A double action blue light FotoSan® Blue

- Curing composites in 2s / 5s
- Killing bacteria with FotoSan® Blue agent in 10s / 30s

Features
- Battery type
- Nominal voltage
- Nominal capacity
- Charging time
- User capacity
- Output intensity
- Output spectrum
- Temp. protection of diode
- CE-class
- Electrical classification
- LED classification

FotoSan® Blue
- LifePO4
- 3.2V
- 1.200 mA
- Approx. 760s
- 3.700-4.000 mW/cm²
- 450-470nm
- Yes

Class 2 (EN 60601-1:2006)
Class 2 (EN 60825-1:2001)

Kit contains:
- FotoSan® Blue light
- Docking station
- Power supply: Plugs for mains: EU/US/AUS/UK
- Manual
- Barrier sleeves open 10 pcs.
- Barrier sleeves closed 10 pcs.
- Click-on protection

FotoSan® Blue agent
- Liquid 0.5 ml
- 10 syringes in a box

FotoSan® Blue agent
- Gel 0.5 ml
- 10 syringes in a box

FotoSan® Blue agent
- Gel 1.5 ml
- 10 syringes in a box

FotoSan® Blue 1-2-3 PerioKit
- 1 x FotoSan® Blue agent Gel 1.5 ml
- 1 x ProtectSan® Gel
- 3 x ProtectSan® boxes (each 30 lozenges)
- Tips: BLUNT 8 mm, END0 and PERIO
- 2 x covers

References (from centre fold):
6. Effect of photodynamic therapy on matrix metalloproteinase-8 (MMP-8) in periodontitis patients. Lean Heong Foo, Kai Soo Tan, and Lum Peng Lim, Faculty of Dentistry, National University of Singapore.
7. Effect of Photodynamic Therapy on Subgingival Microflora in Periodontitis Patients. Jacinta Loo, Kai Soo Tan, and Lum Peng Lim, Faculty of Dentistry, National University of Singapore.
Treatment with Light Activated Disinfection (LAD)

Light activated disinfection is a combination treatment between a photactive substance (photosensitizer) and light of a specific wavelength. The photosensitizer is stimulated by the light and transforms present O₂ to split into radicals O ᵂ or anions O⁻, collectively known as ROS (=Reactive Oxygen Specimens). ROS destroys bacterial cell membranes, thus eliminating bacteria within seconds.¹⁻²

Light activated disinfection has become increasingly popular in dentistry in the last 4-5 years where it is used in treatment of gingivitis, periodontitis, pericoronitis, periimplantitis and root canal disinfection. The most commonly used combination is red light with toluidine blue as photosensitizer. In extracted teeth FotoSan® LAD has shown significant root disinfection capabilities.³⁻⁴ On tissue and implant model studies, FotoSan® LAD was shown to be effective against a wide range of known pathogens.⁵ In controlled clinical trials FotoSan® LAD treatment has shown significant effects on BOP, pocket depth reduction and composition of periopathogen bacteria in patients with chronic periodontitis.⁶⁻⁸

Advantages of LAD

Antibiotics work in 12-24 hours. LAD works immediately and is effective against a wide variety of bacteria. As for antibiotics, there is a dose dependent effect of LAD. In practice this means that higher light energy, kills more bacteria.

According to WHO, one of the most serious challenges to our continued health care system are “super bugs”, bacteria, immune to known antibiotics. Every single time antibiotics are used, there is a potential risk of creating immunization to that specific drug. LAD does NOT create immunization. The bacteria cannot learn to become immune to the reactive oxygen specimens of the LAD treatment. LAD has no side effects at all - and as there is no immunizing effect and no side effects it means LAD may be used again and again.

- Immediate effect
- Effective against a wide variety of microorganisms
- Dose dependent effect
- No immunizing effect
- May be repeated again and again
- No side effects

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LAD quick guide

Peridontitis
Apply the FotoSan® Blue agent Gel in the pocket after scaling. Using the pen tip, light 10-20s for each surface in the pocket. The time setting depends on the pocket depth.

Endodontic disinfection
Apply the FotoSan® Blue agent Liquid in the root canal after instrumentation and rinsing. Using the endo tip, light 30-60s in the canal. The time setting depends on how deep the tip goes into the canal, i.e. size of canal.

Profound caries
Excavate until safe distance from the pulp. Apply FotoSan® Blue agent Gel in the cavity and light 30s with blunt tip (4 mm) attached.

Gingivitis
Apply FotoSan® Blue agent Gel on relevant gingiva and light 10s for every cm² with blunt tip (8 mm) attached.

Curing composites
The FotoSan® Blue is a very powerful blue light. It cures all materials based on camphorquinone as photoinitiator.

Use 2s per layer of 2-3 mm in a composite build up and finish with 5s of curing on top layer.

FotoSan® Blue agents

The active substance in FotoSan® Blue agent is riboflavin. The unique feature of the FotoSan® Blue agent is, that it is a powder filled in a syringe with a mixing ball. You draw up water, shake, and it’s ready to use. As a powder riboflavin has a much longer shelf life than a solution. However, the real novelty is, that you may mix the powder with 2 or 3 % H₂O₂ instead of water. Research has shown increased effect of the photochemical action when combined with application of H₂O₂.⁹

The photochemical action depends of the presence of oxygen, so simultaneous treatment with H₂O₂ facilitates the conversion of O₂ to ROS, and therefore increases the clinical effect.

FotoSan® Blue agent comes in two different viscosities:
- As a Liquid for root canal application
- As a Gel for pocket and surface application.

Time settings

The FotoSan® Blue light has 2 time settings for each of the 3 programs. You change between the green, orange and red program by pressing on the two buttons at the same time for 3s until beeping. Then scroll up or down between programs.

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