

Doctor , Can I Swallow the Water?



If you are nervous about any cross infection caused by foreign matters in the water tube, handpiece clogging and water smell from unit chairs.

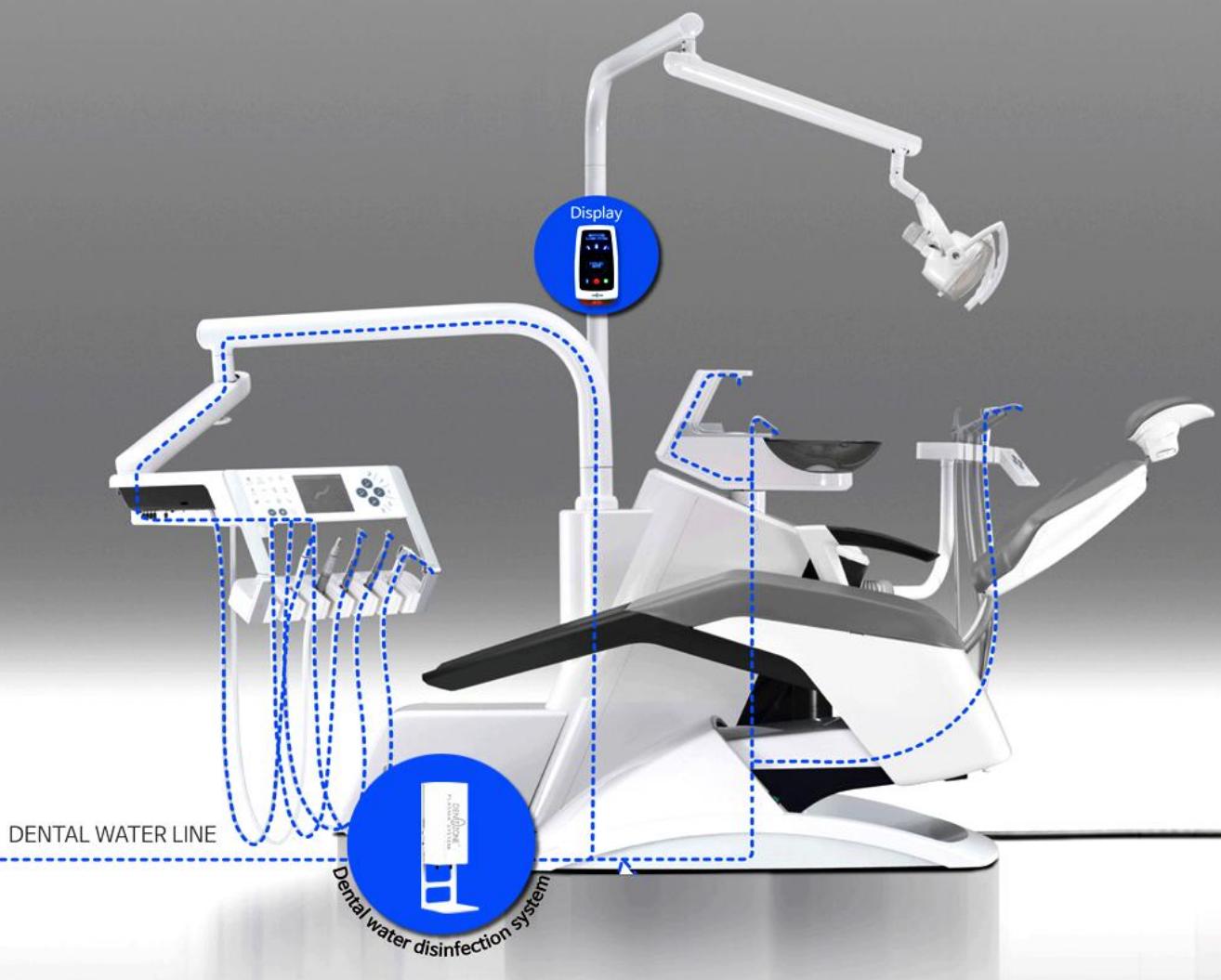
“ Make the clean dental water quality space with Dentozone Plasma System (DPS) ”



- ✓ **NO Chemicals**
- ✓ **NO Bacteria**
- ✓ **NO Biofilm**

• Dental unit water line
Disinfection system

Dentozone Plasma System (DPS)



DPS2



เครื่องฆ่าเชื้อ ระบบพลาสม่า[®]
(สำหรับฆ่าเชื้อในห้องน้ำดีของเก้าอี้ทันตกรรม)





Dentozone Plasma System (DPS)



เครื่องฆ่าเชื้อ ระบบพลาสม่า[®]
(สำหรับฆ่าเชื้อในหัวน้ำดีเก้าอี้ทันตกรรม)

Dentozone Plasma System (DPS)
destroys the biofilm of bacteria in the
water of handpiece, 3 – way syringe, scaler
and auto-cup of dental unit & chair and
makes it into germ-free clean water.



Handpiece
clogging



Water smell from
unit chair



Biofilm in the water
tube



FEATURES

- **Lasting Sterilizing Effect**

Reducing to water in the natural state after sterilization without chemical (toxic) additives, it is eco-friendly, and you can give medical treatment with an easy mind because it continuously maintained based on the drinking water.

- **Chemical-free, Eco-friendly Plasma Sterilized Water**

As the eco-friendly and safe sterilization type of Dentozone Plasma which reduces to the natural state of water after sterilization without adding any chemical (toxic) additives is continuously maintained based on the drinking water, you can give make treatment in relief.

- **Interaction with Patient on Display**

On the display mounted on the unit chair, the patient coming in the clinic can have a feeling of relief that bacterial contamination-free safe dental water is supplied.

- **Real time Supply of Sterilized Water**

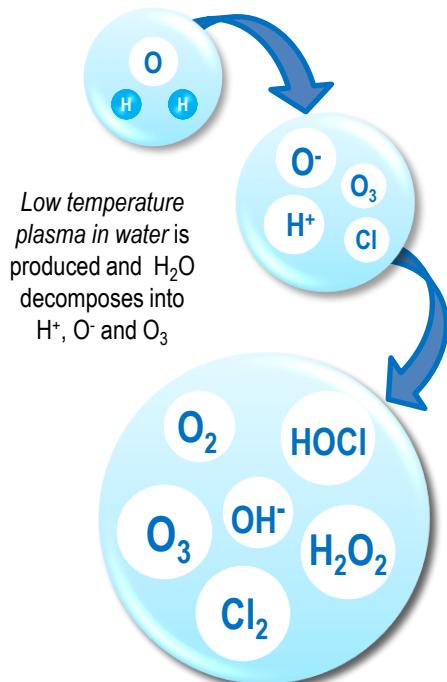
Plasma sterilized water supplied at real time maintain for using even a drop of water in relief with ultra-micro sensor.

- **Compact Size, Easy to Install**

Compact size of about a span, easy to install and so good as it doesn't take up much space even after installation.



NO Chemicals

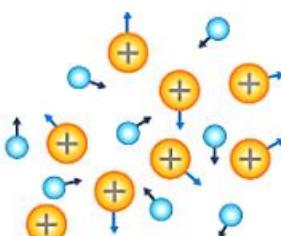


- ▶ **Hydroxide ion (OH^-)**
- ▶ **Hydrogen peroxide (H_2O_2)**
 - Its key features include being a strong oxidizing and bleaching agent, a disinfectant, and its instability
- ▶ **Hypochlorous acid (HOCl)**
 - It is highly effective at killing germs, reducing inflammation, and promoting wound healing. It is a weak, acidic, and water-soluble compound with a neutral charge that allows it to penetrate and destroy bacteria, fungi, and viruses.
- ▶ **Ozone (O_3)**

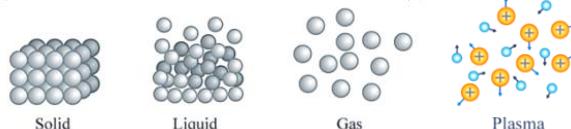
Remarks

- Must be used normal water or water that has been filtered through a coarse filter (no more than 500 CFU/ml of germs found).
- Water that has been through an RO machine cannot be used because RO water will not contain the necessary substances that break down into substances that have the ability to kill germs.

Note



Plasma

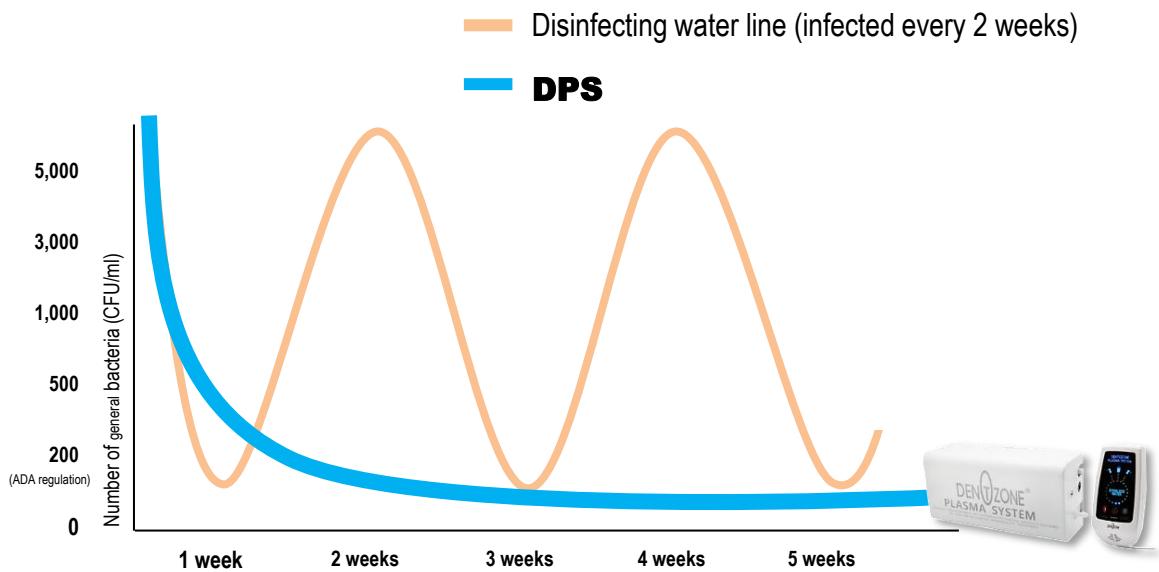


It consists of particles that have both positive and negative charges in proportions that make the net charge zero. Due to the rapid ionization process, the number of electrons released increases dramatically, which eventually breaks down and turns into plasma.



NO Bacteria

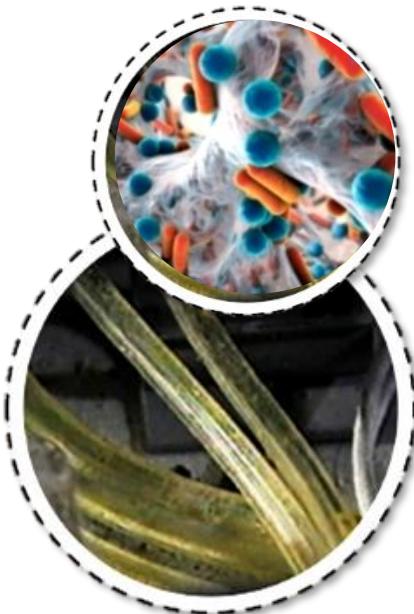
Number of general bacteria (CFU/ml)



- The graph shows that the **Dentozone Plasma System (DPS)** is **effective in continuously and long-lastingly eliminating bacteria**.



NO Biofilm



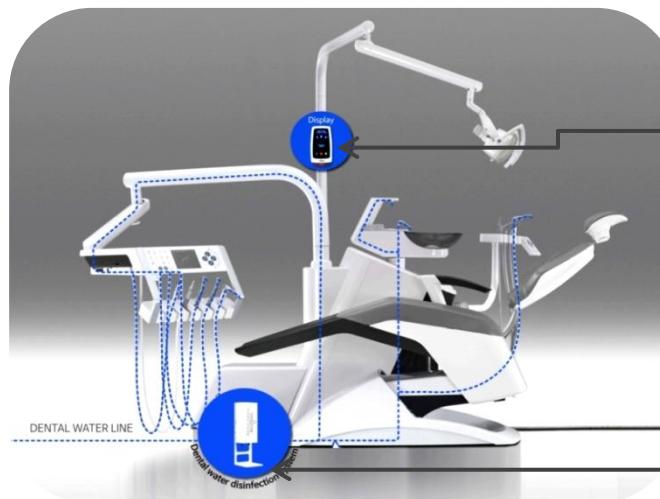
Biofilm problem that accumulates in medical instruments, which are delicate instruments with very small diameter water pipes and are prone to clogging.

In particular, stagnant water in pipes can harbor various germs, such as;

- Tuberculosis (TB)
- Pneumonia
- COVID-19
- Respiratory diseases
- Brain infections



NO Biofilm



Display



DPS

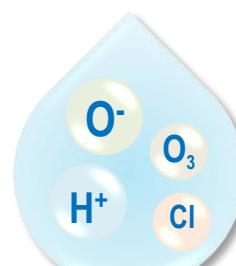


PROCEDURES



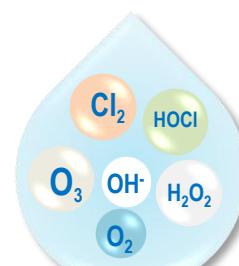
Step 1

Dental water **before** the sterilization.



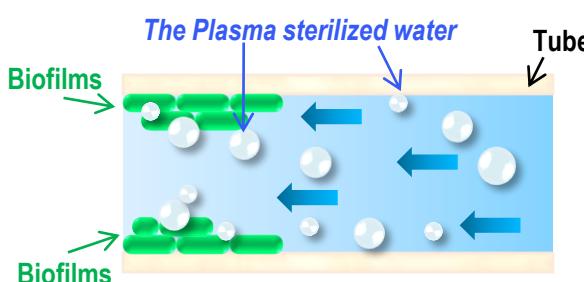
Step 2

Low temperature plasma in water is produced and H_2O decomposes into H^+ , O^- and O_3



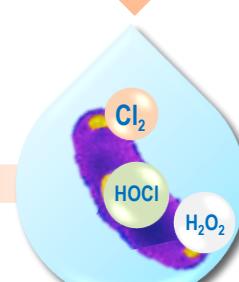
Step 3

It forms OH^- , $HOCl$ and H_2O_2 which are bactericidal factors.



Step 5

Biofilms formed in the thin and long tube are **removed** by **the plasma sterilized water**.



Step 4

These formed materials **destroy the biofilm and sterilize it**.



THE COMPARISON OF DENTAL UNIT WATER LINE



No	Section หัวข้อ	Water purifier น้ำบริสุทธิ์ (RO)	Chemical สารเคมี	DPS เครื่องฆ่าเชื้อ ^{ระบบพลาสม่า}
1	Sterilization การฆ่าเชื้อ	✗	✓	✓
2	Corrosion resistance ความทนทานต่อการกัดกร่อน	✓	✗	✓
3	Human Safety ความปลอดภัยต่อมนุษย์	✓	✗	✓
4	Prevention of infection การป้องกันการติดเชื้อ	✗	✓	✓
5	Persistency ความต่อเนื่อง (คงทน) ในการฆ่าเชื้อ	✗	✗	✓
6	Convenience ความสะดวก	✓	✗	✓
7	Features คุณสมบัติ	No bacterial suppression ไม่มีการฆ่าแบคทีเรีย	Disinfectants must be regularly Life shortened by corrosion chair ยาฆ่าเชื้อจะมีประสิทธิภาพอย่อนลงเรื่อยๆ เนื่องจากการเสื่อมสภาพของเก้าอี้ทันตกรรม	Eco-friendly & Automated control systems เป็นมิตรกับสิ่งแวดล้อม และมีระบบควบคุมอัตโนมัติ



แสกนเพื่ออ่านบทความงานวิจัยในหัวข้อ

" Plasma Sterilization Effectively Reduces Bacterial Contamination in Dental Unit Waterlines"



CLIENTS

Hospital

● Siriraj Piyamaharajkarun Hospital	Bangkok
● Chulabhorn Hospital	Bangkok
● Siriraj H Solutions	(5th Floor, ICS Lifestyle Complex)
● Phyathai-Paolo Hospital	(Srinakarin)
● Siriraj Academic Center of Geriatric Medicine	Samut Prakarn
● Nonthavej Hospital	Samut Sakhon
	Nontaburi

University

● Faculty of Dentistry, Chulalongkorn University	Bangkok
● Faculty of Dentistry, Srinakharinwirot University	Bangkok
● Faculty of Dentistry, Thammasat University	Bangkok
● Faculty of Dentistry, Khon Kaen University	Khon Kaen
● Faculty of Dentistry, Chiang Mai University	Chiang Mai
● Faculty of Dentistry, Naresuan University	Pitsanulok

Dental Clinic

● Dental Clinic	(Soi. Ladprao 111)	Bangkok
● Fun Yim Dental Clinic	(Huay Kwang)	Bangkok
● Rajapas-Anchana Dental Clinic	(Charan Sanit Wong Road)	Bangkok
● Art Dental Studio	(Wave Building, Wireless Road)	Bangkok
● Dentique Dental Clinic	(CDC, Praditmanutham Road)	Bangkok
● Dentopia Dentalligen Clinic	(Tha pra)	Bangkok
● Bank of Thailand Medical Clinic		Bangkok
● In-Orn Dental Clinic		Khon Kaen
● White Smile Dental Clinic		Lamphun
● Dr.Teera & Dr.Niramon Dental Clinic		Roi-Ed



J.E.B. MILLENNIUM (THAILAND) CO., LTD.



Established on November 7, 2000,
as an importer and distributor of medical and dental
equipment.

The company has been operating for over 20 years and has received continuous support, trust, confidence, and satisfaction from customers up until the present.

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