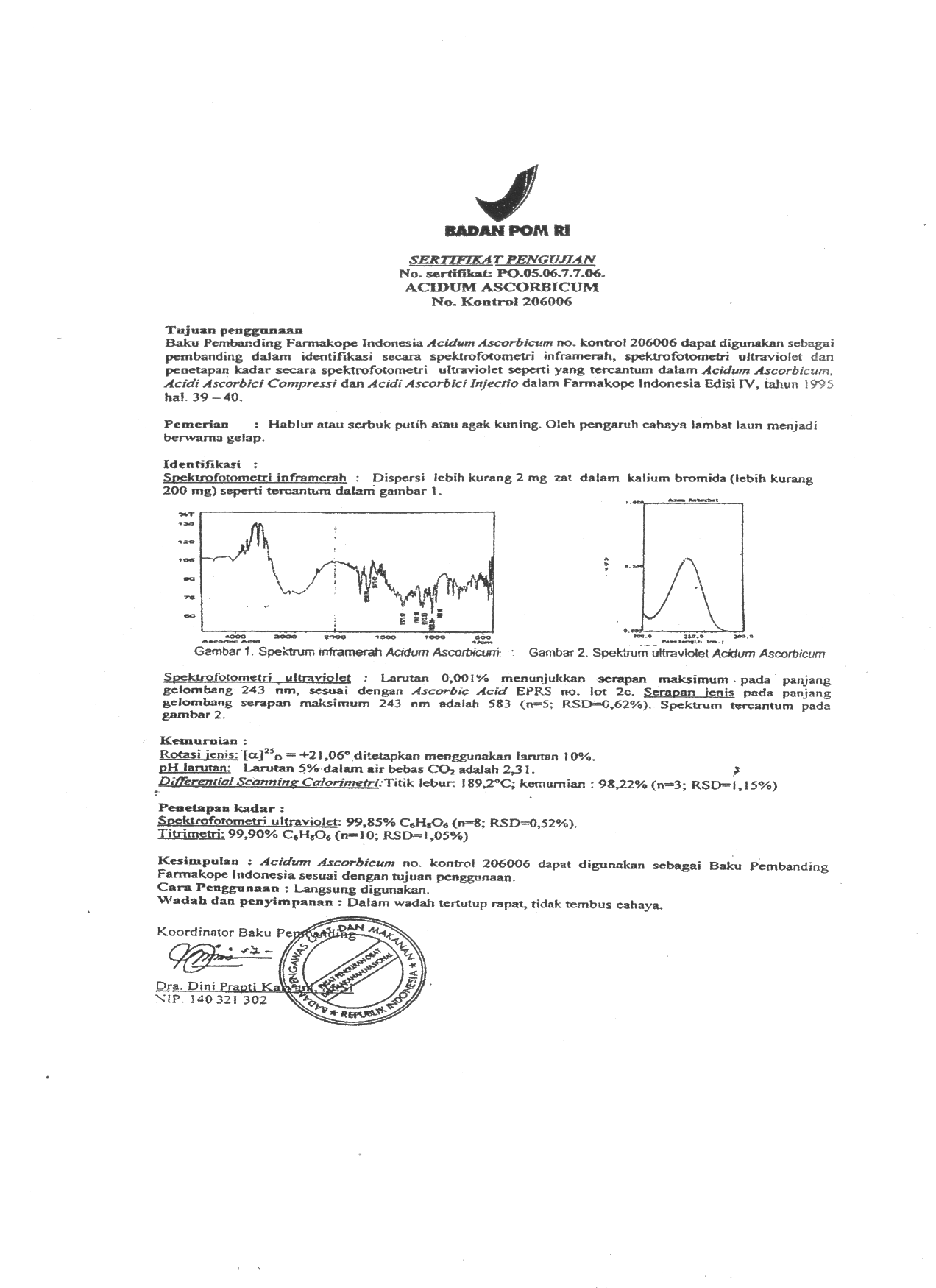
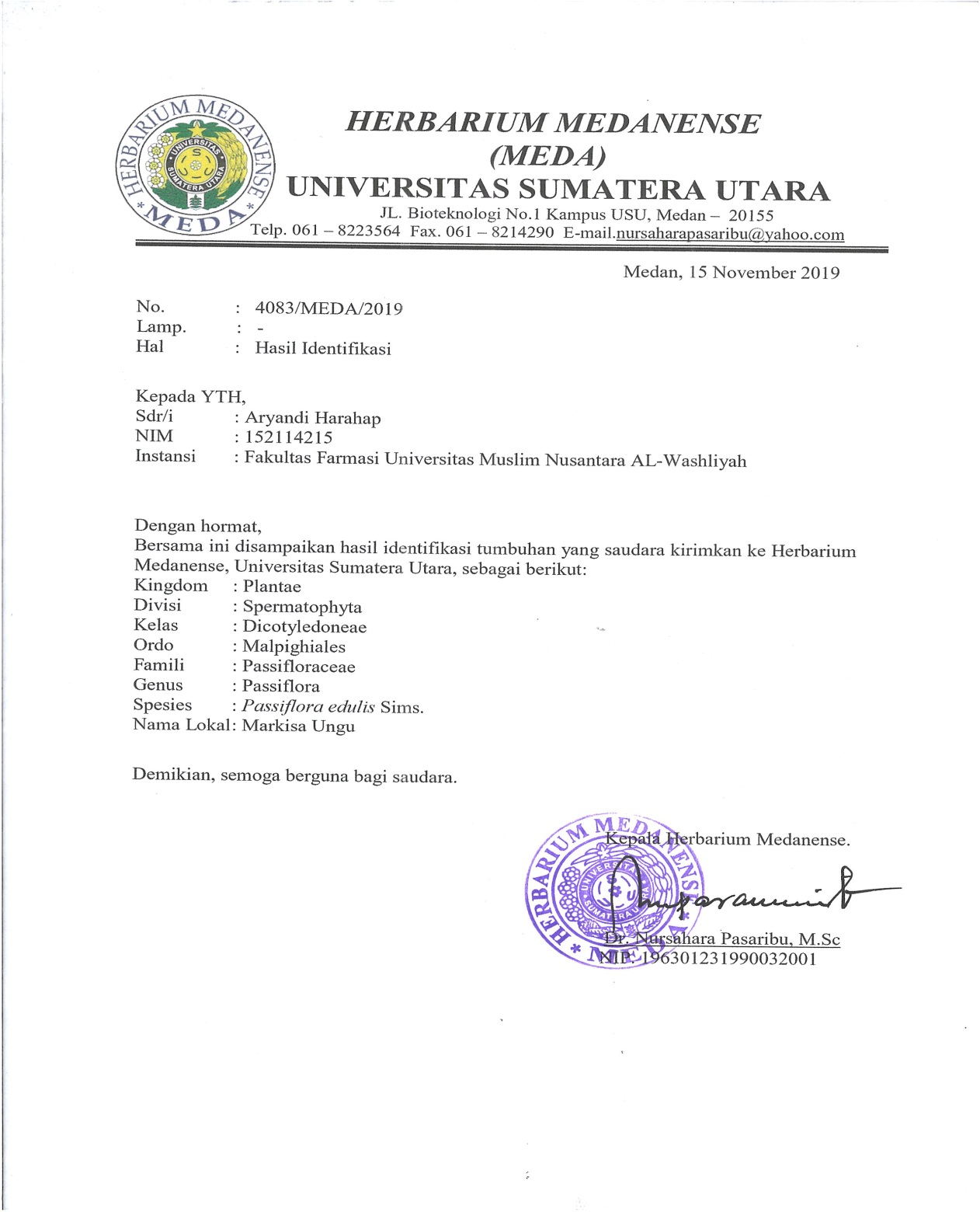
**Lampiran 1. Sertifikat baku pembanding**

**Lampiran 2. Sertifikat identifikasi tumbuhan**

****

**Lampiran 3.** Buah, JusMarkisa dan hasil titrasi





**Lampiran 4.** Penyiapan Larutan Sampel

Buah Markisa

Dicuci bersih lalu dibersihkan

Ditimbang sekitar 500 g

Dipotong menjadi beberapa potongan

Dimasukkan ke dalam *juicer*, lalu dijus

Jus Buah Markisa

Ditimbang lebih kurang 10g

Dimasukkan ke dalam labu tentukur 100 mL

Ditambahkan larutan asam metafosfat 3%

sampai garis tanda (pada masing-masing

titik waktu: 0, 3, 6, dan 9 jam).

Di homogenkan

Di Saring

Filtrat

**Lampiran 5.** Penetapan Kadar Vitamin C dari Larutan Sampel

Filtrat

Dipipet 2 mL

Dimasukkan kedalam erlenmeyer

Ditambahkan 5 mL larutan asam metafosfat 3% ke dalam masing-masing erlenmeyer

Dititrasi dengan 2,6-diklorofenol indofenol

sampai terbentuk warna merah jambu mantap

Hasil

Dilakukan penetapan kadar vitamin C dalam jus buah markisa pada beberapa penyimpanan setelah jus diproses, antara lain pada 0 jam, 3 jam, 6 jam, 9 jamhingga diperoleh profil penurunan kadar vitamin C dari jus buah markisa

Hasil

Kemudian dibandingkan profil penurunan kadar vitamin C pada jus markisa.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Lampiran 6.** Data dan Hasil Perhitungan Kadar Vit C di Dalam Sampel | | | | | | | | | | | |  |  |
|  |  | |  | | |  | |  | |  | |  |  |
| **Sampel** | **Berat sampel yang ditimbang (g)** | | **Volume larutan sampel (ml)** | | | **Volume larutan sampel yang dipipet (ml)** | | **Kesetaraan vitamin C terhadap larutan 2,6 diklorofenol indofenol (mg)** | | **Volume Pentiter untuk titrasi blanko (ml)** | | **Volume Pentiter untuk titrasi sampel (ml)** | **Kadar Vitamin C (mg/100 g)** |
|
|
| Jus buah markisa yang baru dibuat | 100,00 | | 1000,00 | | | 25,00 | | 0,2325 | | 0,50 | | 4,00 | 32,55 |
| 100,05 | | 1000,00 | | | 25,00 | | 4,05 | 33,00 |
| 100,10 | | 1000,00 | | | 25,00 | | 4,10 | 33,45 |
| 100,00 | | 1000,00 | | | 25,00 | | 4,05 | 33,02 |
| 100,20 | | 1000,00 | | | 25,00 | | 3,95 | 32,02 |
| 100,05 | | 1000,00 | | | 25,00 | | 3,90 | 31,60 |
| Kadar vitamin C rata-rata = | | | | | | | 32,61 | |  | |  |  |
| Standar deviasi = | | | | | | | 0,69 | |  | |  |  |
| Kadar vitamin C sebenarnya = | | | | | | | 32,61 | | ± | | 1,14 |  |
| Jus buah markisasetelah didiamkan selama 3 jam pada suhu dingin | 100,00 | 1000,00 | | | 25,00 | | | 0,2325 | | 0,50 | | 4,00 | 32,55 |
| 100,05 | 1000,00 | | | 25,00 | | | 3,95 | 32,07 |
| 100,10 | 1000,00 | | | 25,00 | | | 3,90 | 31,59 |
| 100,00 | 1000,00 | | | 25,00 | | | 3,95 | 32,09 |
| 100,20 | 1000,00 | | | 25,00 | | | 3,90 | 31,56 |
| 100,05 | 1000,00 | | | 25,00 | | | 3,95 | 32,07 |
| Kadar vitamin C rata-rata = | | | | | | | 31,99 | |  | |  |  |
| Standar deviasi = | | | | | | | 0,37 | |  | |  |  |
| 31,99 | | | ± | | | 0,609 | |  | |
| Jus buah markisa setelah didiamkan selama 3 jam pada suhu kamar | 100,00 | 1000,00 | | | 25,00 | | | 0,2325 | | 0,50 | | 3,95 | 32,09 |
| 100,05 | 1000,00 | | | 25,00 | | | 3,90 | 31,60 |
| 100,10 | 1000,00 | | | 25,00 | | | 3,95 | 32,05 |
| 100,00 | 1000,00 | | | 25,00 | | | 3,90 | 31,62 |
| 100,20 | 1000,00 | | | 25,00 | | | 3,95 | 32,02 |
| 100,05 | 1000,00 | | | 25,00 | | | 3,90 | 31,60 |
| Kadar vitamin C rata-rata = | | | | | | | 31,83 | |  | |  |  |
| Standar deviasi = | | | | | | | 0,24 | |  | |  |  |
| Kadar vitamin C sebenarnya = | | | | | | | 31,83 | | ± | | 0,401 |  |
| Jus buah markisa setelah didiamkan selama 6 jam pada suhu dingin | 100,00 | 1000,00 | | | 25,00 | | | 0,2325 | | 0,50 | | 3,05 | 23,72 |
| 100,05 | 1000,00 | | | 25,00 | | | 3,00 | 23,24 |
| 100,10 | 1000,00 | | | 25,00 | | | 2,95 | 22,76 |
| 100,00 | 1000,00 | | | 25,00 | | | 2,90 | 22,32 |
| 100,20 | 1000,00 | | | 25,00 | | | 2,80 | 21,35 |
| 100,05 | 1000,00 | | | 25,00 | | | 2,85 | 21,84 |
| Kadar vitamin C rata-rata = | | | | | | | 22,54 | |  | |  |  |
| Standar deviasi = | | | | | | | 0,88 | |  | |  |  |
| Kadar vitamin C sebenarnya = | | | | | | | 22,54 | | ± | | 1,449 |  |
| Jus buah markisa setelah didiamkan selama 6 jam pada suhu kamar | 100,00 | 1000,00 | | | 25,00 | | | 0,2325 | | 0,50 | | 2,75 | 20,93 |
| 100,05 | 1000,00 | | | 25,00 | | | 2,90 | 22,31 |
| 100,10 | 1000,00 | | | 25,00 | | | 2,95 | 22,76 |
| 100,00 | 1000,00 | | | 25,00 | | | 2,80 | 21,39 |
| 100,20 | 1000,0  0 | | | 25,00 | | | 2,85 | 21,81 |
| 100,05 | 1000,00 | | | 25,00 | | | 2,70 | 20,45 |
| Kadar vitamin C rata-rata = | | | | | | | 21,61 | |  | |  |  |
| Standar deviasi = | | | | | | | 0,86 | |  | |  |  |
| Kadar vitamin C sebenarnya = | | | | | | | 21,61 | | ± | | 1,420 |  |
| Jus buah markisa setelah didiamkan selama 9 jam pada suhu dingin | 100,00 | 1000,00 | | | 25,00 | | | 0,2325 | | 0,50 | | 2,75 | 20,93 |
| 100,05 | 1000,00 | | | 25,00 | | | 2,60 | 19,52 |
| 100,10 | 1000,00 | | | 25,00 | | | 2,85 | 21,83 |
| 100,00 | 1000,00 | | | 25,00 | | | 2,90 | 22,32 |
| 100,20 | 1000,00 | | | 25,00 | | | 2,90 | 22,28 |
| 100,05 | 1000,00 | | | 25,00 | | | 2,85 | 21,84 |
| Kadar vitamin C rata-rata = | | | | | | | 21,45 | |  | |  |  |
| Standar deviasi = | | | | | | | 1,07 | |  | |  |  |
| Kadar vitamin C sebenarnya = | | | | | | | 21,45 | | ± | | 1,764 |  |
| Jus buah markisa setelah didiamkan selama 9 jam pada suhu kamar | 100,00 | 1000,00 | | | 25,00 | | | 0,2325 | | 0,50 | | 2,80 | 21,39 |
| 100,05 | 1000,00 | | | 25,00 | | | 2,60 | 19,52 |
| 100,10 | 1000,00 | | | 25,00 | | | 2,50 | 18,58 |
| 100,00 | 1000,00 | | | 25,00 | | | 2,70 | 20,46 |
| 100,20 | 1000,00 | | | 25,00 | | | 2,60 | 19,49 |
| 100,05 | 1000,00 | | | 25,00 | | | 2,80 | 21,38 |
| Kadar vitamin C rata-rata = | | | | | | | 20,14 | |  | |  |  |
| Standar deviasi = | | | | | | | 1,13 | |  | |  |  |
| Kadar vitamin C sebenarnya = | | | | | | | 20,14 | | ± | | 1,87 |  |

**Lampiran 7.** Contoh PerhitunganKesetaraan Kadar Vit. C Dalam Sampel

Bobot sampel = 10,02 g

Dilarutkan dalam labu tentukur sampai 100 ml

Dipipet 20 ml, (volume aliquat) untuk dititrasi

dengan larutan 2,6 Diklorofenol indofenol

Volume pentiter untuk titrasi sampel ( VA) = 10,40 ml

Volume pentiter untuk titrasi blanko rata-rata (VB) = 0,10 ml

Tiap ml larutan 2,6 Diklorofenolindofenol setara dengan 0,0577 mg Vit.C.

Kadar Vit.C (%) = (VA - VB) ml x volume larutan sampel Kesetaraan x 100%

Volume sampel yang dipipet x Bobot sampel

Kadar Vit.C (%) = (10,4 - 0,1 ) ml x 0,0577 mg x 100% = 0,2966 mg/g

20 ml x 10,02 mg

Kadar Vit.C = 29,66 mg/100 g

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Lampiran 8.** Perhitungan Kesetaraan Vitamin C Dengan Larutan Pentiter | | | | | | |
| 2,6 Diklorofenol indofenol | | | | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Persen kemurnian Vitamin C baku = 99,90% | | | | |  |  |  |  |
| Ditimbang 50,05 mg, dilarutkan dalam labu tentukur 100 ml | | | | | |  |  |  |
| Dipipet 1 ml,untuk dititrasi dengan larutan 2,6 Diklorofenol indofenol | | | | | | |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 0,9999 |  |
| Volume pentiter untuk titrasi sampel ( VA) = | | | | |  |  |  |  |
|  | 7, 50 ml | |  |  |  |  |  |  |
|  | 7, 45 ml | |  |  |  |  |  |  |
|  | 7, 55 ml | |  |  |  |  |  |  |
| Volume pentiter untuk titrasi blanko = | | | |  |  |  |  |  |
|  | 0, 06 ml | |  |  |  |  |  |  |
|  | 0, 06 ml | |  |  |  |  |  |  |
|  | 0, 06 ml | |  |  |  |  |  |  |
| Volume pentiter untuk titrasi blanko rata-rata (VB) = 0,10 ml | | | | | |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Kesetaraan Vit.C = | | Bobot Vit.C x Kemurnian Vit C x Faktor pengenceran | | | | |  |  |
| (VA - VB) ml | | | | |  |  |
| Kesetaraan Vit.C = | | 50 mg x 99,90/100 x 2ml/50ml | | | = 0,1259 mg/ml | | 0,2237 |  |
| (9 - 0,5) ml | | |  |  |
|  |  |  |  |  |  |  |  |  |
| Kesetaraan Vit.C = | | 50 mg x 99,70/100 x 2ml/50ml | | | = 0,1263 mg/ml | | 0,2502 |  |
| (8,05 - 0,5) ml | | |  |  |
|  |  |  |  |  |  |  |  |  |
| Kesetaraan Vit.C = | | 50 mg x 99,70/100 x 2ml/50ml | | | = 0,1259 mg/ml | | 0,2237 |  |
| (9 - 0,5) ml | | |  |  |
|  |  |  |  |  |  |  |  |  |
| Kesetaraan Vit.C = rata-rata | | (0,2237 + 0,2502 + 0,2237) mg/ml | | | |  |  |  |
| 3 | | | |  |  |  |
|  |  |  |  |  |  |  | 0,2325 |  |
| Kesetaraan Vit. C rata-rata = 0,2325 mg/ml | | | | |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Tiap ml larutan 2,6 Diklorofenolindofenol setara dengan 0,2325 mg Vit.C. | | | | | | |  |  |