latar Belakang ...... 1

1.2 Rumusan Masalah ....................................................................... 2

1.3 Tujuan Penelitian ......................................................................... 3

1.4 Hipotesis ...................................................................................... 3

1.5 Manfaat Penelitian ....................................................................... 3

1.6 Kerangka Pikir Penelitian ............................................................ 4

**BAB II TINJAUAN PUSTAKA** 5

2.1 Uraian Tumbuhan 5

 2.1.1 Morfologi tumbuhan ........................................................... 5

 2.1.2 Sistematika tumbuhan ......................................................... 6 2.1.3 Nama daerah dan nama asing .............................................. 6

2.1.4 Kandungan .......................................................................... 6

2.1.5 Manfaat ................................................................................ 6

2.2 Ekstraksi ........................................................................................ 7

2.2.1 Cara dingin .......................................................................... 8

2.2.2 Cara panas ........................................................................... 9

2.3 Vitamin C ...................................................................................... 11

2.3.1 Peranan vitamin C dalam tubuh .......................................... 12

2.3.2 Sumber vitamin C............................................................... 12

2.4 Metode Analisis Kadar Vitamin C ............................................... 13

2.4.1 Analisa kualitatif ................................................................ 13

2.4.2 Analisa kuantitatif .............................................................. 13

2.5 Spektrofotometri ........................................................................... 17

2.5.1 Instrumen spektrofotometer ............................................... 18

2.5.2 Jenis-jenis spektrofotometer ............................................... 19

2.5.3 Proses absorbsi cahaya pada spektrofotometri ................... 22

2.5.4 Prinsip spektrofotometri ..................................................... 23

#### BAB III METODE PENELITIAN ............................................................. 25

3.1 Jenis dan Rancangan Penelitian ................................................... 25

3.2 Waktu dan Tempat Penelitian ..................................................... 25

3.3 Alat dan Bahan ............................................................................. 25

3.3.1 Alat-alat .............................................................................. 25

3.3.2 Bahan-bahan ....................................................................... 25

3.4 Pengumpulan dan Pengolahan Sampel ........................................ 25

3.4.1 Pengumpulan sampel.......................................................... 25

3.4.2 Pengolahan sampel ............................................................. 26

3.5 Pembuatan Larutan Pereaksi ........................................................ 26

3.5.1 Pereaksi besi (III) klorida 1%............................................. 26

3.5.2 Larutan kalium permanganat 0,1 % ................................... 26

3.6 Pengujian Kualitatif Vitamin C Pada jerami nangka

(*Artocarpus heterophyllus* Lam.) ................................................ 26

3.7 Uji Kuantitatif Vitamin C Pada jerami nangka

(*Artocarpus heterophyllus* Lam.) ................................................ 27

 3.7 1 Pembuatan larutan induk .................................................... 27

3.7.2 Penentuan panjang gelombang maksimum pada

larutan vitamin C ............................................................... 27

3.7.3 Pembuatan kurva kalibrasi ................................................. 27

3.7.4 Penentuan kadar vitamin C pada sari dan ekstrak

etanol jerami nangka .......................................................... 28

3.7.5 Perhitungan kadar ............................................................... 28

3.7.6 Analisa data secara statistik................................................ 28

#### BAB IV HASIL DAN PEMBAHASAN ..................................................... 30

4.1 Hasil Determinasi Tumbuhan .................................................... 30

4.2 Hasil Ekstraksi Jerami Nangka (*Artocarpus heterophyllus*

Lam.) ......................................................................................... 30

4.3 Uji kualitatif vitamin C pada sari dan ekstrak etanol

 jerami nangka ........................................................................... 30

4.4 Uji kuantitatif vitamin C pada sari dan ekstrak etanol

 jerami nangka ........................................................................... 31

4.4.1 Penentuan Panjang Gelombang Serapan Maksimum

 vitamin C 31

4.4.2 Linieritas kurva kalibrasi 32

4.4.3 Penentuan kadar sampel 33

#### BAB V KESIMPULAN DAN SARAN 34

#### 5.1 Kesimpulan 34

5.2 Saran 34

#### DAFTAR PUSTAKA . 35

#### LAMPIRAN ... 38

### DAFTAR TABEL

Tabel 2.1 Spektrum tampak dan warna komplementer 20

Tabel 4.1 Hasil uji kualitatif vitamin C 30

Tabel 4.2 Kadar rata-rata vitamin C 33

### DAFTAR GAMBAR

**Gambar 1.1** Kerangka pikir penelitian ......................................................... 4

**Gambar 2.1** Jerami nangka ............................................................................ 5

**Gambar 2.2** Struktur vitamin C ..................................................................... 11

**Gambar 4.1** Kurva serapan maksimum dengan pelarut aquadest ................. 32

**Gambar 4.2** Kurva kalibrasi vitamin C dengan pelarut aquadest ................. 32

### DAFTAR LAMPIRAN

**Lampiran 1** Sampel (Jerami nangka) 38

**Lampiran 2** Uji kualitatif (uji warna) 39

**Lampiran 3** Spektrofotometer 40

**Lampiran 4** Bagan alir pembuatan larutan induk 41

**Lampiran 5** Bagan alir penentuan kadar sampel 42

**Lampiran 6** Perhitungan persamaan regresi dan koefisien korelasi vitamin C 43

**Lampiran 7** Data perhitungan konsentrasi dan kadar sebenarnya sari

jerami nangka 45

**Lampiran 8** Data perhitungan konsentrasi dan kadar dan kadar

sebenarnya ekstrak etanol jerami nangka 49

**Lampiran 9** Data distribusi t 54