

Lampiran 1

Lampiran : 2 Lembar
Perihal : Permohonan Penggunaan Laboratorium Dan Peminjaman Alat

Kepada
Yth. Kaprodi D3 Analisis Kesehatan
Fakultas Ilmu Kesehatan UM Surabaya
Di Tempat

Assalamuallaikum Wr. Wb

Sehubungan dengan pelaksanaan penelitian untuk menyusun Karya Tulis Ilmiah (KTI) 2013 – 2014, maka saya yang bertandatangan dibawah ini :

Nama : Nur Hasanah
Nim : 20110662025
Semester / tingkat : 6 (enam) / III (tiga)
Judul KTI : “Pengaruh lama pemanasan terhadap kadar vitamin C pada sayur brokoli (*Brassica oleracea*)”.

Mengajukan permohonan penggunaan laboratorium dan peminjaman alat sebagai mana terlampir, kiranya Bapak/Ibu di tempat memberikan izin agar dapat mempermudah penelitian.

Demikian surat permohonan izin ini saya buat atas izin Bapak/Ibu penanggung jawab, saya ucapkan terimakasih.

Wasalamuallaikum Wr. Wb

Surabaya, 21 Mei 2014

Dosen pembimbing I

Pemohon

Baterun Kunsah, ST. M.Si

Nur Hasanah

Tembusan Yth :

1. Penanggung Jawab Laboratorium KIMIA
2. Arsip

Lampiran 2

DAFTAR ALAT DAN REAGEN

NO.	NAMA	JUMLAH
	Alat :	
1.	Beaker Glass 500 ml	3buah
2.	Beaker Glass 250 ml	3 buah
3.	Pipet volume 10 ml	1 buah
4.	Pipet ukur 10 ml	1 buah
5.	Termometer	3 buah
6.	Hotplate	2 buah
7.	Buret	2 buah
8.	Erlenmeyer tutup asa	3 buah
9.	Sentrifuge	1 buah
10.	Gelas arloji	2 buah
11.	Pengaduk	2 buah
12.	Pipet pastur	3 buah
	Reagen / bahan :	
1.	Iodin (I)	20 gram
2.	Kalium iodida (KI)	15 gram
3.	Arsen trioksida (AS_2O_3)	0,5 gram
4.	Amilum	2 gram
5.	Natrium hidroksida (NaOH)	2 gram
6.	Asam sulfat	1 ml
7.	Natrium bikarbonat ($NaHCO_3$)	6 gram

Mengetahui,
KepalaLaboratorium

Diah Ariana,M.Kes

Lampiran 3



Foto hasil Pemanasan brokoli



Slurry diaddkan 100 ml



Hasil titrasi

Lampiran 4



Sentrifuge



Blender



Neraca analitik

Lampiran 5

(i) Standarisasi

Gram AS ₂ O ₃	BE AS ₂ O ₃	Volume
0,1509	98,92	V ₁ = 15,8
0,1522		V ₂ = 15,3
Gr rata ² =0,1535		Rata ² =15,55

(ii) Penetapan Kadar

Bobot slurry (gram)	Vol filtrat (ml)	N Iod (Hasil Std)	Volume Iod (mL)
			V ₁ =
			V ₂ =
Rata ² =	Rata ² =		Rata ² =

A. PERHITUNGAN

Standarisasi

$$\text{ml ekuivalen AS}_2\text{O}_3 = \text{ml ekuivalen I}_2$$

$$\text{ml ekuivalen AS}_2\text{O}_3 = \frac{\text{gram AS}_2\text{O}_3}{\text{Be AS}_2\text{O}_3} \times 1000$$

$$= \frac{0,15035}{98,92}$$

$$= 0,0015 \times 1000 = 1,5$$

$$N \text{ I}_2 = \frac{\text{ml AS}_2\text{O}_3}{V \text{ I}_2}$$

$$= \frac{1,5}{15,55}$$

$$= 0,0964 \text{ N}$$

B. Penetapan kadar

1 ml 0,01 N iodium = 0,88 mg Asam askorbat

a. Tanpa perlakuan

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,4 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,59\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,2 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,50\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 0,8 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,33%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,0 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,42%

b. Perlakuan 5 menit

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,6 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,67%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,3 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,55%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,6 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,67\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,5 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,63\%$$

c. Perlakuan selama 10 menit

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,2 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,50\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,3 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,55\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,3 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,55\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,2 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,50\%$$

d. Perlakuan selama 15 menit

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,2 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,50%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,4 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,59%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,3 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,55%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,1 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,46 %

e. Perlakuan selama 20 menit

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,1 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,46\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,2 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,50\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,0 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,42\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,1 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,46\%$$

f. Perlakuan selama 25 menit

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,0 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,42\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,0 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,42\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,1 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,46%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,0 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,42%

g. Perlakuan selama 30 menit

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,4 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,59%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,3 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

= 0,55%

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,5 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,63\%$$

$$\% \text{ Vit.C} = \left(\text{ml Iod} \times \frac{\text{N Iod}}{0,01} \right) \times 0,88 \times 10 \times 100 \%$$

Mg Bahan

$$= 1,0 \times \frac{0,0964}{0,01} \times 0,88 \times 10 \times 100\%$$

20047,9

$$= 0,42\%$$