

1.

(溫暖多濕)

(高溫多濕)

300 , Antony van Leeuwenhoek .

, , , , ,

,

,

.

, ,

(從屬 營養菌:

) .

가 .

, (糸狀菌) . , ,

.

2.

가 가 .

, ,

( ), pH .

## 2.1

，  
．  
．  
( 2,800  
2,540 )  
．  
，가 ， 가  
．  
， ．

## 2.2

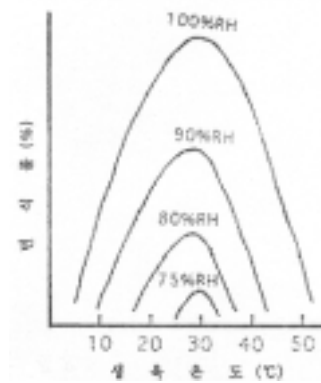
(代謝)  
가 가 15 45  
가 ，  
-5 80  
，  
가 ， 가 Cladosporium  
herbarium ， Aspergillus fumigatus 45 50  
0 40  
20 35 가  
，< 1> ．

## 2.3 ( )

가

，

가 . 80%  
 . < 1> 가  
 가 . 45 50 , 58%  
 , 100% 5 50  
 . ,  
 . 8%  
 , 40% , 24%



< 1>

## 2.4 pH

pH5.0 9.0 가 ,  
 .  
 , pH1.8 2.0 .  
 Pseudomonas aeruginosa  
 가 .

## 3.

(氣密性) , , 가  
 , 가 가 가  
 가 , 가

·  
 ( ) · ,  
 ( ,  
 ) .

·  
 가

·  
 , ,  
 가 가 .  
 , (皮脂), .

(cellulase)

Chaetomium (屬), Myrothecium , Cladosporium ,  
 Trichoderma , Trichoderma viride Chaetomium  
 grobosum .

Actinomyces , Cladosporium

(carboxylicester hydrolase)

Penicillium chrysogenum

cladosporioides가

#### 4.

##### 4.1

< 1>

< 1>

|                        |     |                        |     |
|------------------------|-----|------------------------|-----|
|                        |     |                        |     |
| Actinomyces sp.        |     | Acremonium sp.         | , , |
| Alcaligenes booheri    |     | Aluternaria alternata  | , , |
| Bacillus agri          |     | Aspergillus flavus     | , , |
| B. aurantius           |     | A. fumigatus           | , , |
| B. cereus              | ,   | A. niger               |     |
| B. corchorus           |     | A. ustus               |     |
| B. megatherium         |     | A. terreus             | , , |
| B. mesnitericus        |     | A. varianus            |     |
| B. mycoides            | ,   | A. versicolor          |     |
| B. robustus            |     | Chaetomium globosum    | , , |
| B. subtilis            |     | Ch. funiculum          |     |
| Blennoria sp           |     | Ch. indium             |     |
| Botryodiplodia sp      |     | Cladosporium sp.       |     |
| Cellulomonas biazotea  |     | Cl. cladosporioides    | ,   |
| Cellu. Fiavigena       |     | Cl. herbarum           | , , |
| Cellu. Fimi            |     | Curvularia brachyspora | ,   |
| Cellvibrio fulvus      |     | Cu. lunata             | ,   |
| Cellu. vulgaris        |     | Fusarium moniliforme   | ,   |
| Monascus sp.           |     | F. javanicum           |     |
| Proteus vulgaris       |     | Memnoniella echinata   | ,   |
| Pullularia pullulans   |     | Microsporum gypseum    |     |
| Pseudomonas aeruginosa | , , | Monascus sp.           |     |
| Ps. flourecens         |     | Mucor hiemalis         |     |
| Serratia marcescens    | ,   | Myrothecium verrucaria | ,   |
| Spegazzinia tessarthra |     | Paecilomyces sp.       | , , |
|                        |     | Penicillium citrinum   |     |
|                        |     | Pe. chrysogenum        | , , |
|                        |     | Pe. frequentans        | ,   |
|                        |     | Pe. islandicum         |     |
|                        |     | Pe. luteum             |     |
|                        |     | Pe. purpurogenum       |     |
|                        |     | Phoma sp.              | , , |
|                        |     | Rhizopus nigricans     |     |
|                        |     | R. japonicus           |     |
|                        |     | Sachybotrys atra       | ,   |
|                        |     | S. chartarum           |     |
|                        |     | Trichophyton           |     |
|                        |     | mentagrophytes         |     |
|                        |     | Trichothecium sp.      |     |

가 .

, , 3

, (液狀卵) > > > .

가

> > > > > , < 2>

가 .

가 , 가

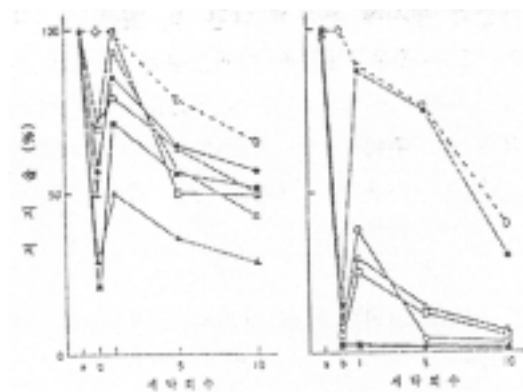
.

.

,

,

가 가



< 2>

(2-4-4'-Trichloro-2'-hydroxy diphenyl ether 가 )

○: , ●: , : , ▲: , □: , ■: , 0:

a: , b:

$$(\%) = \frac{\text{ , (mm)}}{\text{ (mm)}} \times 100$$

## 4.2 ,

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, , , , , ,

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.

< 3> < 2> .

가 ,

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< 3>

< 2>

|     |                                                                                                                                                                                                |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                                                                                                                                                                                |
|     | Aleternaria sp.                      Aspergillus niger<br>Cladosporium herbarum      Gliomastix murorum<br>Pyronellaea glomerata      Phoma sp.<br>Stachybotrys chartarum      Stemphyrium sp. |
|     | Penicillium citrinum              Eruinia sp.<br>P. chrysogenum                  P. frequentans                                                                                                |
|     | Aspergillus glaucus                                                                                                                                                                            |
|     | Penicillium islandicum                                                                                                                                                                         |
|     | Pseudomonas fluorescens                                                                                                                                                                        |
|     | Aspergillus ustus                  Penicillium sp.<br>Cladosporium herbarum                                                                                                                    |
|     | Aspergillus roseum              Eusarium roseum                                                                                                                                                |
| (鮮) | Aspergillus versicolor                                                                                                                                                                         |
|     | Penicillium purpurogenum      Fusarium sp.                                                                                                                                                     |
|     | Micrococcus roseus              Rhodotorula sp.<br>Serratia marcescens                                                                                                                         |
|     | Penicillium glaucum                                                                                                                                                                            |
|     | Pseudomonas aeruginosa                                                                                                                                                                         |

#### 4.3

(蒸泄量) 600 900Mℓ

1/10 1/100 , 99%  
0.3 0.8%

3 가  
가

< 3>

|  | (%)         | (%)   |
|--|-------------|-------|
|  | 1.174 1.597 | 4.365 |
|  | 0.821 1.170 | 2.300 |
|  | 0.648 0.987 | 1.538 |
|  | 0.006 0.025 | 0.355 |
|  | 0.086 0.173 | 1.742 |
|  | 0.010 0.018 | 0.041 |

|  |               |       |
|--|---------------|-------|
|  | 0.0006 0.0015 | 0.129 |
|  | 0.0005 0.0020 | 0.156 |
|  |               | 0.019 |
|  | 0.013 0.020   | 0.073 |
|  | 0.006 0.022   | 0.077 |
|  | 0.034 0.107   | -     |

가 . <

4> .

, ,

.

가 .

가 pH .

pH 4.5 6.0

. 가 , pH 3.8

6.4 .

Staphylococcus , Mycrococcus , Bacillus

(脂質),

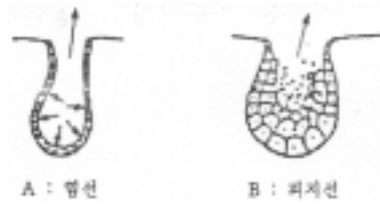
가 .

pH .

.

가

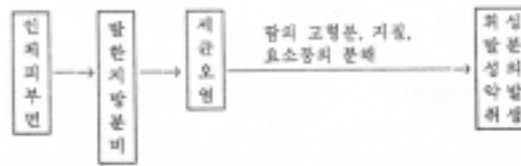
. < 5>



< 4>

A: , 가

B: (乳腺), ,



< 5>

#### 4.4

, (trachoma)

(influenza), (diphtheria),

가

Aspergillus , Penicillium

Fusarium

Cryptococcus (症)

Cryptococcus neoformans

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 ,  
 가 .  
 가 ,  
 ,  
 ,  
 ,  
 가  
 Staphylococcus aureus, Trichophyton mentagrophytes, Escherichia coli  
 , 가  
 SEK( 가 ) Staphylococcus  
 aureus Klebsiella pneumoniae (檢定菌) .

## 5. 가

### 5.1 ( )

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 ,  
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 , , ,  
 ,  
 .  
 ,  
 가  
 , , ,  
 .

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## 5.2 ( 가 )

(抗菌防黴) ·

，  
가 . 가 Octadecyl  
dimethyl(3-trimethoxysilylplopyl) ammonium chloride, Polyhexamethylene biguanide  
hydrochloride, Polyoxyethylene trimethyl ammonium chloride,  
， ·

## 6.

·  
가 1%  
，  
·  
·  
· < 4> ·  
Papularia  
가  
· 가  
·

< 4>

|                                                         | Penicillium sp |  | Fusarium sp |  | Cladosporium sp |  | Epicoccum sp |  |
|---------------------------------------------------------|----------------|--|-------------|--|-----------------|--|--------------|--|
|                                                         |                |  |             |  |                 |  |              |  |
| CaOCl <sub>2</sub>                                      |                |  |             |  |                 |  |              |  |
| NaOCl                                                   |                |  |             |  |                 |  |              |  |
| NaO <sub>2</sub> Cl +<br>CH <sub>3</sub> COOH           |                |  |             |  |                 |  |              |  |
| H <sub>2</sub> O <sub>2</sub>                           |                |  |             |  |                 |  |              |  |
| Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub>           |                |  |             |  |                 |  |              |  |
| Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub> +<br>NaOH |                |  |             |  |                 |  |              |  |

**7.**

, ( ), , pH