

KORFA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

TEST REPORT

http://www.fiti.re.kr

APPLICANT : ENPUTECH

REPORT NO.: 41-62-02-15851

DATE

: 2002-06-12

SAMPLE DESCRIPTION: ONE(1) SAMPLE SAID TO BE "UV STERILIZER" SUBMITTED BY THE APPLICANT

ON 2001-06-05

TEST CONDUCTED

TEST RESULTS

#1

(1) ANTIMICROBIAL EFFICACY TEST (CLIENT'S REQUEST METHOD) : CFU/mℓ, PERCENT REDUCTION OF BACTERIA %

| | BLANK | SAMPLE | PERCENT REDUCTION OF BACTERIA |
|---|---|-------------------------------------|-------------------------------|
| BACTERIA-1 : START AFTER 30s AFTER 1min | 1.2 x 10 ⁵ 1.2 x 10 ⁵ 1.3 x 10 ⁵ | 1.2 x 10 ⁵ <10 <10 | 99.9 99.9 |
| BACTERIA-2 : START AFTER 30s AFTER 1min | 1.4 x 10 ⁵ 1.4 x 10 ⁵ 1.4 x 10 ⁵ | 1.4 x 10 ⁵ <10 <10 | 99.9 99.9 |
| BACTERIA-3 : START AFTER 30s AFTER 1min | 1.5 x 10 ⁵ 1.6 x 10 ⁵ 1.6 x 10 ⁵ | 1.5 x 10 ⁵ <10 <10 | 99.9 99.9 |

NOTE) • INOCULUM CONCENTRATION : BACTERIA-1 : $1.2 \pm 0.3 \times 10^{5}$ /ml

BACTERIA-2 : $1.4 \pm 0.3 \times 10^{5}/\text{ml}$

BACTERIA-3 : $1.5 \pm 0.3 \times 10^{5}/\text{ml}$

NONIONIC WETTING AGENT: TWEEN 80 (0.05%)

TEST CONDITION

- THE UV ARE CONTACTED AT 35 ± 1°C, RH90% FOR 30s, 1min AND DETERMINE BACTERIA CELL GROWTH INHIBITION RATE BY POUR AGAR PLATE METHOD.

TEST BACTERIA: BACTERIA-1 - Staphylococcus aureus ATCC 6538 BACTERIA-2 - Escherichia coli ATCC 25922.

BACTERIA-3 - Salmonella typhimurium KCTC 1925.

< = LESS THAN.</p>

· SEE ATTACHED PHOTOS.

EXECUTIVE DIRECTOR

OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS.

165-A-61-1-7} 89. 2. 15



REPORT NO.: 41-62-02-15851 (PAGE 1 OF



& RESEAR(

892-64 Chegidong, Tongdaemun-gu, Seoul, Korea Tel: 82-2-3299-8006/9 Fax: 82-2-3299-8150/ http://www.fiti.re.kr

KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

#1

(2) ANTIMITE EFFICACY TEST (CLIENT'S REQUEST METHOD) : %

| | | BLANK | SAMPLE | PERCENT REDUCTION OF MITE |
|-------------|----------------------------------|---|-------------------------------------|---------------------------|
| ARGANISM-1: | START AFTER 30s AFTER 1min | 1.5 x 10 ⁴ 1.6 x 10 ⁴ 1.6 x 10 ⁴ | 1.5 x 10 ⁵ <10 <10 | 99.9 99.9 |
| ARGANISM-2: | START AFTER 30s AFTER 1min | 1.3 x 10 ⁴ 1.3 x 10 ⁴ 1.4 x 10 ⁴ | 1.3 x 10 ⁴ <10 <10 | 99.9 99.9 |

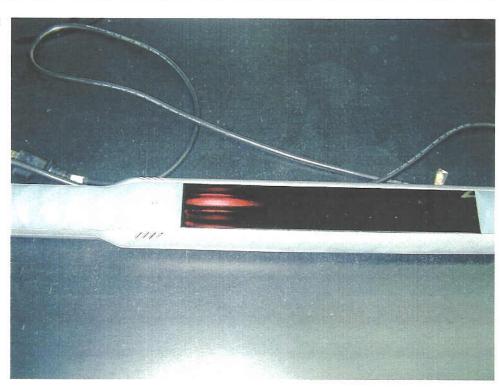
NOTE) • TEST CONDITION : THE UV ARE CONTACTED AT 35 \pm 1°C, RH90% FOR 30s, 1min AND DETERMINE MITE GROWTH INHIBITION RATE.

TEST ARGANISM : ARGANISM-1 - Dermatophagoides farinae

ARGANISM-1 - Dermatophagoides pteronyssinus

< = LESS THAN

SAMPLE PHOTO:



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS.



REPORT NO.: 41-62-02-15851 (PAGE 2 OF 8



892-64 Chegidong, Tongdaemun-gu, Seoul, Korea Tel: 82-2-3299-8006/9 Fax: 82-2-3299-8150/ http://www.fiti.re.kr

KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

APPLICANT : ENPUTECH

REPORT NO : 41-41-03-10033

DATE

: 2003-05-07

SAMPLE DESCRIPTION: ONE(1) SAMPLE OF PULIGHT, SUBMITTED ON 2003-04-14.

TEST CONDUCTED

TEST RESULTS

| (1) | ANTIMICROBIAL EF OF BACTERIA % | FICACY TEST (SH | IAKE FLASK ME | ETHOD (FC-TM-19)-2001) | : CFU/ml, PERCENT | REDUCTION |
|--------|-----------------------------------|-------------------------------|---|--|--|---------------------|
| | OF BACTERIA 70 | | | BLANK | SAMPLE | |
| | BACTERIA-1 : ST. AF | TER 20SEC. | L OF PACTER! | 1.5 x 10 ⁵ 1.5 x 10 ⁵ | 1.5 x 10 ⁵ <10 | |
| | BACTERIA-2 : ST. | TER 20SEC. | | 1.3 x 10 ⁵ 1.4 x 10 ⁵ | 99.9 1.3 x 10 ⁵ <10 99.9 | |
| | BACTERIA-3 : ST AF | TER 20SEC. | | 1.4×10^{5} | 1.4 x 10° | |
| | BACTERIA-4 : ST AF | TER 20SEC. | | 1.6 x 10 ⁵ 1.7 x 10 ⁵ | 99.9 1.6 x 10 ⁵ ≤10 | |
| | BACTERIA-5 : ST AF | TER 20SEC. | | 1.3 x 10 ⁵ 1.3 x 10 ⁵ | 1.3 x 10 ⁵ <10 | |
| | BACTERIA-6 : ST. | TER 20SEC. | | 1.7 x 10 ⁵ 1.7 x 10 ⁵ | 99. 9 1. 7 x 10 ⁵ <10 | |
| | BACTERIA-7 : ST AF PE | TER 20SEC. RCENT REDUCTION | OF BACTERIA | 1.5 x 10 ⁵ 1.6 x 10 ⁵ | 99. 9 | |
| | NOTE) • INOCULU | M CONCENTRATION | BACTERIA- BACTERIA- BACTERIA- BACTERIA- BACTERIA- BACTERIA- BACTERIA- | -1 : 1.5 \pm 0.3 \times 10 ⁵ /m -2 : 1.3 \pm 0.3 \times 10 ⁵ /m -3 : 1.4 \pm 0.3 \times 10 ⁵ /m -4 : 1.6 \pm 0.3 \times 10 ⁵ /m -5 : 1.3 \pm 0.3 \times 10 ⁵ /m -6 : 1.7 \pm 0.3 \times 10 ⁵ /m (0.05%) SIRRADIATED AT 35 \pm 1 RMINE BACTERIA CELL GRAPH METHOD1 : Klebsiella pneumo | ne 1e 1e ne ne 1e 1e | |
| | • NONIONI • TEST CO | C WETTING AGENT NDITION | TWEEN 80 THE UV IS AND DETER | (0.05%) S IRRADIATED AT 35 ± 1 RMINE BACTERIA CELL GF | I ℃, RH 90 ± 5 % F ROWTH INHIBITION RA | OR 20 SEC, TE BY |
| | • TEST BA | CTERIA | BACTERIA- BACTERIA- BACTERIA- BACTERIA- BACTERIA- | R PLATE METHOD1 : Klebsiella pneumo -2 : Pseudomonas aeruo -3 : Escherichia coli -4 : MRSA(Methicillin I -5 : Bacillus subtilis -6 : Shigella flexner -7 : Vibrio parahaemo | oniae ATCC 4352. ginosa ATCC 27853. ATCC 43895. Resistance S. aureus) s ATCC 6633 i ATCC 9199 | ATCC 33592. |
| 27. 27 | SEE ATT | ACHED PHOTOS. | | -7 : Vibrio parahaemo | | |

HO CHUL KIM EXECUTIVE DIRECTOR

OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS.

165-A-61-1-プト



http://www.fiti.re.kr

KOREA, Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

- SAMPLE PHOTO -



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS.



REPORT NO. : 41-41-03-10033 (PAGE 2 OF



892-64 Chegidong, Tongdaemun-gu, Seoul, Korea Tel: 82-2-3299-8006/9 Fax: 82-2-3299-8150/1 http://www.fiti.re.kr

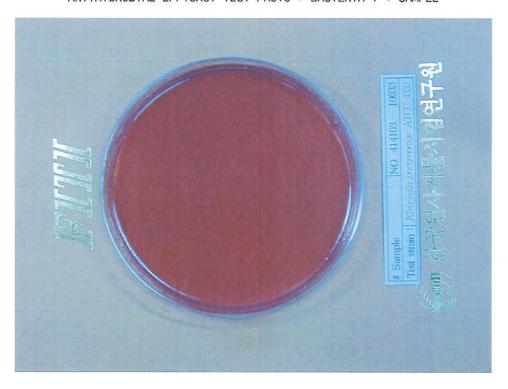
KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-1 : BLANK -



- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-1 : SAMPLE -



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS 165-A-61-1-7 89-2. 15



REPORT NO. : 41-41-03-10033 (PAGE 3 OF

FITI TESTING & RESEARCH INSTITUTE

892-64 Chegidong, Tongdaemun-gu, Seoul, Korea Tel: 82-2-3299-8006/9 Fax: 82-2-3299-8150/1 http://www.fiti.re.kr

KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-2 : BLANK -



- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-2 : SAMPLE -



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS 165-A-61-1-71-89. 2. 15



REPORT NO. : 41-41-03-10033 (PAGE 4 OF 9)



KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-3 : BLANK -



- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-3 : SAMPLE -



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS 165-A-61-1-71-89.2.15



REPORT NO. : 41-41-03-10033 (PAGE 5 OF

TESTING & RESEARCH

892-64 Chegidong, Tongdaemun-gu, Seoul, Korea Tel : 82-2-3299-8006/9 Fax : 82-2-3299-8150/1 http://www.fiti.re.kr

KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-4 : BLANK -



- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-4 : SAMPLE -



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS

165-A-61-1-가 89. 2. 15



REPORT NO. : 41-41-03-10033 (PAGE 6 0



TESTING & RESEARCH

892-64 Chegidong, Tongdaemun-gu, Seoul, Korea Tel: 82-2-3299-8006/9 Fax: 82-2-3299-8150/1 http://www.fiti.re.kr

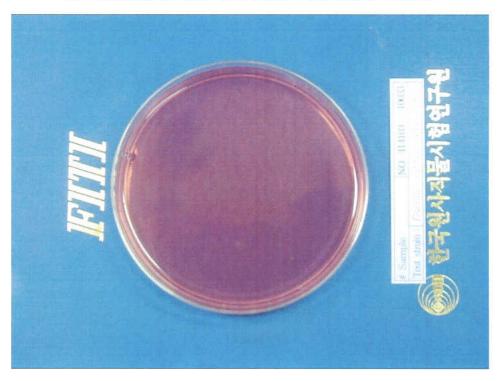
KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-5 : BLANK -



- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-5 : SAMPLE -



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS 165-A-61-1-가 89. 2. 15



REPORT NO. : 41-41-03-10033 (PAGE 7 OF



892-64 Chegidong, Tongdaemun-gu, Seoul, Korea Tel: 82-2-3299-8006/9 Fax: 82-2-3299-8150/1 http://www.fiti.re.kr

KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-6 : BLANK -



- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-6 : SAMPLE -



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS 165-A-61-1-가 89. 2. 15



REPORT NO. : 41-41-03-10033 (PAGE 8 OF

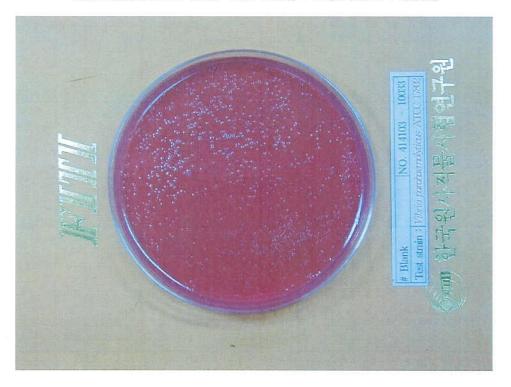
TESTING & RESEARCH



KOREA Government Designated Service Supplier Affiliated Organization of BOKEN, GSI, ITS

Members of : ASTM, AATCC, AAMA, IFAI, INDA, BTTG, IGS, LD, TMSJ

- ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-7 : BLANK -



ANTIMICROBIAL EFFICACY TEST PHOTO : BACTERIA-7 : SAMPLE -



OUR REPORTS APPLY ONLY TO THE SAMPLE TESTED AND ARE NOT NECESSARILY INDICATIVE OF THE QUALITIES OF APPARENTLY IDENTICAL OR SIMILAR PRODUCTS 165-A-61-1-プト 89. 2. 15



REPORT NO. : 41-41-03-10033 (PAGE 9 OF