



Permit 3319



Quality Management



ISO 9001 ISO 13485

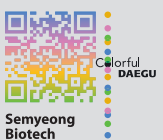


European Certificated



0470 Electrical Safety Certificated

Medical UVB device for skin treatment



**SEMYEONG Biotech Co.**

[www.panos.co.kr](http://www.panos.co.kr)

# + Company Introduction

## Company Introduction

Halo,

Kami Semyeong Biotech Co produsen yang mengkhususkan diri dalam produksi "PANOS", perangkat fototerapi ultraviolet B untuk pengobatan kulit. . Semyeong Biotech Co didirikan untuk mencerahkan dunia dan mempromosikan kesehatan manusia "PANOS", sebuah fototerapi perangkat Ultraviolet B, secara ilmiah dirancang melalui pengolahan khusus dengan mengembangkan substansi memproduksi paling stabil kisaran panjang gelombang (280-320 nm) dari sinar ultraviolet , tanpa membahayakan tubuh manusia. Semyeong Biotech Co menjadi sebuah perusahaan yang mengkhususkan diri dalam pembuatan peralatan medis ultraviolet dengan meneliti dan mengembangkan berbagai macam alat terapi dan peralatan medis yang berkaitan dengan ultraviolet light.Thank Anda.

SEMYEONG Biotech Co.



## Patent and Certificate



Certificate of manufacturer



Certificate of free sale



Certificate of trademark



Certificate of design



Electrical appliances safety



KGMP



Patent



CE / MDD



Indonesia



Saudi Arabia



Sri Lanka



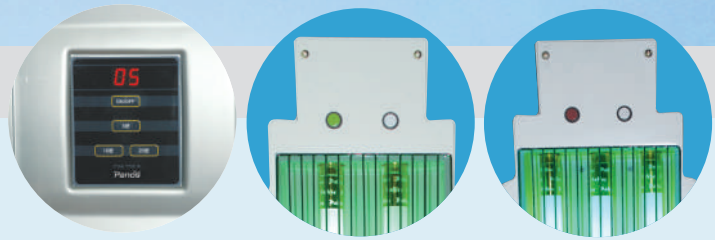
Thailand

# + Brief History

## History

- 2002 Developed a UV-B lamp with a specific wavelength range as medical equipment for treatment of the human body
- 2003 Established N/B Tech Inc.
- 2004 Developed, produced and distributed level 2 medical equipment OMI 1000, 2000 and 3000 (for hospital use)
- 2005 Acquired a patent for a UV-B lamp with a specific wavelength range as medical equipment for treatment of the human body
- 2007 SEMYEONG Biotech Co. became an individual business  
Registered a trademark for an ultraviolet B (UV-B) phototherapy device for skin treatment, PANOS KPA-01 (patent number: 2007-0057124)
- 2008 Developed an ultraviolet B (UV-B) phototherapy skin treatment device for home use  
Acquired safety certification for electrical appliances from the Korea Testing Certification (certification number: HC07120-8001A)  
Developed, produced and distributed an ultraviolet (UV-B) phototherapy skin treatment device, PANOS KPA-01 (for general public use)  
Registered a design for an ultraviolet (UV-B) phototherapy skin treatment device, PANOS KPA-01 (patent number: 2008-0015699)  
Acquired certification from the Korea Institute of Atopy (2008-10-13)
- 2009 Registered the product with the Public Procurement Service (national organization for electronic procurement) (2009-12-24)
- 2010 Acquired European certification for CE 0470 KPA-01 UV-B level 2 light treatment device  
Acquired (NEMKO), (IQNET) ISO 13485: 2003 ISO 9001: 2008 certification  
Chosen as HIT500 by the Small and Medium Business Corporation  
Received manufacturing license for medical equipment from the KFDA  
KPA-01 granted  
Received item license for medical equipment from the KFDA  
Received GMP certificate from the KFDA
- 2011 Registered with Saudi Arabia, Sri Lanka, Thailand FDA
- 2012 KPA-02 granted item license for medical equipment from the KFDA
- 2013 Registered with Indonesia FDA
- 2014 Developed HEALING LIGHT HR-UVD (personal use)  
HEALING LIGHT HR-UVD granted item license for medical equipment from the KFDA



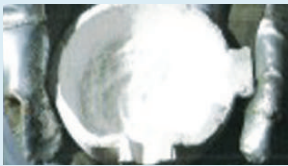


## ■ PANOS?

The ultraviolet B fototerapi perangkat "PANOS" mensterilkan semua jenis bakteri pada kulit dengan penyinaran mereka dengan sinar ultraviolet B (UV-B), yang merupakan sinar yang berhubungan dengan kehidupan dan kesehatan melalui kimia tubuh manusia. Juga, PANOS adalah UV-B perawatan kulit fototerapi perangkat dengan lampu ultraviolet sangat stabil yang menghasilkan berbagai panjang gelombang 280 nm - 320 nm, meningkatkan kekebalan dengan menciptakan vitamin D3 dalam tubuh manusia. Hal ini diakui sebagai teknologi terbaik di dunia.

\* Sinar ultraviolet B tidak dapat menembus kaca atau serat. Bahkan dengan sinar matahari, musim dingin atau daerah yang berada di lebih dari 35 ° di lintang kurangnya cukup sinar ultraviolet B untuk menghasilkan lebih banyak vitamin D3 sebagai kebutuhan tubuh.

## ■ Manufacturing technology



### Measuring ultraviolet light

Glowing materi (boronic strontium asam) adalah campuran selama 24 jam dan kemudian plasticized selama 3 ~ 6 jam pada suhu 500-1000 ° C dalam tanur listrik.

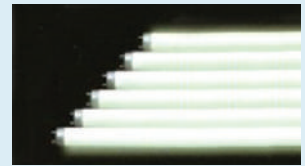


### Measuring negative ions

Lampu UV-B memiliki ion negatif berlimpah yang bermanfaat bagi kesehatan.

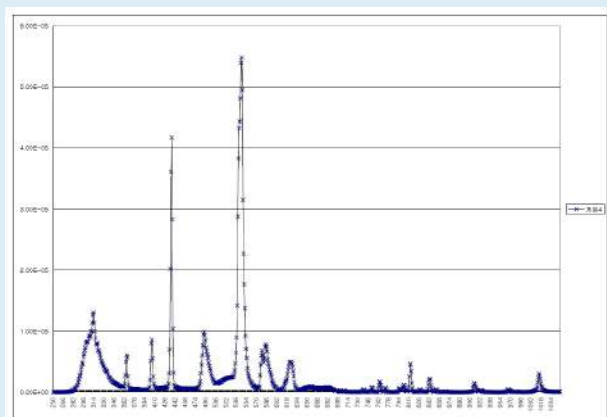


Detektor ultraviolet dapat mengukur sinar ultraviolet dari lampu UV-B sementara lampu normal tidak bisa.



Menciptakan lampu UV-B dengan tabung kaca khusus yang dapat menyerap ultraviolet juga ringan tapi blok kisaran panjang gelombang di bawah 280 nm yang berbahaya bagi tubuh manusia.

## ■ KPA-01 PANOS spectrum



Panjang gelombang puncak :311.7nm good untuk Psoriasis, leukoderma pengobatan panjang gelombang 295-300nm : vitamin D make panjang gelombang Kriss (Korea Research Institute of Standar dan Ilmu) NO : 1001-01295-001

# + Production Technology

## Model



### Panos KPA-01

Ultraviolet light(UV-B) exposure for skin therapy

Country of manufacturer : Korea  
 Name of manufacturer : SEMYEONG Biotech  
 Wave length : 280mm~320mm  
 Intensity of illumination :  $10\mu W^2/cm^2 \times 3$   
 Voltage : 220v/70w  
 Dimension : H 90cm, L 70cm, W90kg

Domestic accreditation : (KPDA) Ultraviolet light exposure machine-Level 2  
 Use : Skin disease treatment  
 Accredited in Europe : Class II A, UV-B radiation Level 2 medical equipment  
 Use : Effective for skin diseases such as atopic, psoriasis, eczema



### Panos KPA-02

Ultraviolet light(UV-B) exposure

Country of manufacturer : Korea  
 Name of manufacturer : SEMYEONG Biotech  
 Wave length : 280mm~320mm  
 Intensity of illumination :  $10\mu W/Cm^2 \times 2$   
 Voltage : 220v/45w  
 Dimension : H 90cm, L 70cm, W90kg

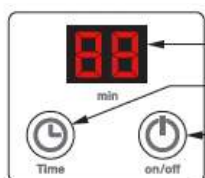
Domestic accreditation : (KPDA) Ultraviolet light exposure machine-Level 2  
 Use : Skin disease treatment



### HR-UVD

Healing light

Country of manufacturer : Korea  
 Name of manufacturer : SEMYEONG Biotech  
 Stand size : 790mm(H) X 1,270(L) X 124mm  
 Fold size : 763 X 124 X 113mm  
 Box size : 810 X 160 X 140mm, 9kg  
 Weight : 8kg



- ① 1. Press On/Off button.
- ② 2. Choice setting time : 1,5,10, 15,20minutes.
- ③ 3. Press On/Off button once more.

※ Feature

1. Anybody can assemble simply.
2. Foldup design can keep small space.
3. For personal & for use living aptment pet.

No	Name	Function
①	Display	displaying operation time
②	ON/OFF	power on/off button
③	Setting for operation time	setting time : 1,5,10, 15,20minutes.

# + Production Technology

Test reports on the effects of the UV-B lamp in sterilizing yellow staphylococcus that aggravates atopic dermatitis and various other skin diseases



Ulsan Goodmorning Hospital, Preventive medicine specialist Dr. Cho, Gyu-il

## UV-B Related Research Institutions

**Testing institutions** Kyungpook National University, Catholic University of Korea (orthopedics)

- Belajar pada pembentukan tulang dari equipment Effectiveness medis ultraviolet sebagai
- peralatan medis osteoporosis melalui Analisis serum dan radiasi pengujian
- aktif vitamin D, 25 (OH) vitamin D setelah radiasi UV-B menunjukkan bahwa vitamin D dalam kelompok eksperimen telah meningkat secara signifikan dibandingkan dengan kelompok kontrol.

**Testing institutions** Physical Therapy Department, Daegu University

- Studi pada fitur bintik-bintik merah dan fitur keselamatan dari irradiator UV-B
- Generasi dan keselamatan gelombang elektromagnetik melewati persyaratan teknis untuk inferensi elektromagnetik (pemberitahuan tidak ada 2000-79 Kementerian Informasi dan Komunikasi.) Dan keselamatan fitur listrik dan mekanik telah disetujui oleh KFDA
- Sebuah makalah penelitian yang diterbitkan dalam Journal of Korea Fisika Society di 2006

**Testing institutions** Women's Medical Center at KyungHee University Oriental Medicine Hospital in Gangnam

- Studi tentang efek Ultraviolet-B (UVB) radiasi pada kalsium, vitamin D3 dan kadar kolesterol pada wanita menopause.
- Hasil penelitian menunjukkan bahwa kadar kalsium darah di kedua kelompok UV-B dan kelompok kontrol meningkat secara signifikan setelah penyinaran UVB.
- vitamin darah di kedua kelompok UV-B dan kelompok kontrol meningkat secara signifikan setelah penyinaran UVB.
- Total kadar kolesterol darah di kedua kelompok UV-B dan kelompok kontrol menurun secara signifikan setelah penyinaran UVB.

## Mass Media Promotion



MBC information today



Korea Beauty TV



TV N



Yeongnam Ilbo(daily)

# Effects of Ultraviolet-B(UV-B) radiation on calcium, vitamin D<sub>3</sub> and cholesterol level in postmenopausal

Department of Oriental Gynecology, Kangnam Korean Hospital, Kyung-Hee Univ, Seoul, Korea.

Department of Acupuncture & Moxibustion, Kangnam Hospital of Korean Medicine, Kyung-Hee University, Seoul, Korea.

2004.11.07

## (test method)

Object of study : postmenopausal women(UV-B Group:70.6 ±5.8 age /Combined Group:69±8.5)

UV-B Group(no calcium therapy) : UV B Device(NB Tech, senia) phototherapy

Combined Group(calcium therapy) : UV B Device(NB Tech, senia) phototherapy+Calcium supplement(HealhCal/Donghwa drug)

\* 20minutes/1time per one day, 2week(Total 12times).

\* Before & after therapy, checking for calcium, Vitamin D<sub>3</sub>& total cholesterol level in blood.

\* after 3months, checking for side effect, but they have not side effects.



Table1.The change of serum calcium level by UV-B TX

Calcium(mg/dl)	Before	After
UV-B group	8.64 ±0.32	9.15 ± 0.34**
Combined group	8.62 ± 0.28	9.11 ± 0.29**

\*\* : P < 0,01

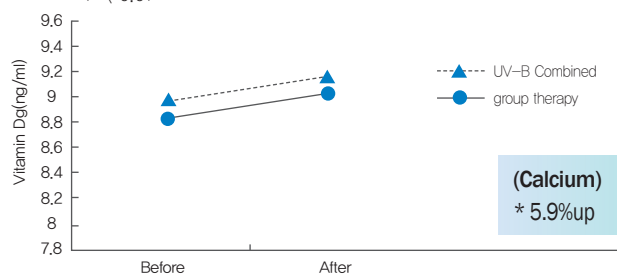


Fig 1 .The change of serum calcium level by UV-B TX

Table2.The change of serum Vitamin D<sub>3</sub> level by UV-B TX

Vitamin D <sub>3</sub> (ng/ml)	Before	After
no calcium therapy	21,80 ± 8,02	27,52 ± 7,14**
calcium therapy	25,40 ± 8,39	30,58 ± 8,01**

\*\* : P < 0,01

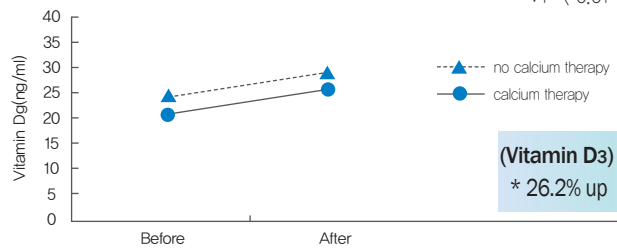


Fig 2.The change of serum Vitamin D<sub>3</sub> level by UV-B TX

Table3.The change change of T-cholesterdo level by UV-B TX

Vitamin D <sub>3</sub> (ng/ml)	Before	After
no calcium therapy	195,82 ± 30,43	187,43 ± 32,02**
calcium therapy	200,40 ± 31,18	187,96 ± 32,29**

\*\* : P < 0,01

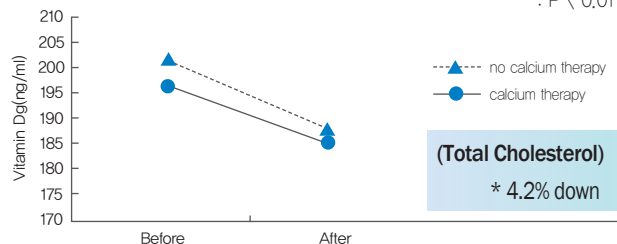


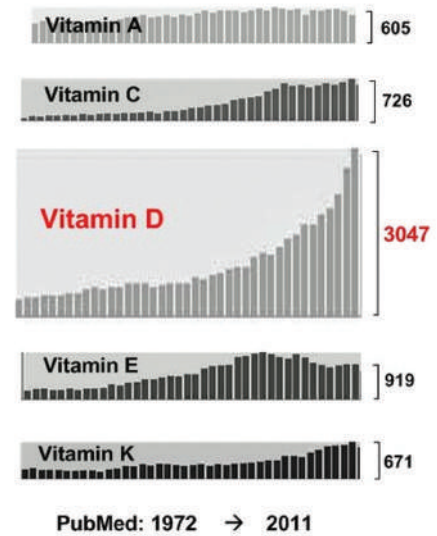
Fig 2.The change change of T-cholesterdo level by UV-B TX

## Growth Scientific papers on Vitamin

### Exponential growth in vitamin D publications



### Scientific papers on Vitamins



### Disease Incidence Prevention by Serum 25(OH)D Level

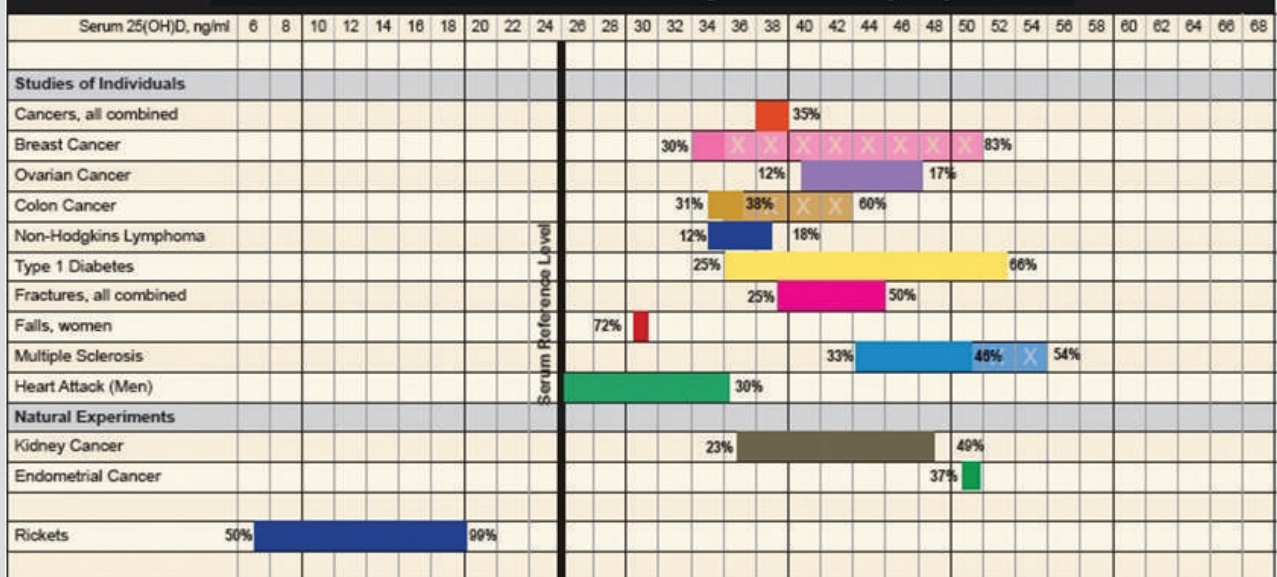
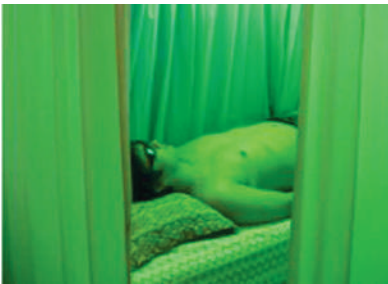


Chart prepared by: Garland CF, Baggerly CA

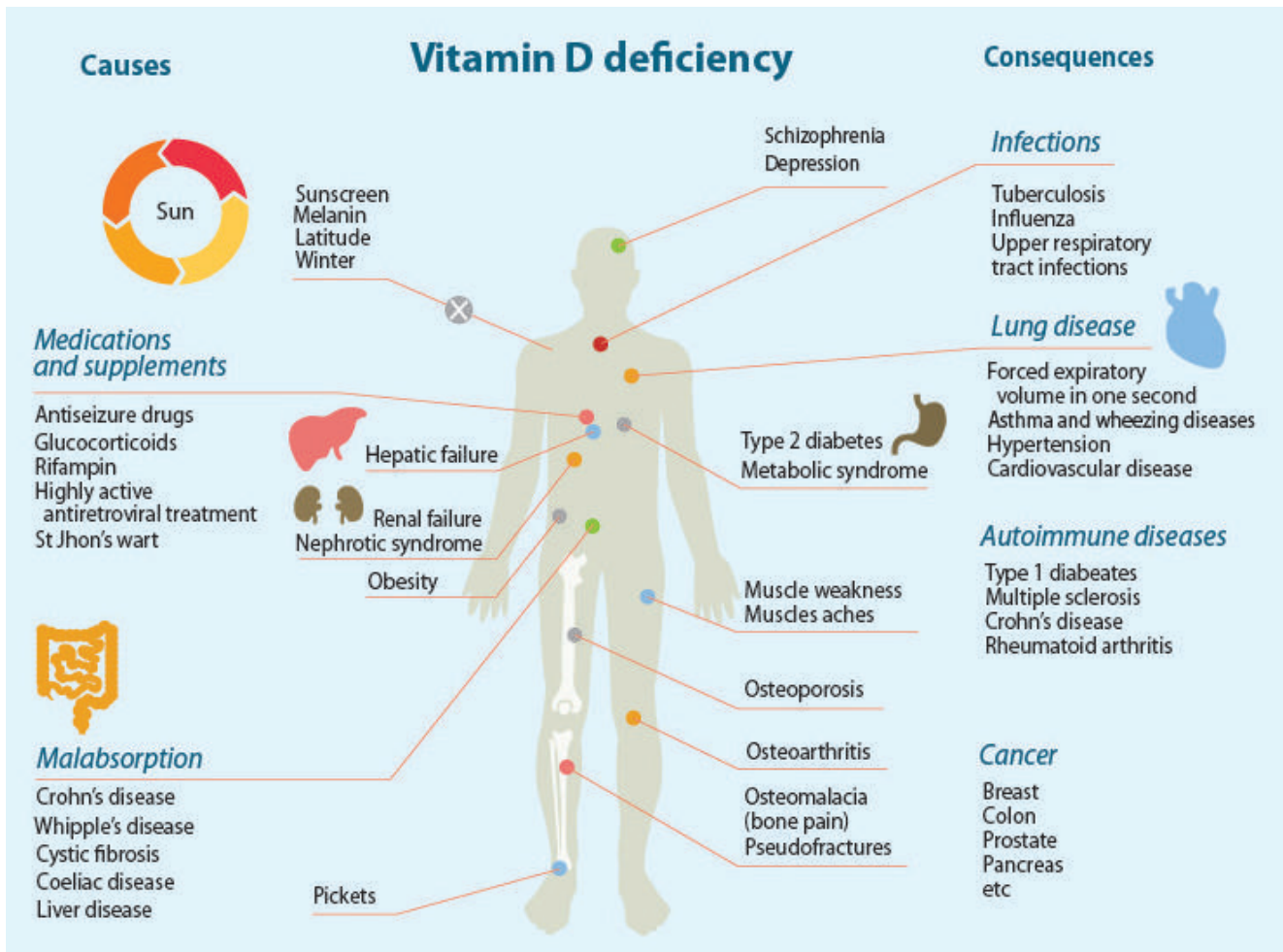


# + Atopic/Use

## The Generating Process of Vitamin D3 and the Effect of Vitamin D3 on the Human Body



UV-B ray » Skin » Dissolving 7-DHC (dehydrocholesterol) » Converting to previtamin D3 in blood » Transporting vitamin D3 into blood vessel » Liver (the 1st chemical reaction:  $\text{OH}^-$  radical) » Kidneys (the 2nd chemical reaction: forming  $\text{OH}^-$  radical) » Completing active vitamin D3 » Small intestine » Storing in other body cells (repairing and maintaining cells)



## I Experiential Case for Skin Disease

### Allergic Patient's



Before irradiation



One irradiation



Five irradiations



Ten irradiations

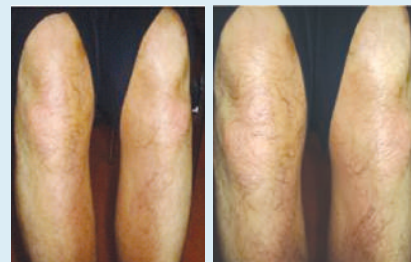
### Psoriasis



Three irradiations



Five irradiations



Ten irradiations

### Atopic dermatitis



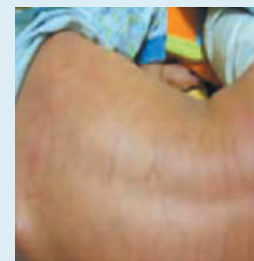
Before irradiation



One irradiation



Five irradiations

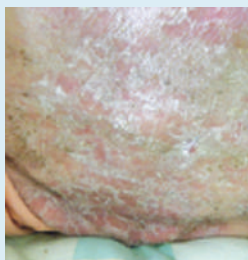


Ten irradiations

### Bedsore



One irradiation



Three irradiations



Seven irradiations



Ten irradiations

### Gardenia seeds poison



1st day



2days after



25days after

### Atopy



1st day



10days after



20days after

### Bedsore



1st day



10times after

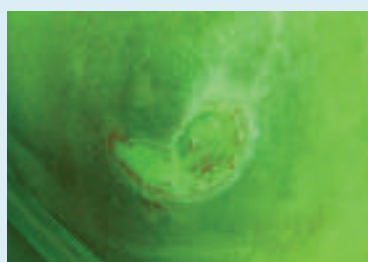


19times after

### Bedsore



1st day



33days after



88days after

# + Hospital users

## Korean clinic



Ham pediatric korean clinic : 43 branch



Inuri korean clinic - 17branch



Oriental hospital of Daejeon universty-Daejeon



Jeonju oriental Hospital-Jeonju



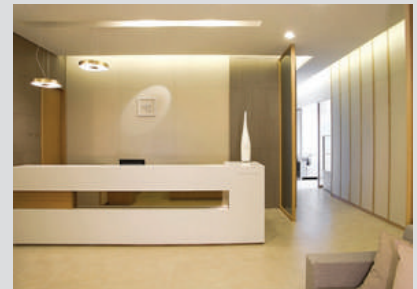
Semyung Universty Chungju Oriental Medicine Hospital



Cheongdam Korean clinic-Busan



Gyeonghi Korean clinic-Seoul



Idn Korean clinic-Goyang

## Hospital & Long term hospital



Wellnis1004 Hospital - Daegu

### CASE STUDY



### 큐리백(상처를 음압 치료하는 의료기기)

상처부위에 일정한 음압을 가하여 삼출물을 빨아들이면서 상처의 오염을 방지하고 주변 혈관을 자극시켜 새상 조직이 차오르게 합니다.

### 지속적이고 체계적인 육상관리



### 자외선 치료기



Heeyeon hospital -Changwon



Yeonse hospital - Daegu



New seongmo hospital-Seoul



Yunseong hospital - Cheongdo

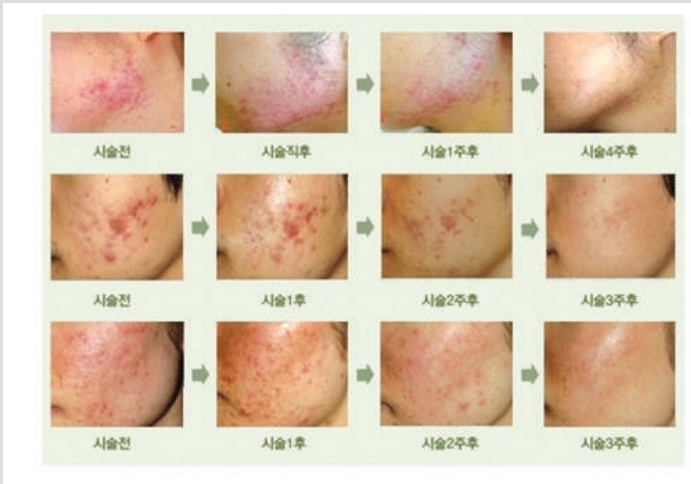


Eden adventist hospital-Namyangju



# + dermatology & clinic

## dermatology & clinic



Marin-J clinic(dermatology)-Seoul



NSP Medical(dermatology)\_Gwacheon



all 4 skin(dermatology)-Daegu



AK clinic(orthopedics)-Seoul



Hanseu pediatric clinic-Daejeon



Sung Ji internal Medicine ENT clinic - Suwon



Public health center



skin shop



Animal Hospital



Atopy school

## overseas



Vichavej international hospital in Thai



Neo salong in Tokyo Japan



The Son La rehabilitation hospital in Vietnam

**Hollidge Medical Centre & Travel Clinic**

HOLLIDGE MEDICAL CENTRE  
 130 Hollidge Blvd, Unit B6  
 Aurora, Ontario  
 L4G 8A3  
 Phone: 905-841-5554  
 Fax: 905-841-0088  
 Email: hollidgetravelclinic@gmail.com

Hollidge Medicalcenter in Canada



General Hospital Colombo, Sri Lanka

# + Exhibition

## Exhibition



2010.10. The World Korean Business



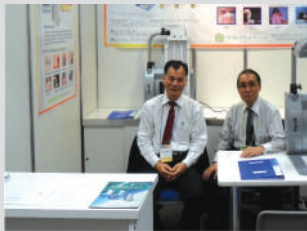
2010.11. Atlanta Med show



2011.07. 60th CIDESO in Seoul



2011.09. Medical fair Thailand



2010.10. The World Korean Business



2011.10. Korean Med show in Daegu



2012.03. 3th Sri Lanka Medicare show



2012.08. Sendex in Kintex



2012.11. Indonesia Health show



2012. 11. Jedda korean show



2013. 1 Arab Health



2013.3.Bangkok DST



2013.3. Kimes



2013.4 Thai skin show



2013.6.Qingdao Korean show



2013.6 Ningbo show



2014.3. Bangkok DST



2014.4, Daegu Korean Doctor



2014.4. GMES Spring



2014.10 GMES Autumn



## + How to Use?

### for make VitaminD & VitaminD related disease



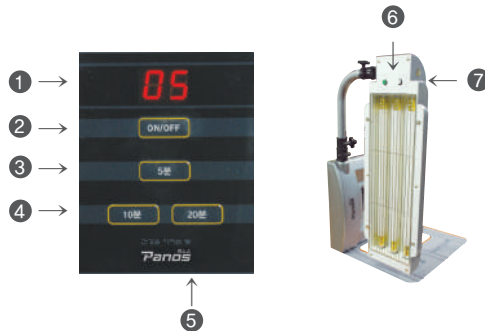
- \* Hal ini merekomendasikan untuk mengekspos punggung atau perut.
- \* Kasus oleh rhinitis, mengekspos perut atau kembali ke lampu tidak hidung.
- Jika gejala parah (kanker dll), Anda dapat mengekspos bagian yang sakit sebagai bubuk yang Anda bisa (selama 1-2 jam sebagai salah satu waktu dan secara bergantian: perut, punggung, kaki, lengan, sisi dll ..)
- Terlepas dari lampu sekitar 50-70cm
- 2-3 kali seminggu 20minutire / waktu (orang Nomal)
- Anda dapat melihat efek dari berbagai penyakit seperti Rhinitis, kanker, nodul tiroid, diabetes, inkontinensia, osteoporosis, penyakit prostat, pruritus ginjal,

Detoxification

### Skin disease treatment



- Pada awalnya, menyesuaikan pengaturan sebagai 5 menit untuk berusia di bawah 13 tahun, 10 menit untuk berusia di bawah 20 tahun, dan 20 menit lebih dari 20 tahun. Jika tidak ada masalah, Anda dapat menambahkan jumlah lampu
- directry mengambil th cahaya untuk bagian yang sakit.
- Psoriasis dan atopi harus lebih dekat sebanyak yang Anda bisa.
- memencet jerawat & mencoba Panos dapat baik efek
- kasus oleh Atopi (kekebalan kulit), Terapkan terkena bagian &
- kasus perut Anda dengan Vitiligo, bagian tangan adalah efek cepat, wajah adalah efek lambat.
- kasus oleh trey wajah, silakan memakai kaca mata atau meletakkan handuk
- Jika Eritema membuat kulit Anda cerdas, Anda dapat beristirahat selama beberapa hari. Namun, jika Anda dapat menanggungnya, dianjurkan untuk melanjutkannya.



No.	Name	Function
1	Display	Operation time display
2	On/Off button	Power/Off button
3	Operation time selection display	5-minute setting button Operation
4	Operation time selection display	10-minute setting button Operation
5	Operation time selection display	15-minute setting button Operation
6	UV lamp On/Off button	2 UV lamps On/Off
7	UV lamp On/Off button	1 UV lamps On/Off

## Instruction for Use

- Use 2~3 times a week
- Keep a certain distance during the irradiation (about 50~70cm from the lamp)
- Irradiate the affected skin directly.
- Irradiate the abdomen & back after taking off the clothes to create Vitamin D3.
- It is recommended to irradiate the affected part for 5 minutes for children under 10, 10 minutes for people under 20 and 20 minutes for adults for first-time user (using 1 bulb light).
- Gradually increase the lux to 1-bulb light lux, 2-bulb light lux and 3-bulb light lux.

## Product specification

- Country of manufacture: The Republic of Korea
- Manufacturer: SEMYEONG Biotech Co.
- Use: Ultraviolet (UV-B) phototherapy device for skin treatment
- Wavelength range: 280nm~320nm
- Intensity of illumination:  $10 \mu\text{W}/\text{cm}^2 \times 3$
- Voltage: 80-250v / 70w
- Dimensions: 90cm (H) 70cm (L) 9kg (W)



**SEMYEONG Biotech Co.**

B1, 3F Seongseo BD, 323, Seongseodong-ro, Dalseo-gu, Daegu, Korea  
 TEL : 82-70-7887-7500/7887-7431~3 FAX : 82-53-653-5988  
 www.panos.co.kr

\*This catalogue for internal training can be some different in the context from efficacy and effect permitted by the KFDA.