

REALITY NOW

The information source for esthetic dentistry

2014

FirstLook



Natural+

Meodental
www.meodental.com

PRICE
LED Lamp
\$1,450.00
Professional Kit
\$540.00 (6 patients)
Cost/patient/appt =
\$90.00

*Note: Meodental is offering **REALITY** members special pricing*

LED Lamp
\$1,299.00 (free w/
purchase of 10
Professional Kits)
Professional Kit
\$498.00 (6 patients)
Cost/patient/appt =
\$83.00

Direct ordering from the manufacturer's site is not yet available. To place an order, you must send the manufacturer an email using dror@meodental.com

WARRANTY
2 years

SHELF LIFE
Bleach 1.25 years
refrigerated
Other components
2 years room
temperature

BLEACHING – MATERIALS AND EQUIPMENT – POWER

Power bleaching is somewhat stagnant these days with loss-leader-like promotions and Groupon-type offers readily available in most metro markets in the U.S. Indeed, we were able to find a \$49/session "during happy hour" special from an office in our home office city of Houston, Texas.

Zoom WhiteSpeed seems to be the most heavily promoted system, although its manufacturer, Philips Oral Healthcare, has chosen not to submit it for a full evaluation, which is never a good sign. However, its predecessor, Zoom AP, was evaluated and received a rating of 4.0, which is a decent if not exemplary score. Philips's legacy power bleach system, BriteSmile, has been discontinued. Opalescence Boost from Ultradent is currently our top-rated power bleach and doesn't require an activation light,

although it seems that some patients don't feel they are getting the best bang for their buck if a light is not used.

This brings us to Natural+ from a new company called Meodental, which is based in Israel. The product itself, which comes in power and home versions, is stated to be "100% ecological, 100% effective, and having a "patented formula". Its long list of bullet points is truly impressive and includes claims to cause "virtually no sensitivity during and after the procedure", "inclusion of Dead Sea minerals", "calcium and fluoride released", "enamel layer protection as well as reinforcement of dentine", "non-toxic, ecological and stabilized hydrogen peroxide (patented)", "neutral pH", "progressive and sustained release of active ingredients", "long-lasting results", "immediate improve-

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American Association of Dental Editors

ment up to 8 shades”, and “treats all stains including fluorosis and tetracycline”.

Whew, remember we stated the list is impressive and we even left out a few bullets! So how does this stuff achieve its miracles?

Well, first and foremost, it uses a really cool and unique light that is part bleach activator and part entertainment system. The bleach activator part consists of a small light generator that contains LEDs emitting 470 nm blue light and 660nm red light. More on these LEDs below. This generator connects through a cable to a small control box that is designed to mount on a pole on your dental unit via two, Velcro-type straps on its back.

This relatively small control box design, which is contemporary and clean but not quite cutting edge, eliminates the somewhat bulky stands of most other bleaching light units. Not only do the stands take up a lot of space in treatment rooms, there also never seems to be a good place to park them when they are not being used.



Control box

The front of the control box has the soft-touch buttons that operate the unit and the LED display panel, which tells you which power level you are using and the remaining time for bleaching. The bottom has two connections, one for the power cord and one for the light generator. The top row of buttons includes power, start/pause, and up/down, which allows you to increase the bleaching time from the default of 30 minutes. The bottom row has a curing button with a default time of 60 seconds, then the three power level buttons: high, normal, and low. There is a beep whenever a button is activated.

The light generator mounts into a slot on a u-shaped-like arm that looks like an elongated, single bar, football face-mask. A simple thumb-screw provides the stability of the generator due to its small size and minimal weight. This apparatus attaches to a more or less typical padded, over-the-head headphone that gives it entertainment status. There is a cable with one end that bifurcates so it can connect to each headphone, while the other end inserts into the headphone jack on your mp3 player or mobile phone so you can listen to whatever you choose during the bleaching session.

There are paper-like barriers for the ear pads, but no type of barrier for the over-the-head straps. Since patients come in with all kinds of greasy stuff in their hair, you may want to provide your own, disposable, hair coverings (like the kind used in the food industry) before placing the headphones into position.

The front end of the light generator has the familiar wrap-around design so the light can illuminate even the premolars directly. It is framed with a contoured, photobloc orange shield to protect the operator’s eyes. While the manufacturer states the unit is silent, the fan keeping the LEDs cool and which vents on the top of the light generator still produces a low hum. Although it is hardly annoying, it is also not silent either.

The 470nm blue light is the spectrum that activates the bleaching material, while the 660nm red light is stated to protect the soft tissue since this wavelength presumably can be used by cells for healing effects and has supposedly been used to assist the absorption of minerals such as calcium and fluoride into enamel. The LEDs have a projected lifespan of 50,000 hours, which means you would be able to bleach at least 50,000 patients even if you used the 60 minute bleach cycle. In other words, you will probably never have to change out the LEDs!

The Professional Kits come in a shrink-wrapped cardboard box that identifies the product as Natural+ on two sides as well as the top, although “Professional” is only printed on the top. This identification section is actually a slide-off sleeve, with the tray inside containing six smaller, toothpaste-sized boxes of the auxiliary items. The bleach itself, which comes in separate packing so it can be refrigerated, is sequestered in six, sealed, attached foil packs. When it comes time for bleaching, separate one pack from the rest through the slot already cut into the end of the pack.

The bleach comes in two syringes, one holding the 35% hydrogen peroxide and the other with the activator. You connect the syringes using the Luerlock device and then move the contents of one syringe into the other repeatedly at least five times for mixing. Leave the mixed contents in one syringe (doesn’t matter which one) and mount a

dispensing tip on the syringe. You are supposed to allow the mixed bleach to sit for 5-8 minutes before using it.



Natural+ syringes after mixing

The manufacturer claims the bleach will continue to whiten throughout the bleaching session and doesn't have to be refreshed. This means you can apply it and not have to bother with suctioning and reapplying at certain intervals during the session. It also has a high water content to prevent dehydration, high molecular mass thickener to preserve optimal water content, and high viscosity so it stays in contact with the teeth and doesn't run off.

To use, you insert the supplied lip retractor, which also acts as a tongue shield. Then, instead of polishing the teeth to remove any stains that may have accumulated since the patient had a prophy, apply the PowerPrep+, which is a neutral pH, aqua-colored, stain-removing gel containing citric acid, potassium nitrate, fumed silica, and water. You are supposed to apply it to both the facial and lingual of the teeth to be bleached and allowed to dwell for 6-10 minutes.



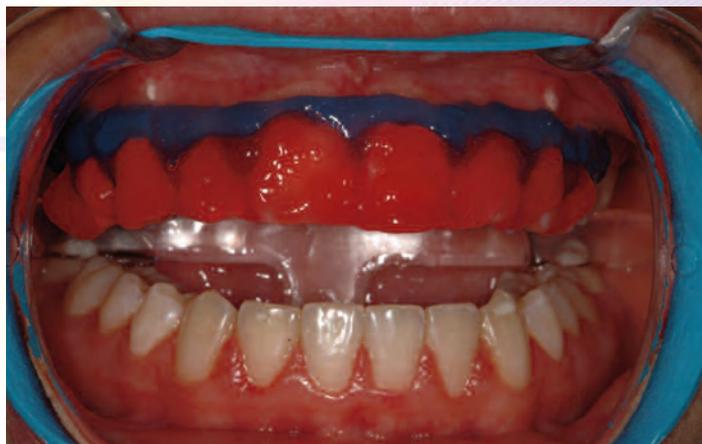
PowerPrep+ has a neutral pH

This gel is supposed to remove stains, desensitize teeth, and allow the bleaching gel to penetrate into the enamel more expeditiously. However, due to its neutral pH, how it accomplishes this last feat is a mystery. And note that in our test patients, the enamel definitely lost some of its pretreatment gloss after this material was applied and rinsed. So it seems to behave like a mild etchant, notwithstanding its neutral pH. Rinse the gel thoroughly and dry the teeth and gingiva.

Then apply and light cure the dark blue resin shield as you would for any other bleaching system. We found this gel to have a nice consistency, neither too thick nor too thin.

You can then apply the orange/red whitening gel directly from the syringe you previously prepared, using a dispos-

able brush to spread the gel completely over the facial surfaces of the teeth. Alternately, you can dispense more gel into a dappen dish and apply it to the teeth using the brush. We also found this gel to have a nice, easy-to-apply consistency without being runny or too thick.

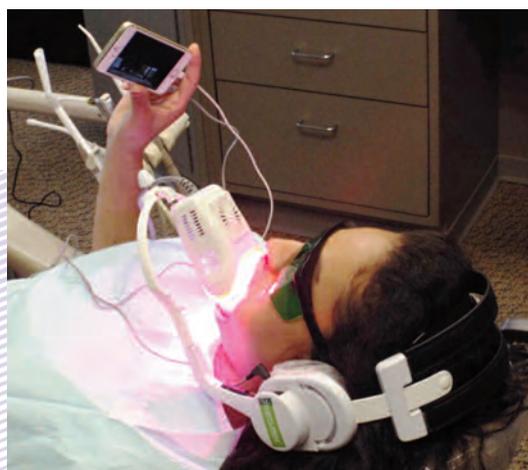


The dark blue resin shield and the bleach gel have been applied

Then place the light generator/headphone apparatus on the patient and activate the light for the time and power level you choose. Since you have already prepped the patient and since most patients want the maximum bleaching effect, we would suggest overriding the default 30 minute time and use the maximum 60-minute session. If the patient becomes impatient before the 60-minute session expires, you can always terminate it early.

Same goes for the three bleaching levels. As long as the patient has no sensitivity during the session, we suggest using the high bleaching level. As with the time, you always have the option of reducing the power level if necessary to ensure patient comfort.

If, for any reason, you need to temporarily stop the procedure before the end of the session, push the start/pause button — this will turn off the light and the timer. To restart the session, push the button again.



The light generator/headphone apparatus has been placed on the patient, who is using her iPhone to watch a movie



A closer view of the bleaching light in position

When the bleaching session has expired, you will be alerted with three short beeps followed by one longer one, along with the light deactivating automatically. Then take off the light/headphone combo, suction the bleaching gel and rinse well, Remove the resin shield, prophylax the teeth, and apply the nourishing/soothing balm with your finger all over the teeth. This balm contains potassium nitrate, sea salt, dicalcium phosphate, eugenol, and fluoride.

There are three sets of written directions, but none of them give you specific instructions on bleaching time and power levels. The manufacturer's site has a well-done video, although some of the terminology did not match the version of the product we were provided.

We used Natural+ on two patients for this preview. While the first patient (35 year old female), who was bleached for 30 minutes using the normal mode, went from A2 to B1, the visible differential at one week between the bleached maxillary teeth and the control mandibular teeth was not spectacular. This patient did not experience any sensitivity during or after the bleaching session.

The second patient (16 year old female), who started about A1.5, was substantially lighter than B1 after one week and the visible differential between the treated and control teeth was quite dramatic. However, this patient was bleached for 60 minutes (normal setting) and new bleach was applied every 15 minutes. This patient also did not experience any sensitivity during or after the bleaching session.



Maxillary bleached arch at 2 weeks is visibly lighter than mandibular untreated control

Therefore, regardless of your application technique, we advise using the 60 minute setting assuming the patient does experience any distress during the appointment.

Note: More testing is planned and the results will be posted when available.

Natural+ has the potential to be the power bleaching system we've been searching for. It has clever engineering for the hardware and its chemistry is quite innovative. As noted previously, more testing is necessary, but initial results are certainly promising.

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