

## LAMPIRAN A

### SERTIFIKAT BAHAN TANAMAN BUNGA CENGKEH



LEMBAGA ILMU PENGETAHUAN INDONESIA  
(Indonesian Institute of Sciences)  
**UPT BALAI KONSERVASI TUMBUHAN KEBUN RAYA PURWODADI**  
(Purwodadi Botanic Garden)  
Jl. Raya Surabaya - Malang Km. 65, Purwodadi - Pasuruan 67163  
Telepon : 0341 - 426046, 424076, 0343 - 615033  
Fax. : 0341 - 426046, 0343 - 615033  
e-mail : kripipi@indo.net.id

#### SURAT IDENTIFIKASI No. :901.a/IPH.3.04/HM/XI/2008

Kepala UPT Balai Konservasi Tumbuhan Kebun Raya Purwodadi dengan ini menerangkan bahwa material tanaman (bunga) yang di bawa oleh :

#### THE ARTIS PRIMALIA, NRP : 2443005077

Mahasiswa Fakultas Farmasi, Universitas Katholik Widya Mandala di Surabaya datang di UPT Balai Konservasi Tumbuhan Kebun Raya Purwodadi pada tanggal 12 November 2008, berdasarkan buku Flora of Java karangan C.A. Backer. Volume I (1963 ) halaman 342, nama ilmiahnya adalah :

|       |                                                  |
|-------|--------------------------------------------------|
| Marga | : <i>Syzygium</i>                                |
| Jenis | : <i>Syzygium aromaticum</i> (L.) Merr. & Perry. |

Adapun menurut buku **The Standard Cyclopedia of Horticulture** karangan L.H. Bailey jilid I (1953 ) halaman 3, klasifikasinya adalah sebagai berikut :

|              |                         |
|--------------|-------------------------|
| Divisio      | : <i>Spermatophyta</i>  |
| Sub Divisio  | : <i>Angiospermae</i>   |
| Kelas        | : <i>Dicotyledoneae</i> |
| Ordo/ Bangsa | : <i>Myrtiflorae</i>    |
| Family/ Suku | : <i>Myrtaceae</i>      |

Demikian Surat Keterangan ini dibuat untuk dapat dipergunakan sebagaimana mestinya

Purwodadi, 17 November 2008

An. Kepala  
UPT.Balai Konservasi Tumbuhan  
Kebun Raya Purwodadi  
Koord. Jasa dan Informasi



**WARDAYA**  
NIP.320003343

**LAMPIRAN B**  
**SERTIFIKAT STAPHYLOCOCCUS AUREUS**



**DEPARTEMEN KESEHATAN REPUBLIK INDONESIA**  
**BALAI BESAR LABORATORIUM KESEHATAN SURABAYA**  
Jalan Karangmenjangan No. 18 Surabaya 60286  
Telp. Tata Usaha : 031-5021451, Kabag. TU / Fax.: 031-5021452 pes. 104, 031-5020388  
E-mail : [blksb@idola.net.id](mailto:blksb@idola.net.id)



6 Februari 2009

- *Staphylococcus aureus* ATCC ( 25923 )

| No | Uji Biokimia    | <i>Staphylococcus aureus</i>       |
|----|-----------------|------------------------------------|
| 1. | Katalase        | +                                  |
| 2. | Hemolise        | B                                  |
| 3. | Coagulase       | +                                  |
| 4. | DNase           | +                                  |
| 5. | Pengecatan gram | Gram positif coccus<br>bergerombol |

Balai Besar Laboratorium Kesehatan  
Surabaya  
Kepala Seksi Laboratorium Klinik



**dr. Eveline Irawan**  
NIP.140 206 418

# LAMPIRAN C

## SERTIFIKAT *STREPTOCOCCUS MUTANS*

DEPARTEMEN PENDIDIKAN DAN KEBUDAYAAN  
**UNIVERSITAS AIRLANGGA**  
**FAKULTAS KEDOKTERAN GIGI**  
 LABORATORIUM BIOLOGI MULUT/ BAG. MIKROBIOLOGI  
 Jl. Mayjen Prof. Dr. Moestopo 47, Surabaya Telp : 5030255

Tgl. 8 Januari 2009

### Sertifikat bakteri

Hasil uji terhadap bakteri

| No | Macam macam uji           | Streptokokus mutans                    |
|----|---------------------------|----------------------------------------|
| 1. | Pengecatan gram           | Gram pos ,kokus halus berderet         |
| 2. | Penanaman pada Blood Agar | Hemolise sebagian / alpha Streptokokus |
| 3  | Biokimia / Gula 2 :       |                                        |
|    | - Sorbitol                | +                                      |
|    | - Aesculin                | +                                      |
|    | - Arginin                 | -                                      |
|    | - Sukrose                 | +                                      |
|    | - Mannitol                | +                                      |

Koordinator Bagian Mikrobiologi  
 Fakultas Kedokteran Gigi Universitas Airlangga



(Markus Budi Rahardjo, drg., M.Kes)

NIP. 130 937 954

## LAMPIRAN D

**TABEL HASIL DESTILASI STAHL SERBUK BUNGA CENGKEH**

| Replikasi | Berat Serbuk Bunga Cengkeh (g) | Volume Minyak Atsiri (ml) | Kadar Minyak Atsiri (%v/b) | Volume Air Sisa Destilasi Labu (ml) | Volume Air Sisa Destilasi Buret (ml) |
|-----------|--------------------------------|---------------------------|----------------------------|-------------------------------------|--------------------------------------|
| 1         | 50                             | 2,0                       | 4,0                        | 275                                 | 120                                  |
| 2         | 50                             | 1,3                       | 2,6                        | 250                                 | 112                                  |
| 3         | 50                             | 4,2                       | 8,4                        | 254                                 | 130                                  |

Rumus yang digunakan:

$$\% \text{ Kadar minyak atsiri} = \frac{\text{volume minyak cengkeh}}{\text{berat serbuk bunga cengkeh}} \times 100 \%$$

## LAMPIRAN E

**TABEL HASIL UJI HSD DARI DATA DHP MINYAK ATSIRI, AIR  
SISA DESTILASI LABU, DAN EUGENOL TERHADAP  
STREPTOCOCCUS MUTANS**

*Multiple Comparisons*  
*Dependent Variable : DHP Streptococcus mutans*  
*Tuckey HSD*

| (I)<br>Formula | (J) Formula | Mean<br>Difference<br>(I-J) | Std.<br>Error | Sig.  | 95% Confidence<br>Interval |                |
|----------------|-------------|-----------------------------|---------------|-------|----------------------------|----------------|
|                |             |                             |               |       | Lower<br>Bound             | Upper<br>Bound |
| <b>MA10%</b>   | MA 20%      | -3.5500                     | 1.5160        | .369  | -8.8619                    | 1.7619         |
|                | MA 30%      | -6.3500*                    | 1.5160        | .013  | -11.6619                   | -1.0381        |
|                | Asdl TP     | .4167                       | 1.5160        | 1.000 | -4.8952                    | 5.7286         |
|                | Asdl WB     | -.5833                      | 1.5160        | 1.000 | -5.8952                    | 4.7286         |
|                | Asdl Fd 10% | -3.3500                     | 1.5160        | .439  | -8.6619                    | 1.9619         |
|                | Asdl Fd 20% | -3.9833                     | 1.5160        | .241  | -9.2952                    | 1.3286         |
|                | Asdl Fd 30% | -4.6833                     | 1.5160        | .110  | -9.9952                    | .6286          |
|                | KP          | -1.4000                     | 1.5160        | .988  | -6.7119                    | 3.9119         |
| <b>MA 20%</b>  | MA10%       | 3.5500                      | 1.5160        | .369  | -1.7619                    | 8.8619         |
|                | MA 30%      | -2.8000                     | 1.5160        | .654  | -8.1119                    | 2.5119         |
|                | Asdl TP     | 3.9667                      | 1.5160        | .246  | -1.3452                    | 9.2786         |
|                | Asdl WB     | 2.9667                      | 1.5160        | .588  | -2.3452                    | 8.2786         |
|                | Asdl Fd 10% | .2000                       | 1.5160        | 1.000 | -5.1119                    | 5.5119         |
|                | Asdl Fd 20% | -.4333                      | 1.5160        | 1.000 | -5.7452                    | 4.8786         |
|                | Asdl Fd 30% | -1.1333                     | 1.5160        | .997  | -6.4452                    | 4.1786         |
|                | KP          | 2.1500                      | 1.5160        | .877  | -3.1619                    | 7.4619         |
| <b>MA 30%</b>  | MA10%       | 6.3500*                     | 1.5160        | .013  | -1.0381                    | 11.6619        |
|                | MA 20%      | 2.8000                      | 1.5160        | .654  | -2.5119                    | 8.1119         |
|                | Asdl TP     | 6.7667*                     | 1.5160        | .007  | 1.4548                     | 12.0786        |
|                | Asdl WB     | 5.7667*                     | 1.5160        | .028  | .4548                      | 11.0786        |
|                | Asdl Fd 10% | 3.0000                      | 1.5160        | .574  | -2.3119                    | 8.3119         |
|                | Asdl Fd 20% | 2.3667                      | 1.5160        | .813  | -2.9452                    | 7.6786         |
|                | Asdl Fd 30% | 1.6667                      | 1.5160        | .967  | -3.6452                    | 6.9786         |
|                | KP          | 4.9500                      | 1.5160        | .079  | -.3619                     | 10.2619        |
| <b>Asdl TP</b> | MA10%       | -.4167                      | 1.5160        | 1.000 | -5.7286                    | 4.8952         |
|                | MA 20%      | -3.9667                     | 1.5160        | .246  | -9.2786                    | 1.3452         |
|                | MA 30%      | -6.7667*                    | 1.5160        | .007  | -12.0786                   | -1.4548        |
|                | Asdl WB     | -1.0000                     | 1.5160        | .999  | -6.3119                    | 4.3119         |
|                | Asdl Fd 10% | -3.7667                     | 1.5160        | .301  | -9.0786                    | 1.5452         |
|                | Asdl Fd 20% | -4.4000                     | 1.5160        | .153  | -9.7119                    | .9119          |
|                | Asdl Fd 30% | -5.1000                     | 1.5160        | .066  | -10.4119                   | .2119          |
|                | KP          | -1.8167                     | 1.5160        | .947  | -7.1286                    | 3.4952         |

|                    |             |          |        |       |          |         |
|--------------------|-------------|----------|--------|-------|----------|---------|
| <b>Asdl WB</b>     | MA10%       | .5833    | 1.5160 | 1.000 | -4.7286  | 5.8952  |
|                    | MA 20%      | -2.9667  | 1.5160 | .588  | -8.2786  | 2.3452  |
|                    | MA 30%      | -5.7667* | 1.5160 | .028  | -11.0786 | -.4548  |
|                    | Asdl TP     | 1.0000   | 1.5160 | .999  | -4.3119  | 6.3119  |
|                    | Asdl Fd 10% | -2.7667  | 1.5160 | .667  | -8.0786  | 2.5452  |
|                    | Asdl Fd 20% | -3.4000  | 1.5160 | .421  | -8.7119  | 1.9119  |
|                    | Asdl Fd 30% | -4.1000  | 1.5160 | .213  | -9.4119  | 1.2119  |
|                    | KP          | 8.167    | 1.5160 | 1.000 | -6.1286  | 4.4952  |
| <b>Asdl Fd 10%</b> | MA10%       | 3.3500   | 1.5160 | .439  | -1.9619  | 8.6619  |
|                    | MA 20%      | -.2000   | 1.5160 | 1.000 | -5.5119  | 5.1119  |
|                    | MA 30%      | -3.000   | 1.5160 | .574  | -8.3119  | 2.3119  |
|                    | Asdl TP     | 3.7667   | 1.5160 | .301  | -1.5452  | 9.0786  |
|                    | Asdl WB     | 2.7667   | 1.5160 | .667  | -2.5452  | 8.0786  |
|                    | Asdl Fd 20% | -.6333   | 1.5160 | 1.000 | -5.9452  | 4.6786  |
|                    | Asdl Fd 30% | -1.3333  | 1.5160 | .991  | -6.6452  | 3.9786  |
|                    | KP          | 1.9500   | 1.5160 | .923  | -3.3619  | 7.2619  |
| <b>Asdl Fd 20%</b> | MA10%       | 3.9833   | 1.5160 | .241  | -1.3286  | 9.2952  |
|                    | MA 20%      | .4333    | 1.5160 | 1.000 | -4.8786  | 5.7452  |
|                    | MA 30%      | -2.3667  | 1.5160 | .813  | -7.6786  | 2.9452  |
|                    | Asdl TP     | 4.4000   | 1.5160 | .153  | -.9119   | 9.7119  |
|                    | Asdl WB     | 3.4000   | 1.5160 | .421  | -1.9119  | 8.7119  |
|                    | Asdl Fd 10% | .6333    | 1.5160 | 1.000 | -4.6786  | 5.9452  |
|                    | Asdl Fd 30% | -.7000   | 1.5160 | 1.000 | -6.0119  | 4.6119  |
|                    | KP          | 2.5833   | 1.5160 | .737  | -2.7286  | 7.8952  |
| <b>Asdl Fd 30%</b> | MA10%       | 4.6833   | 1.5160 | .110  | -.6286   | 9.9952  |
|                    | MA 20%      | 1.1333   | 1.5160 | .997  | -4.1786  | 6.4452  |
|                    | MA 30%      | -1.6667  | 1.5160 | .967  | -6.9786  | 3.6452  |
|                    | Asdl TP     | 5.1000   | 1.5160 | .066  | -.2119   | 10.4119 |
|                    | Asdl WB     | 4.1000   | 1.5160 | .213  | -1.2119  | 9.4119  |
|                    | Asdl Fd 10% | 1.3333   | 1.5160 | .991  | -3.9786  | 6.6452  |
|                    | Asdl Fd 20% | .7000    | 1.5160 | 1.000 | -4.6119  | 6.0119  |
|                    | KP          | 3.2833   | 1.5160 | .464  | -2.0286  | 8.5952  |
| <b>KP</b>          | MA10%       | 1.4000   | 1.5160 | .988  | -3.9119  | 6.7119  |
|                    | MA 20%      | -2.1500  | 1.5160 | .877  | -7.4619  | 3.1619  |
|                    | MA 30%      | -4.9500  | 1.5160 | .079  | -10.2619 | .3619   |
|                    | Asdl TP     | 1.8167   | 1.5160 | .947  | -3.4952  | 7.1286  |
|                    | Asdl WB     | .8167    | 1.5160 | 1.000 | -4.4952  | 6.1286  |
|                    | Asdl Fd 10% | -1.9500  | 1.5160 | .923  | -7.2619  | 3.3619  |
|                    | Asdl Fd 20% | -2.5833  | 1.5160 | .737  | -7.8952  | 2.7286  |
|                    | Asdl Fd 30% | -3.2833  | 1.5160 | .464  | -8.5952  | 2.0286  |

\*The mean difference is significant at the .05 level

Keterangan:

MA10% : minyak atsiri 10%

MA20% : minyak atsiri 20%

MA30% : minyak atsiri 30%

Asdl TP : air sisa destilasi labu tanpa pengolahan

Asdl WB : air sisa destilasi labu dipekatkan di WB

Asdl Fd10% : air sisa destilasi labu *freeze dried* 10%

ASdl Fd20% : air sisa destilasi labu *freeze dried* 20%

Asdl Fd30% : air sisa destilasi labu *freeze dried* 30%

KP : eugenol 2%