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# LAMPIRAN 1

## Surat Determinasi Tanaman

**DEPARTEMEN BIOLOGI FARMASI**
**FAKULTAS FARMASI**
**UNIVERSITAS GADJAH MADA YOGYAKARTA**
Alamat: Sekip Utara Jl. Kaliurang Km 4, Yogyakarta 55281
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**SURAT KETERANGAN**
**No.: BF/76 / Ident /III/2016**

Kepada Yth. :
**Sdri/Sdr. Nor Fitra Sari**
**NIM. 09653/FA**
**Fakultas Farmasi UGM**
**Di Yogyakarta**

Dengan hormat,

Bersama ini kami sampaikan hasil identifikasi sampel buah yang Saudara kirimkan ke Departemen Biologi Farmasi, Fakultas Farmasi UGM, adalah :

| No.Pendaftaran | Jenis | Suku |
|---|---|---|
| 76 | *Gnetum gnemon* L. | Gnetaceae |

Demikian, semoga dapat digunakan sebagaimana mestinya.

Yogyakarta, 14 Maret 2016
Ketua

Dr.rer.nat. Triana Hertiani, M.Si., Apt.
NIP. 197306091998032003

# LAMPIRAN 2

## Perhitungan Hasil Ekstraksi Biji Melinjo

Bobot serbuk biji melinjo = 451,5 gram

Randemen ekstrak kental biji melinjo

Berat gelas + ekstrak = 123,23 gram

Berat gelas = 82,14 gram

Berat ekstrak = 41,06 gram

$$\text{Randemen ekstrak} = \frac{\text{bobot ekstrak}}{\text{bobot serbuk kering}} \times 100\ \%$$

$$= \frac{41,06}{451,5} \times 100\%$$

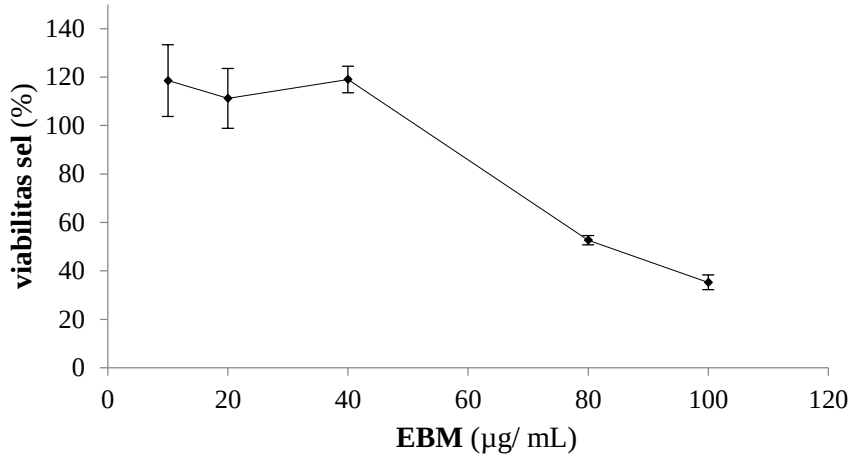
= 9,09% b/b

# LAMPIRAN 3

## Hasil Uji Sitotoksi EBM ke Sel MCF-7/HER2

### Data 1

| kons (µg/ml) | absorbansi | | | Purata abs | viabilitas sel (%) | | | rata-rata | SD | SE |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 0,694 | 0,69 | 0,568 | 0,651 | 127,54 | 126,71 | 101,45 | 118,56 | 14,83 | 8,56 |
| 20 | 0,657 | 0,547 | 0,642 | 0,615 | 119,88 | 97,10 | 116,77 | 111,25 | 12,35 | 7,13 |
| 40 | 0,63 | 0,647 | 0,682 | 0,653 | 114,29 | 117,81 | 125,05 | 119,05 | 5,49 | 3,17 |
| 80 | 0,338 | 0,338 | 0,322 | 0,333 | 53,83 | 53,83 | 50,52 | 52,73 | 1,91 | 1,10 |
| 100 | 0,233 | 0,25 | 0,262 | 0,248 | 32,09 | 35,61 | 38,10 | 35,27 | 3,02 | 1,74 |
| Kontrol Sel | 0,558 | 0,591 | 0,534 | 0,561 | | | | | | |
| Kontrol media | 0,077 | 0,08 | 0,077 | 0,078 | | | | | | |



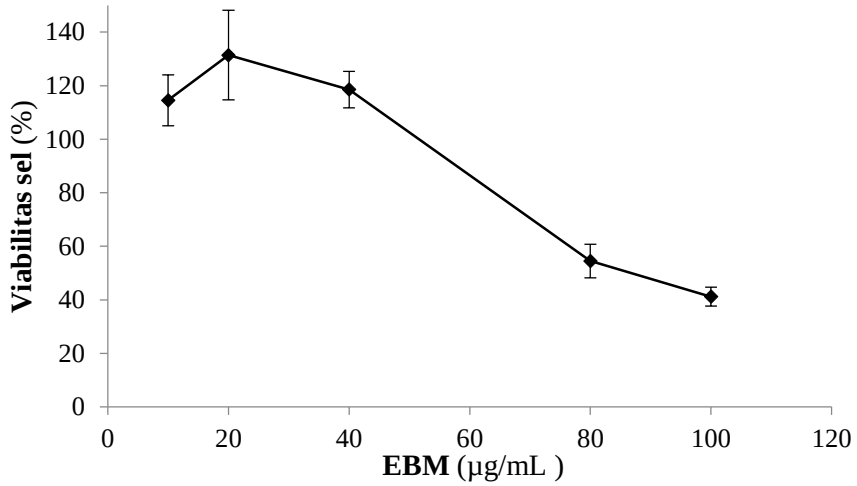

Grafik hubungan konsentrasi EBM terhadap viabilitas sel MCF-7/HER2

Interpretasi data uji sitotoksik EBM terhadap sel MCF-7/HER2

1. Pada persamaan regresi linier y menunjukkan viabilitas sel (%) dan x menunjukkan konsentrasi EBM (µg/mL)
2. Tingkat linieritas antar variabel viabilitas sel dengan konsentrasi EBM dihitung dengan koefisien korelasi ($R^2$) sebesar 0,9056. Nilai koefisien korelasi antara 0,75-0,99 artinya memiliki korelasi yang sangat kuat antara kedua variabel
3. Perhitungan nilai $IC_{50}$ = 87,84 µg/mL

## Data 2

| kons (µg/ml) | absorbansi | | | Purata abs | viabilitas sel (%) | | | rata-rata | SD | SE |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 0,61 | 0,6 | 0,684 | 0,631 | 110,14 | 108,07 | 125,47 | 114,56 | 9,50 | 5,48 |
| 20 | 0,654 | 0,679 | 0,805 | 0,713 | 119,25 | 124,43 | 150,52 | 131,40 | 16,76 | 9,67 |
| 40 | 0,613 | 0,674 | 0,665 | 0,651 | 110,77 | 123,40 | 121,53 | 118,56 | 6,82 | 3,94 |
| 80 | 0,365 | 0,307 | 0,352 | 0,341 | 59,42 | 47,41 | 56,73 | 54,52 | 6,30 | 3,64 |
| 100 | 0,294 | 0,277 | 0,26 | 0,277 | 44,72 | 41,20 | 37,68 | 41,20 | 3,52 | 2,03 |
| Kontrol Sel | 0,558 | 0,591 | 0,534 | 0,561 | | | | | | |
| Kontrol media | 0,077 | 0,08 | 0,077 | 0,078 | | | | | | |



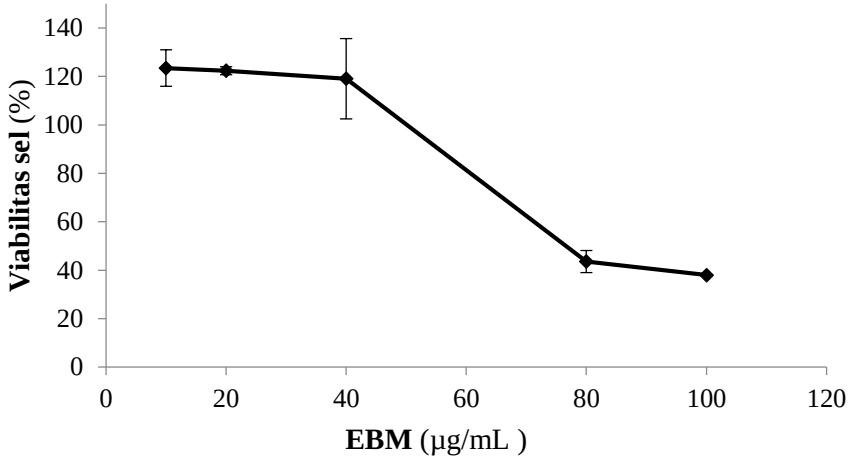

Grafik hubungan konsentrasi EBM terhadap viabilitas sel MCF-7/HER2

Interpretasi data uji sitotoksik EBM terhadap sel MCF-7/HER2

1. Pada persamaan regresi linier y menunjukkan viabilitas sel (%) dan x menunjukkan konsentrasi EBM (µg/mL)
2. Tingkat linieritas antar variabel viabilitas sel dengan konsentrasi EBM dihitung dengan koefisien korelasi ($R^2$) sebesar 0,8929. Nilai koefisien korelasi antara 0,75-0,99 artinya memiliki korelasi yang sangat kuat antara kedua variabel
3. Perhitungan nilai $IC_{50}$ = 91,95 µg/mL

## Data 3

| kons (µg/ml) | absorbansi | | | Purata abs | viabilitas sel (%) | | | rata-rata | SD | SE |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 0,64 | 0,712 | 0,671 | 0,674 | 116,36 | 131,26 | 122,77 | 123,46 | 7,48 | 4,32 |
| 20 | 0,667 | 0,662 | 0,678 | 0,669 | 121,95 | 120,91 | 124,22 | 122,36 | 1,69 | 0,98 |
| 40 | 0,659 | 0,73 | 0,57 | 0,653 | 120,29 | 134,99 | 101,86 | 119,05 | 16,60 | 9,58 |
| 80 | 0,31 | 0,29 | 0,266 | 0,289 | 48,03 | 43,89 | 38,92 | 43,62 | 4,56 | 2,63 |
| 100 | 0,262 | 0,26 | 0,263 | 0,262 | 38,10 | 37,68 | 38,30 | 38,03 | 0,32 | 0,18 |
| Kontrol Sel | 0,558 | 0,591 | 0,534 | 0,561 | | | | | | |
| Kontrol media | 0,077 | 0,08 | 0,077 | 0,078 | | | | | | |




Grafik hubungan konsentrasi EBM terhadap viabilitas sel MCF-7/HER2

Interpretasi data uji sitotoksik EBM terhadap sel MCF-7/HER2

1. Pada persamaan regresi linier y menunjukkan viabilitas sel (%) dan x menunjukkan konsentrasi EBM (µg/mL)
2. Tingkat linieritas antar variabel viabilitas sel dengan konsentrasi EBM dihitung dengan koefisien korelasi ($R^2$) sebesar 0,9208. Nilai koefisien korelasi antara 0,75-0,99 artinya memiliki korelasi yang sangat kuat antara kedua variabel
3. Perhitungan nilai $IC_{50}$ = 85,79 µg/mL

**Nilai $IC_{50}$ EBM pada sel MCF-7/HER2 rata-rata adalah 88,53 ± 3,14**

# LAMPIRAN 4

## Penentuan dan analisis persen penutupan area migrasi sel MCF-7/HER2

Gambar hasil migrasi yang didokumentasikan dengan kamera kemudian dianalisis dengan ImageJ

| | Perlakuan | Luas area | | % Penutupan area | | Rerata % penutupan area |
|---|---|---|---|---|---|---|
| Jam ke-0 | KS | 10526362 | 8634655 | | | |
| | DOXO 10 nM | 10596818 | 12230296 | | | |
| | EBM 22,5 µg/mL | 11887365 | 11374267 | | | |
| | DOXO 10 nM + EBM 22,5 µg/mL | 13066072 | 11798910 | | | |
| Jam ke-24 | KS | 5722758 | 4274896 | 45,63404 | 50,49141 | 48,0627235 |
| | DOXO 10 nM | 5787756 | 7645208 | 45,38213 | 37,48959 | 41,43586203 |
| | EBM 22,5 µg/mL | 7125302 | 7229955 | 40,05987 | 36,43586 | 38,24786514 |
| | DOXO 10 nM + EBM 22,5 µg/mL | 8794212 | 6970421 | 32,69429 | 40,92318 | 36,80873627 |
| Jam Ke-48 | KS | 1734419 | 780813 | 69,6926 | 81,73492 | 75,71376342 |
| | DOXO 10 nM | 23629 | 832016 | 99,59174 | 89,11716 | 94,35444919 |
| | EBM 22,5 µg/mL | 1497593 | 867772 | 78,98204 | 87,99755 | 83,48979403 |
| | DOXO 10 nM + EBM 22,5 µg/mL | 3596296 | 1927151 | 59,1061 | 72,35244 | 65,72927384 |