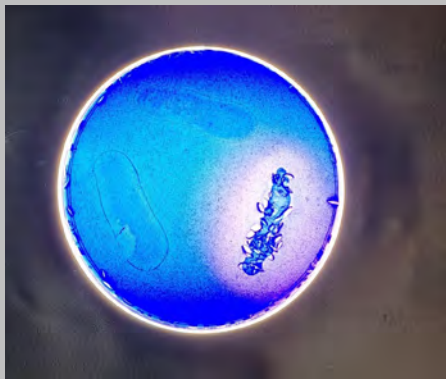




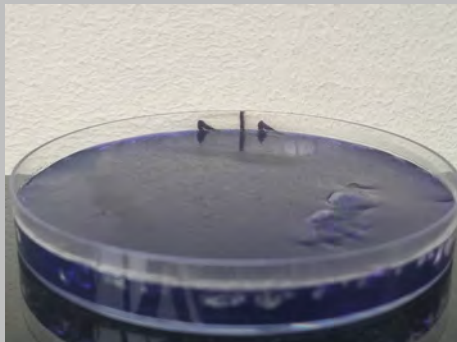
NanoWhite  
QuantumBleach



Up: SB 50% H<sub>2</sub>O<sub>2</sub>, right: SB gel 35% H<sub>2</sub>O<sub>2</sub>,  
left: SB 3% H<sub>2</sub>O<sub>2</sub>, no illumination,  
9' interaction time.



Idem as left, with 9' 3LT illumination.



Surface view.



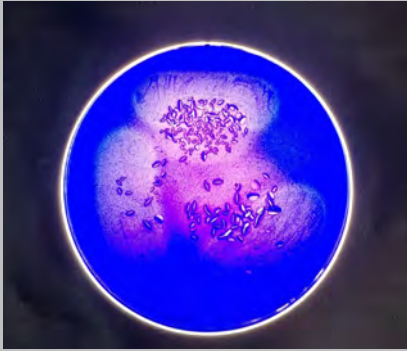
Surface view.



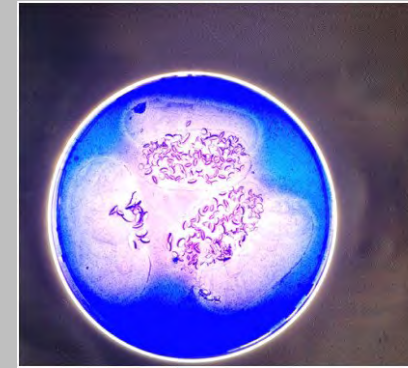
Surface view.



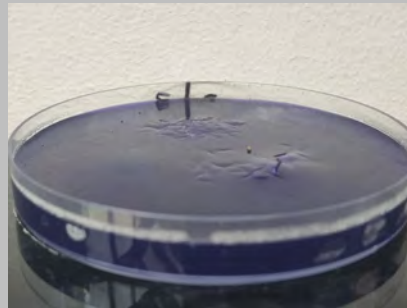
Surface view.



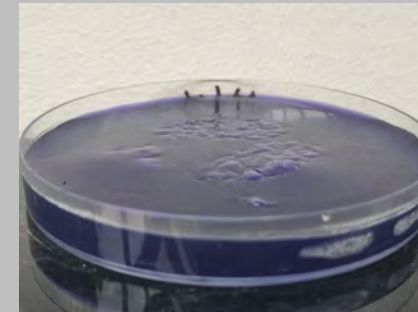
3 different compositions of NanoWhite, outer circels: 3% H2O2, inner circels: 12% H2O2, 9', no illumination.



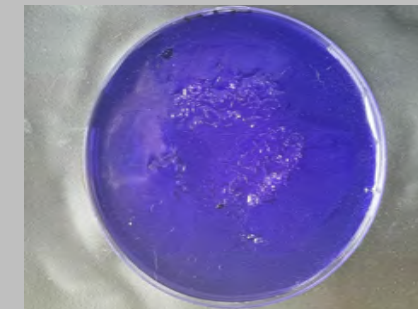
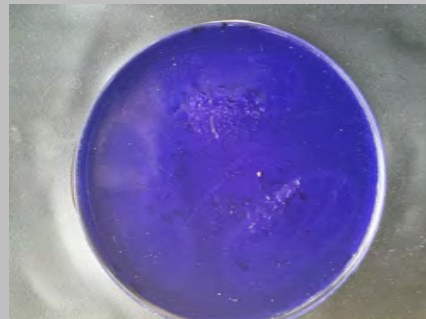
Idem as left, with 9' 3LT illumination.



Surface view, above & down.



Surface view, above & down.





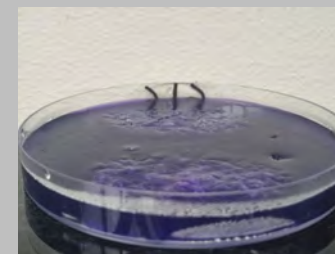
NanoWhite 12% H2O2, 36' interaction time.  
Up: removing gel, rinsing & drying after 9' and after 18', down: no removing of the gel, both, no illumination.



Idem as left, with 36' 3LT illumination



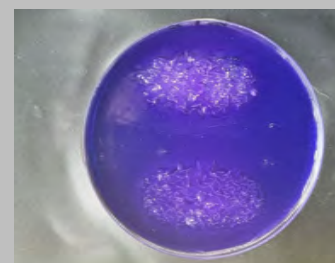
Surface view.



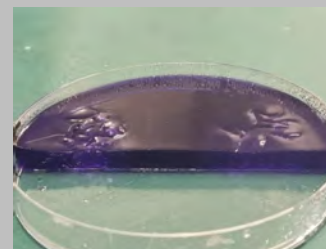
Surface view.



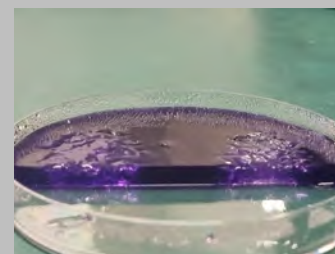
Surface view.



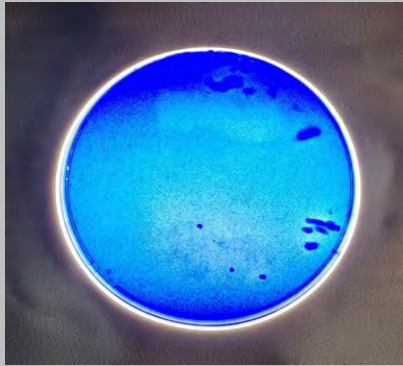
Surface view.



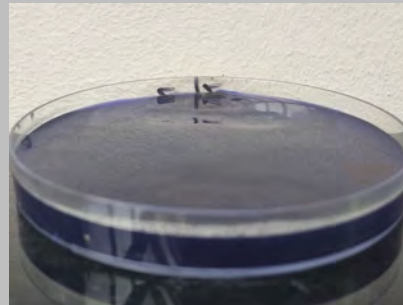
Cross-sectional view of the images above: left, changing of the gel, right, no changing,



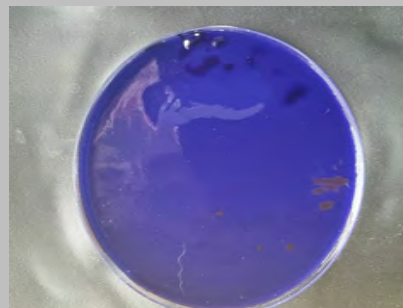
Idem as left, with 36' 3LT illumination.



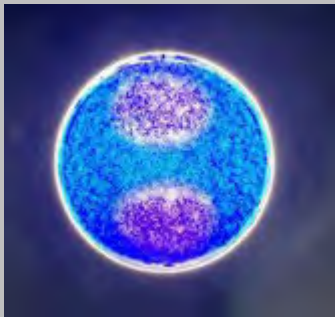
Up: Cavex Bite & White, 16% carbamide peroxide, 1 hour interaction time. Down: Cavex Bite & White bleach tray, 6% H<sub>2</sub>O<sub>2</sub>, 15' interaction time.



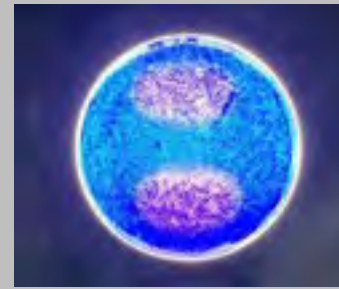
Above & below, surface view.







Up: NanoWhite 9% H<sub>2</sub>O<sub>2</sub>, down: NanoWhite 12% H<sub>2</sub>O<sub>2</sub>, rinsing and drying, no illumination; 36'' interaction time



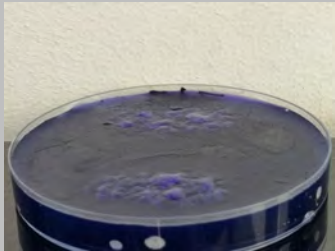
Idem als left, with 36' 3LT Illumination



Surface view.



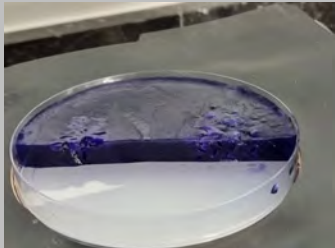
Surface View.



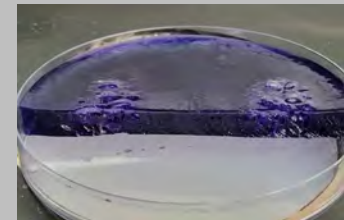
Surface view.



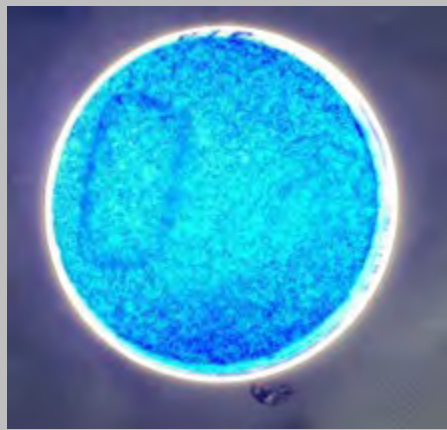
Surface view.



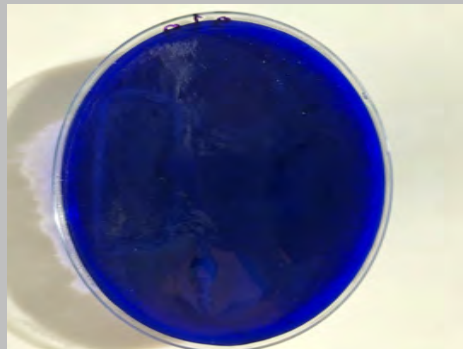
Cross-sectional view of the images above, right 9% H<sub>2</sub>O<sub>2</sub>, left 12% H<sub>2</sub>O<sub>2</sub>.



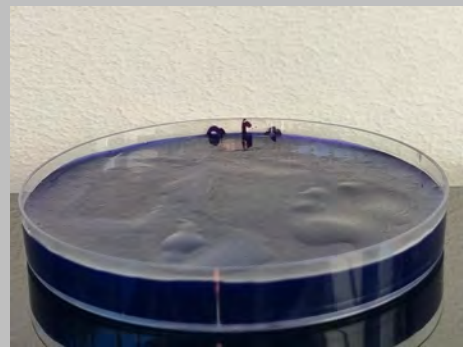
Idem as left, with 36' 3LT Illumination.



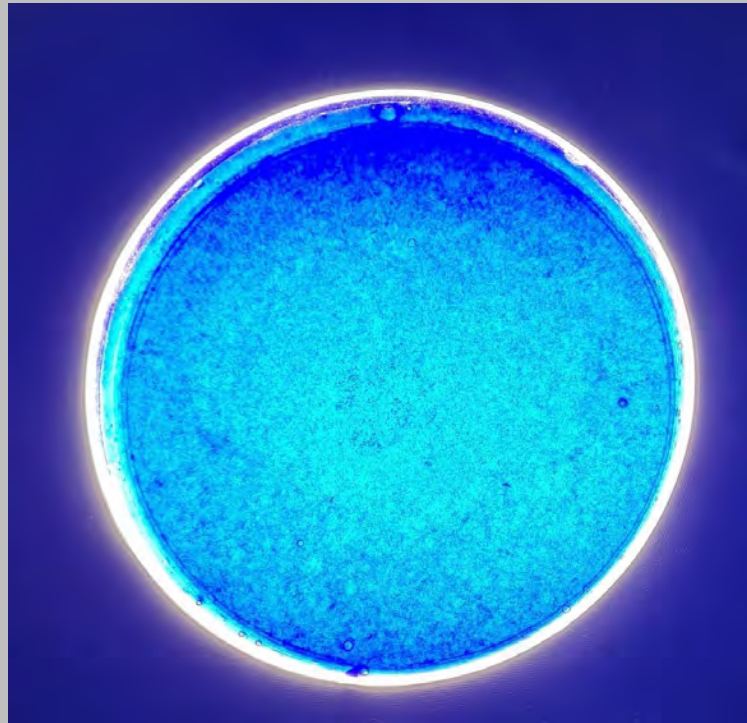
Up: Cavex Bite & White bleach tray, 6% H<sub>2</sub>O<sub>2</sub>, 15' interaction time. Right: Cavex Bite & White, 16% Carbamide peroxide, 1 hour interaction time. Down: Clear Smile with illumination, 16' interaction time. Left: Clear Smile charcoal bleach strips, 30' interaction time.



Surface view.



Surface view.

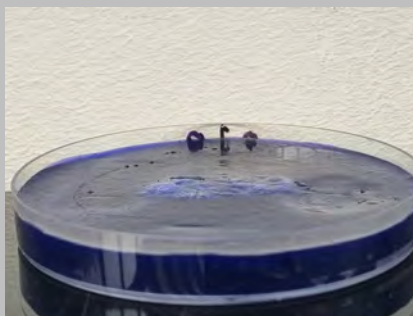


Middle: Cavex in-office, 25% Hydrogen Peroxide Super, 3 times 20' interaction time while applying fresh gel, according to the manufacturer instructions. No changes/reaction, no oxidation of the MB, as in sample/slide above, with 4 different types of @home bleachproducts, no bleaching reaction.





Midle: NanoWhite 12% H<sub>2</sub>O<sub>2</sub> with gingival protector,  
rinsing & drying,36' interaction time with 3LT illumination.



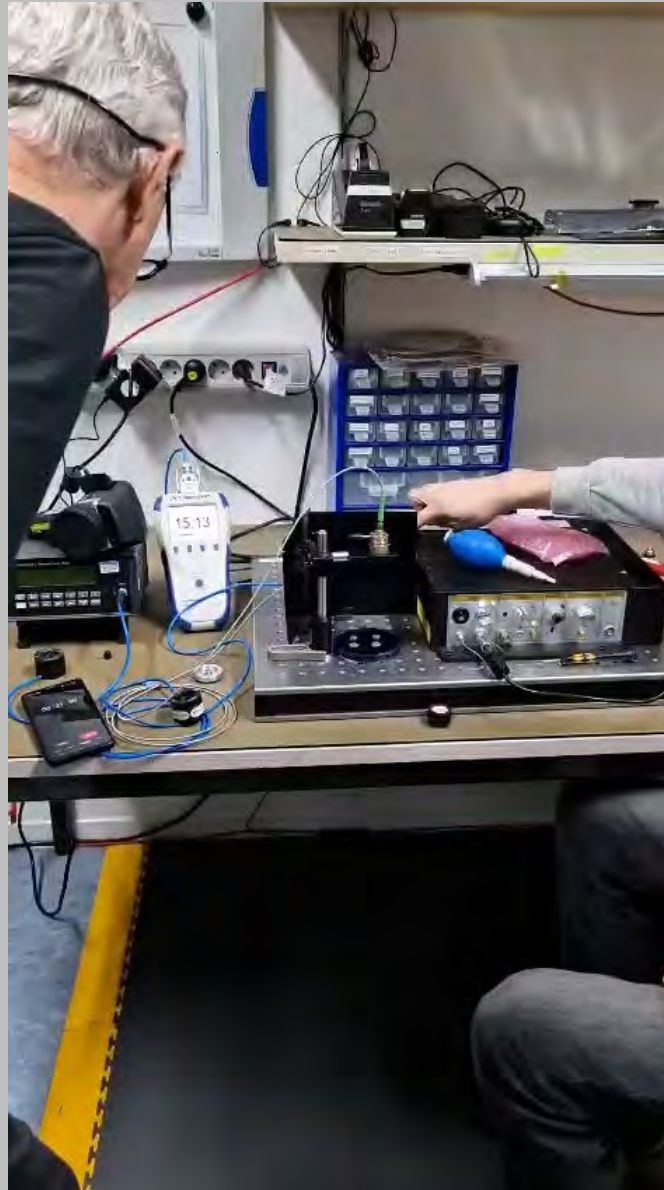
Surface view.



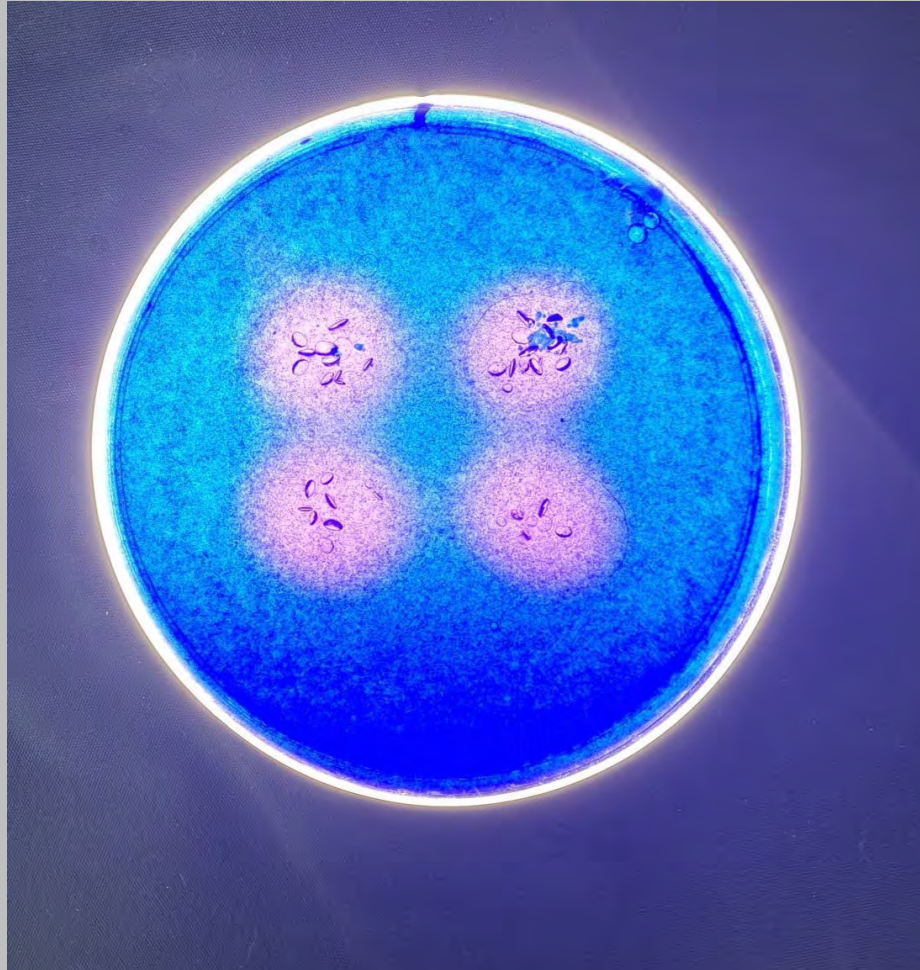
Surface view.



PicoQuant lab, Berlin, April 26 2024



Pico Quant lab, Berlin, April 26 2024

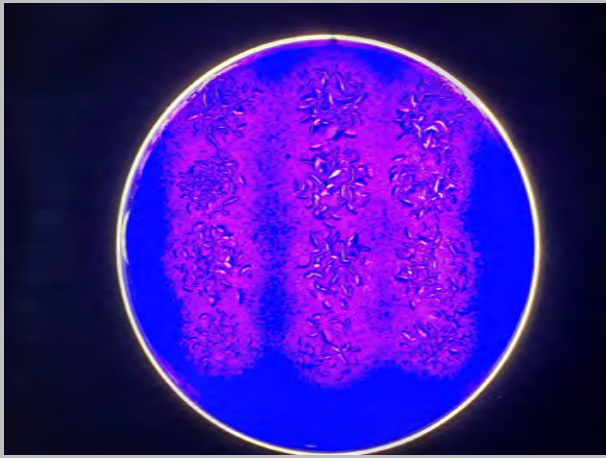


Trials at PicoQuant. Up, NanoWhite 12%, down, NanoWhite 12% & gingival protector. Left, without illumination, right, with 2 times 30'' illumination with a picosecond pulsed 266-355-532 nm laser. Rinsing and fresh gel after 10', 2 applications.

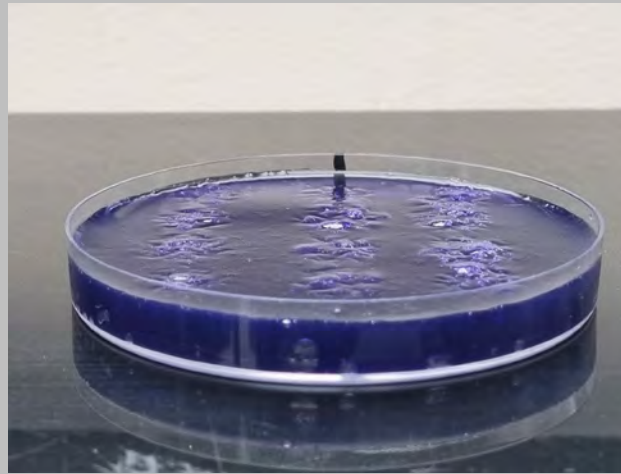


Up, 12% H<sub>2</sub>O<sub>2</sub>, Werken met Merken, down, 30% H<sub>2</sub>O<sub>2</sub>, pharmacy, with a sample of agar-plate-MB. Up, complete oxidation of both MB and agar-gel. Down, even no oxidation of the dissolved MB.

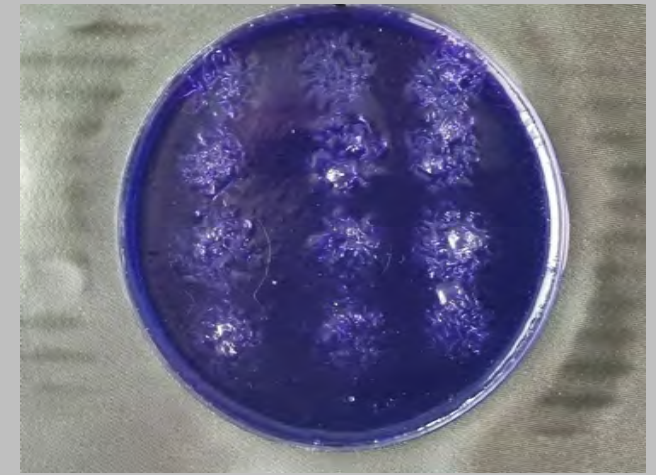




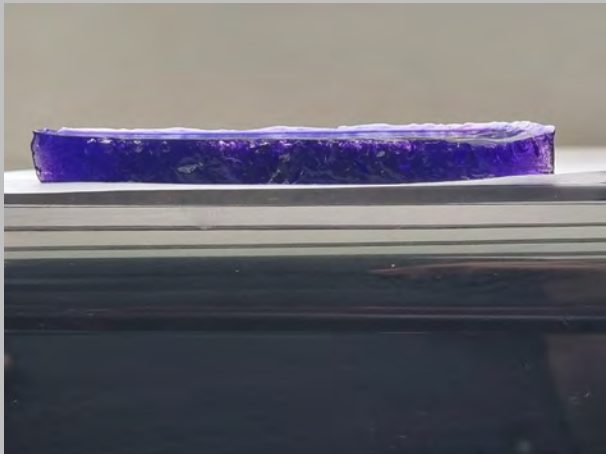
Up: NanoWhite 12% H<sub>2</sub>O<sub>2</sub>; 6 samples. Down: NanoWhite 12% H<sub>2</sub>O<sub>2</sub> & gingival protector; 6 samples.



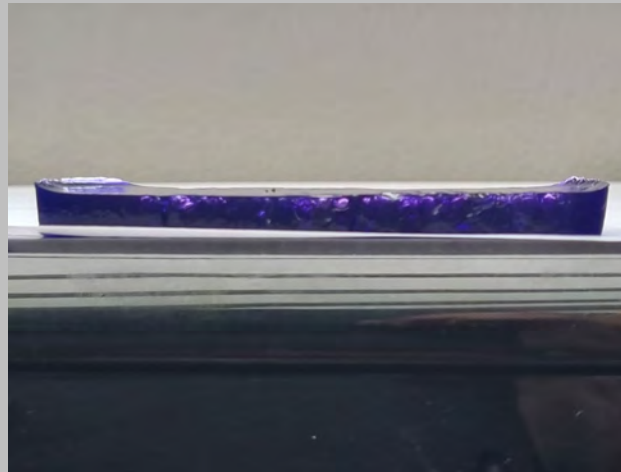
Left: KTP laser irradiation; sample 1 and 3; 1W,30"; sample 2 and 4; 2 W 30".



Middle; controle group, no illumination. Right: 3LT illumination, 9' overall all 4 samples.



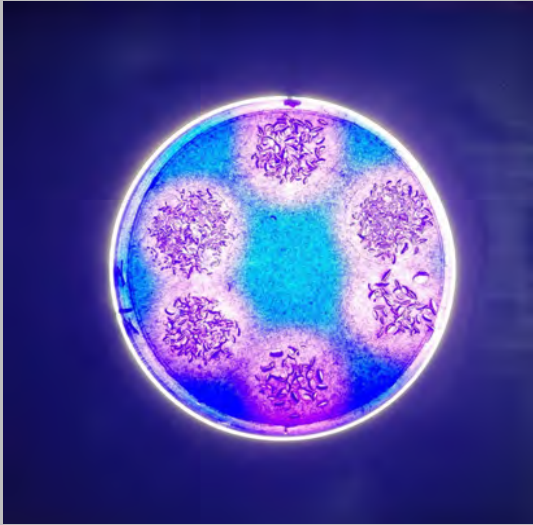
Cross section of the KTP laser group: 1W or 2W continiuous wave, 30", 9' gel interation time, rinsing & fresh gel; 30", 9', rising & fresh gel; 2 times 30", 18' interaction time.



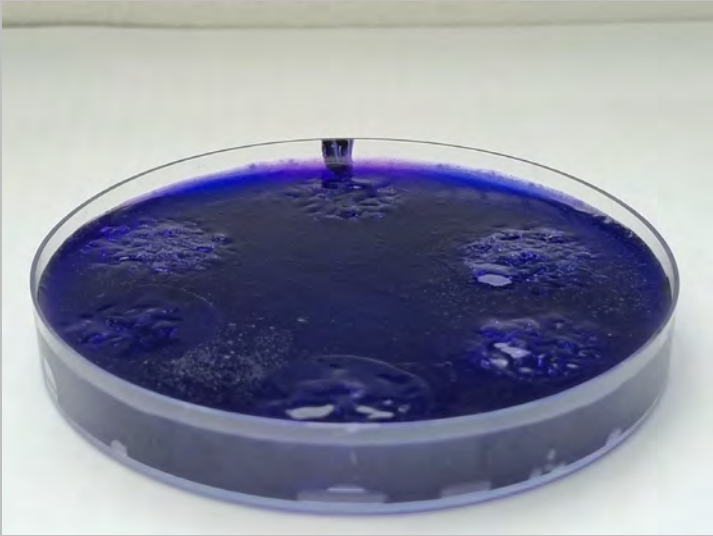
Cross section of the controle group: 9' interaction time, rinsing & fresh gel, 9' , rinsing & frsh gel, 18' interaction time.



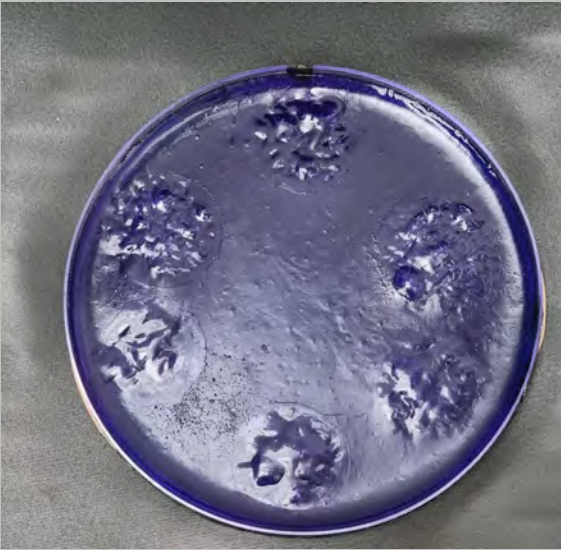
Cros ssection of the 3LT group: same procedure as previous groupes, with an overall illumination of 36', all 4 samples.



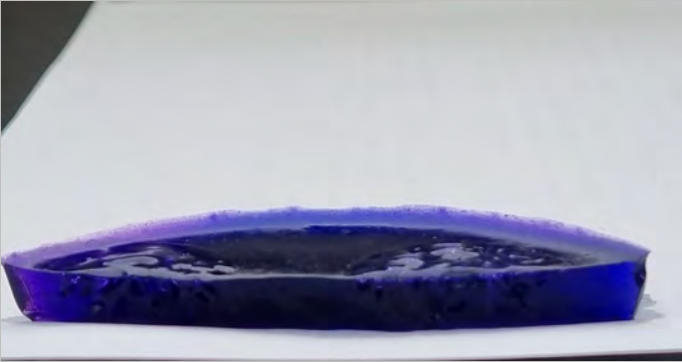
Up: NanoWhite 12% H<sub>2</sub>O<sub>2</sub>, with photosensitiser; 3 samples. Down: NanoWhite 12% H<sub>2</sub>O<sub>2</sub> without photosensitiser; 3 samples.



Left: irradiation with Blue Phase Power cure, 1380mw/cm<sup>2</sup>, 4,5'.



Middle: controle gorup, no illumination.  
Right: 3LT illumination, 250 mW/cm<sup>2</sup>, 9' overall all 2 samples.



Cross section of the Bleu Phase group: 4,5' illuminaton, 9' gel interaction time, rinsing & fresh gel; 4,5', 9', rinsing & fresh gel; 2 times 4,5', 18' interaction time..



Cross ssection of the controle gorup: 9' interaction time, rising & fresh gel; 9', rising & fresh gel; 18' interaction time.

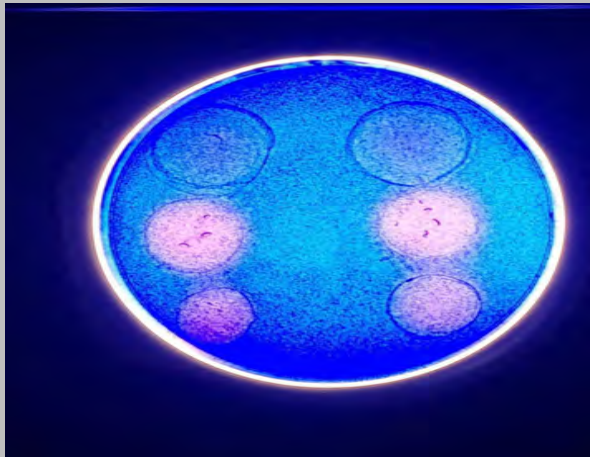


Cross section of te 3LT group: same procedure as previous groups, with an overall illumination of 36', all 2 samples.





left: nano 1 with 12% H<sub>2</sub>O<sub>2</sub>, moderate reaction. Middle: nano 2 with 12% H<sub>2</sub>O<sub>2</sub>, no reaction. Right: combination of nano 1 and nano 2, severe reaction.



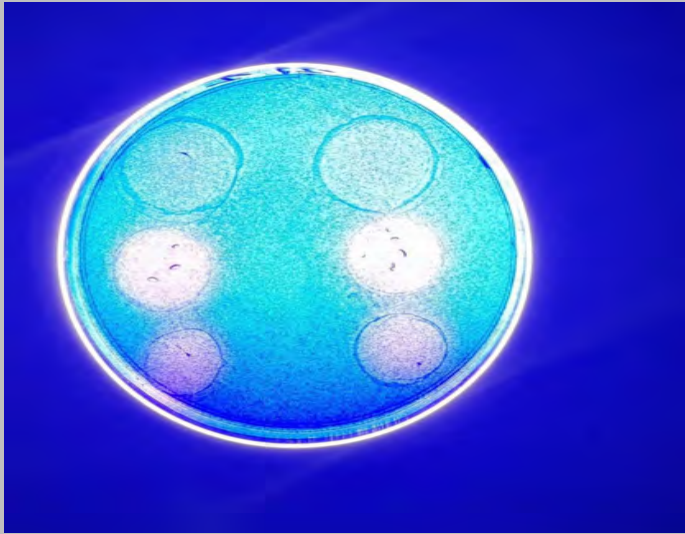
Up: no bleaching with SB en gold nano's. Down: moderate reaction without nano's. Middle: best bleaching action with NW nano's.



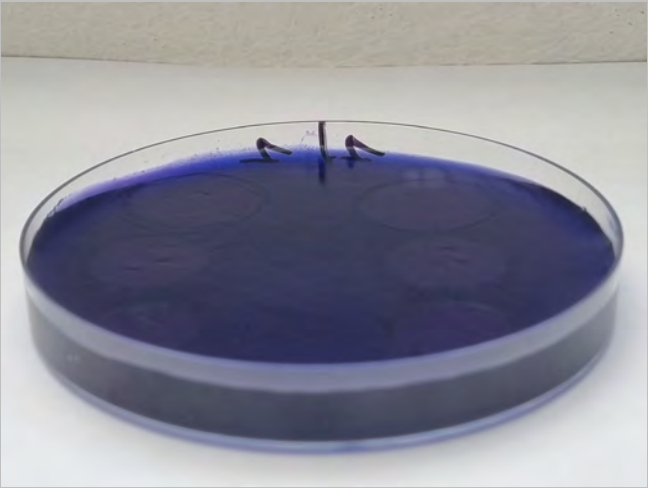
Up: SB gel with gold nano's, middle with NW nano's, down without nano's, 12% H<sub>2</sub>O<sub>2</sub>. Left: no illumination, right 30'' KTP laser, SB protocol, 30' overall interaction time.



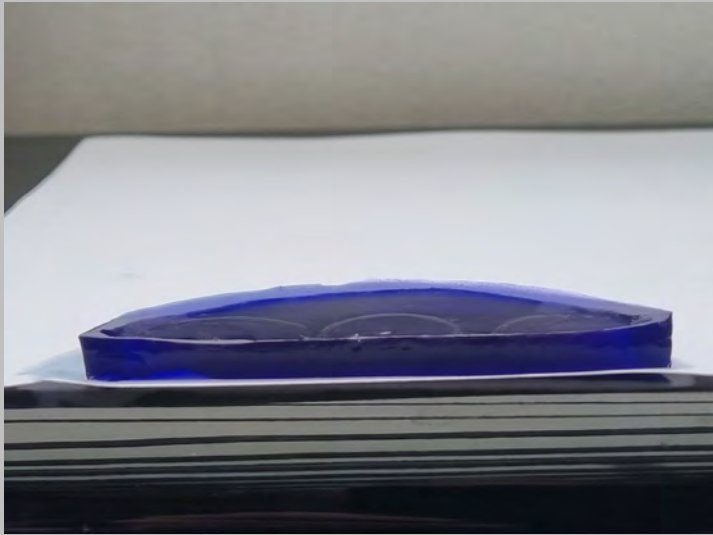
Surface view.



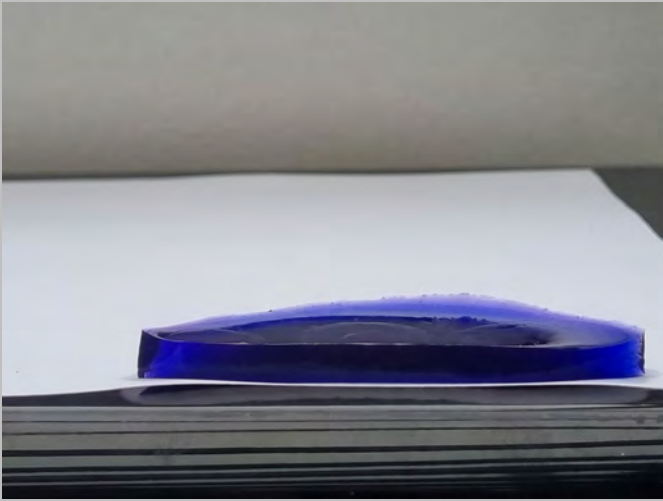
Up: no bleaching with SB en gold nano's. Down: moderate reaction whithout nano's. Middle: best bleaching action with NW nano's.



Surface view.

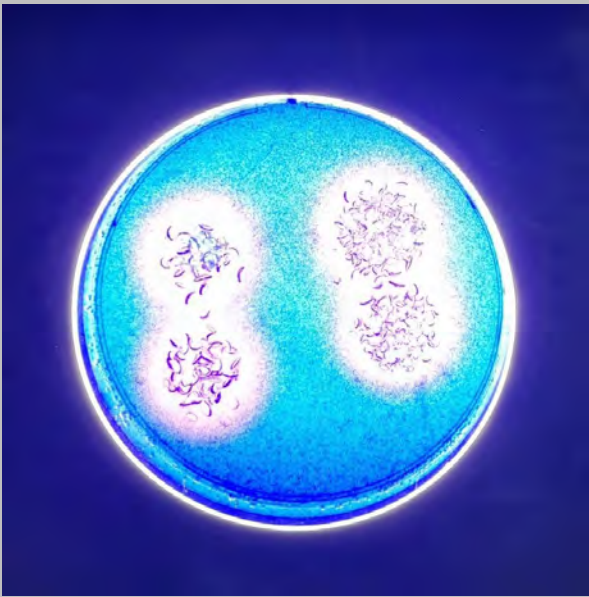


Cross section of the left group, no illumination.

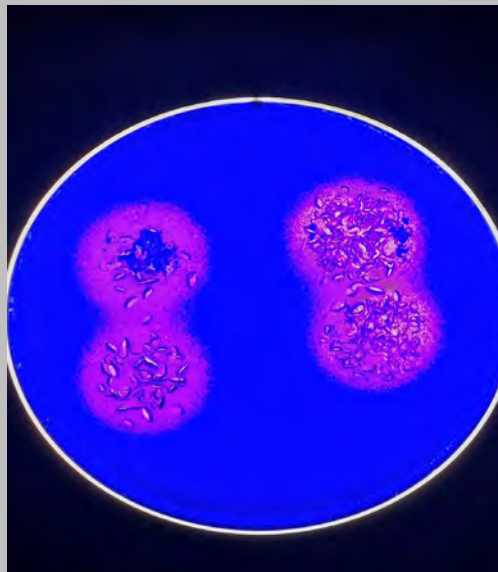


Cross section of the right group with illumination.





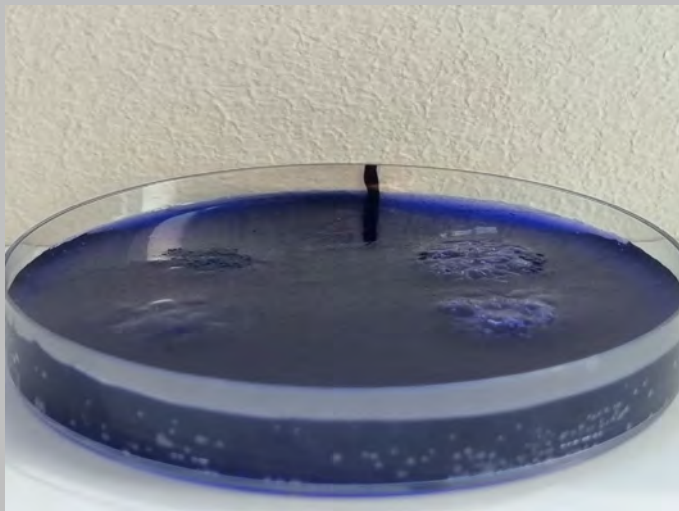
Up: NW gel with nano's, 12% H<sub>2</sub>O<sub>2</sub> and gingival protector.



Down: NW gel without nano's, 12% H<sub>2</sub>O<sub>2</sub> and gingival protector.



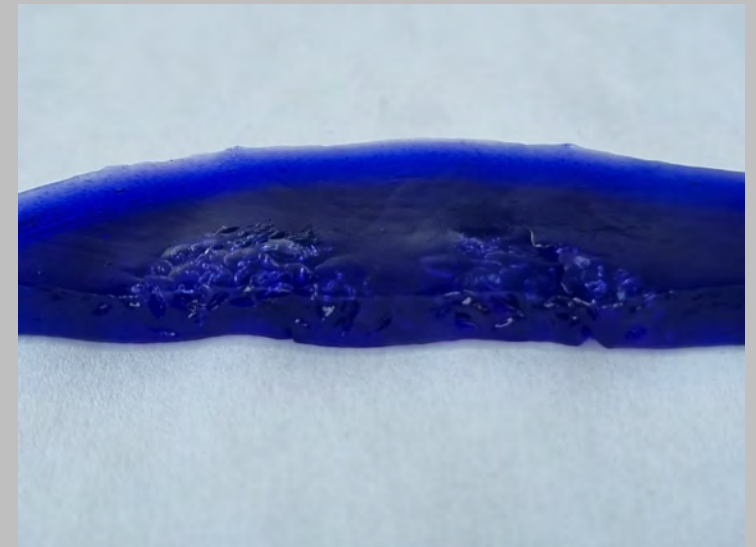
Left: no illumination. Right: with illumination, 3LT protocol.



Surface view.



No 3LT illumination.

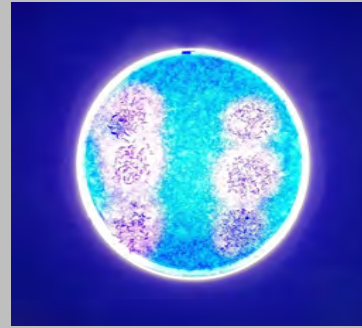


With 3LT illumination.

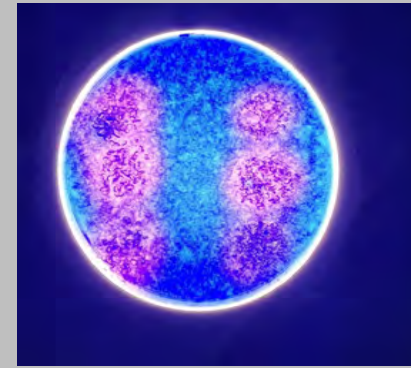




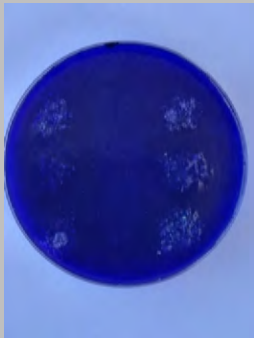
Up: NW gel, 12% H<sub>2</sub>O<sub>2</sub>,  
gingival protector.



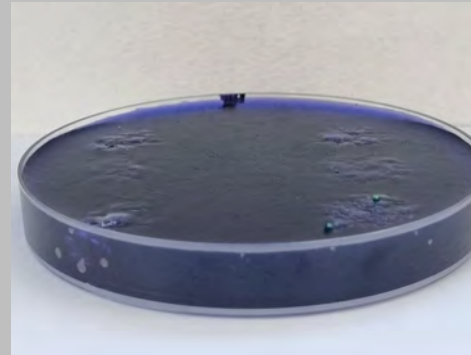
Middle: NW gel, 12% H<sub>2</sub>O<sub>2</sub>,  
gingival protector, without  
nano's.



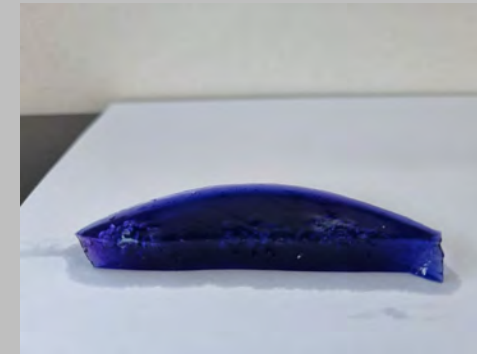
Down: NW gel, 50% H<sub>2</sub>O<sub>2</sub>, gingival  
protector, without nano's.



Left: no illumination.



Right: illumination with  
dermatological UV light.



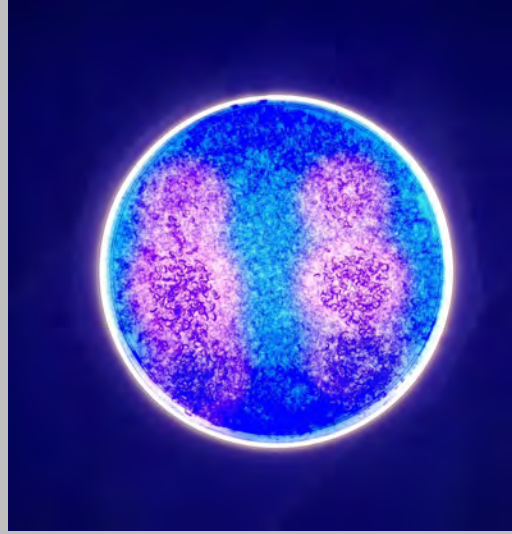
Left group, 2 times 9'  
interaction time.



Right group, 2 times 9' UV illumination



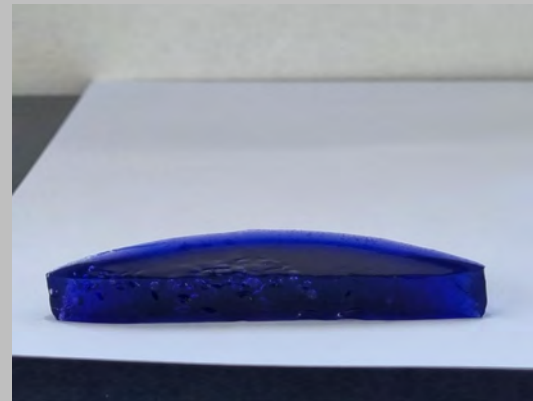
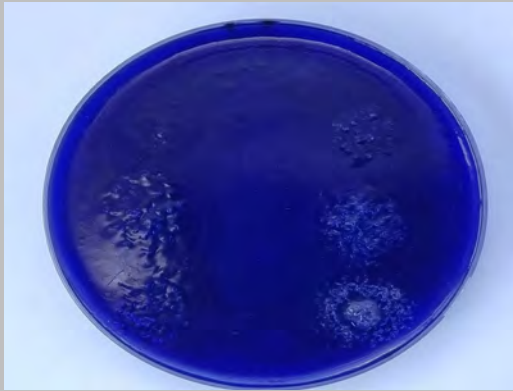
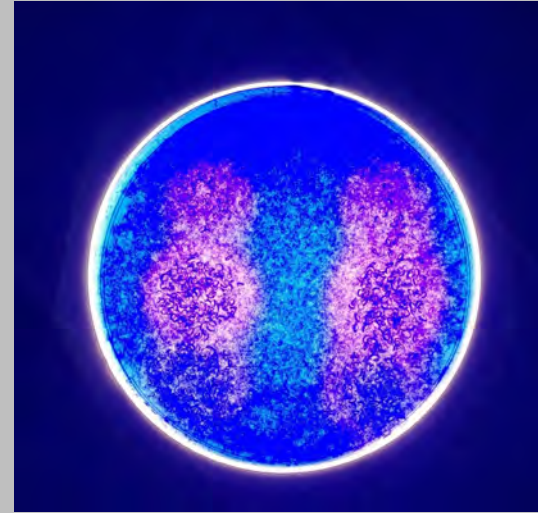
Up, middle, down: same gel compositions as previous slide.



Left: no illumination.



Right: 5' UV, 5' 3LT, rinsing, fresh gel, 5' 3LT, 5' UV.





Left:3LT. Right: Philips Zoom led, 195 mW/cm<sup>2</sup>, spectrum 400 – 505 nm.



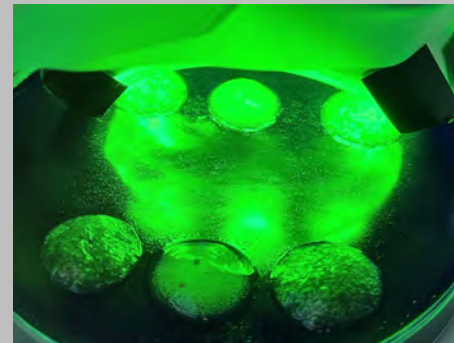
Up: NW gel. Middle: NW gel without nano's.



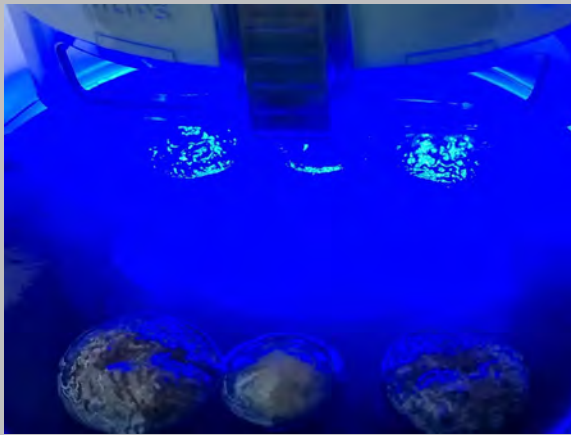
Down: NW gel without photosensitizer..



Philips led, induces an overall increase in the in-vitro gel temperature of aproximately 8° C, 3LT, an average of 5° C.







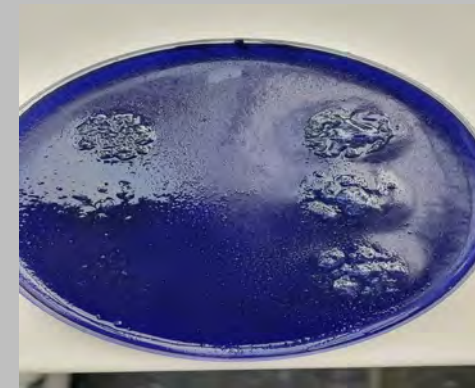
Philips led illumination.



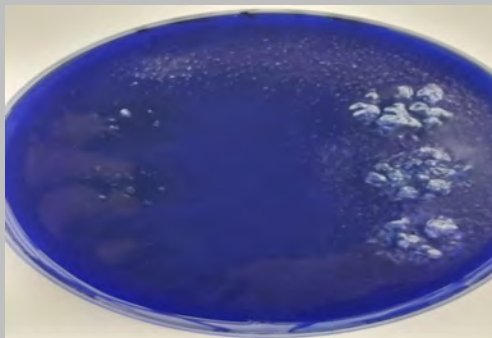
Left: controle group. Right, 3LT illumination, 3LT protocol.



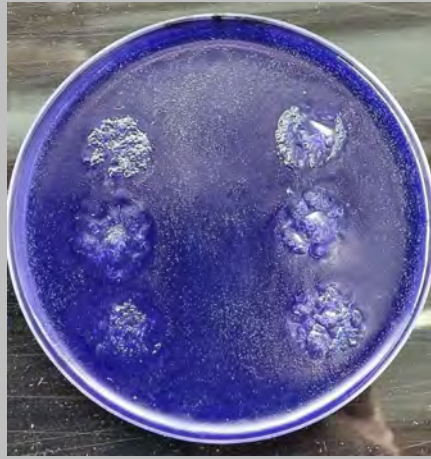
Left: controle group. Right: Philips led illumination, 3LT protocol.



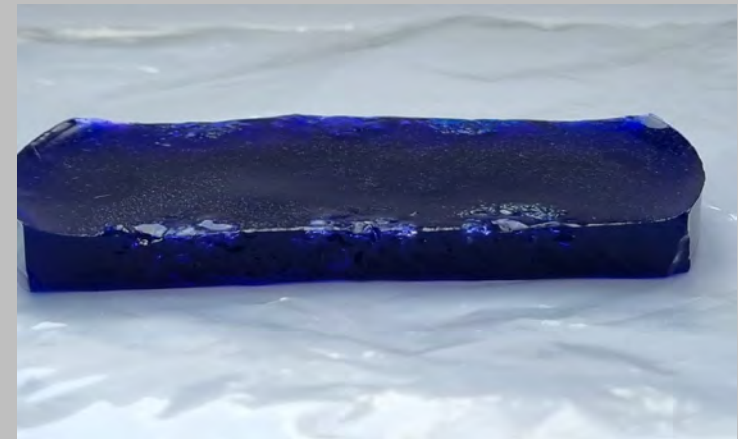
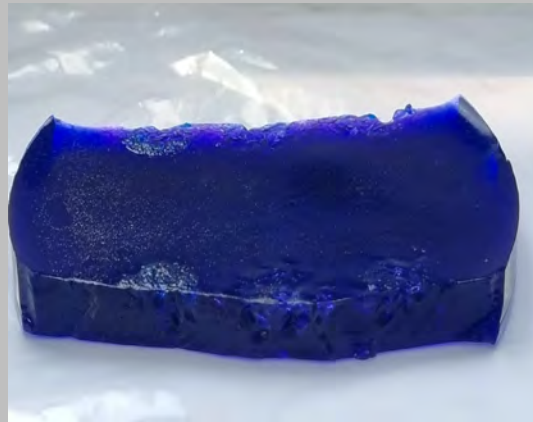
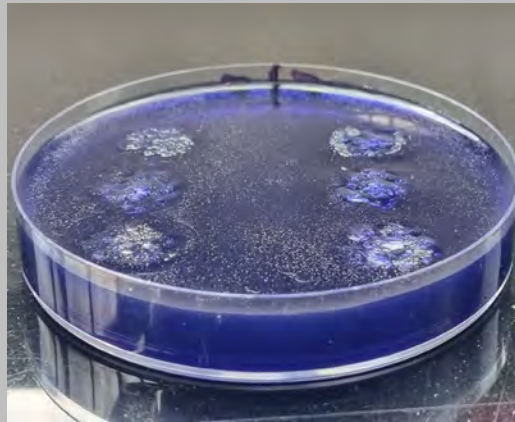
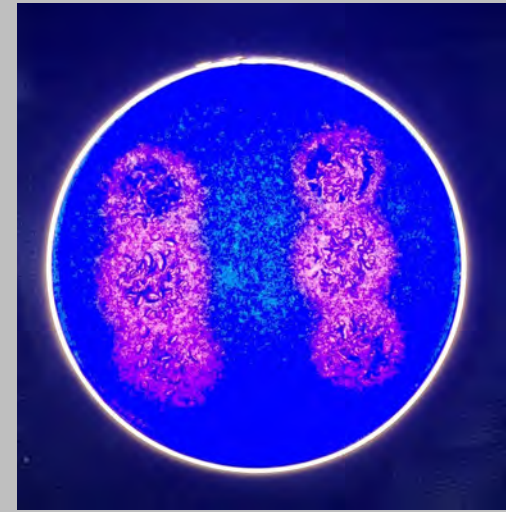
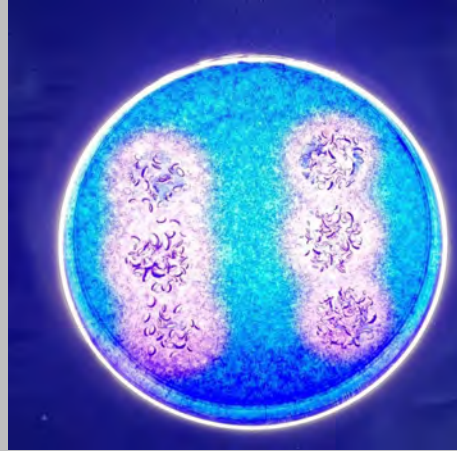
Right: clear effect of 3LT illumination in all 3 gel compositions. Left & up: NW gel with nano's & photosensitizer without illumination, best result.



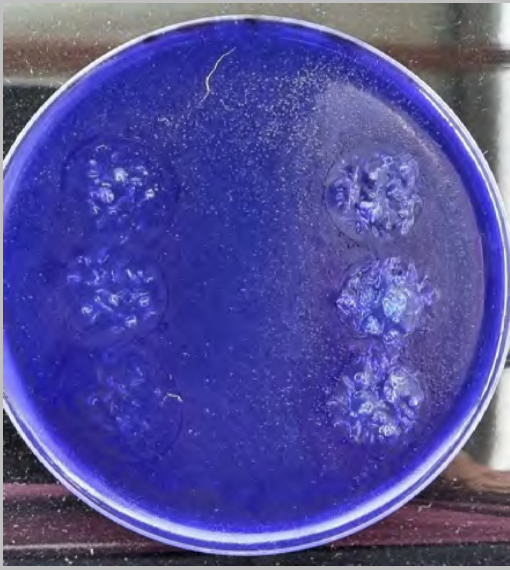
Right: clear effect off Philips led illumination in all 3 gel compositions..



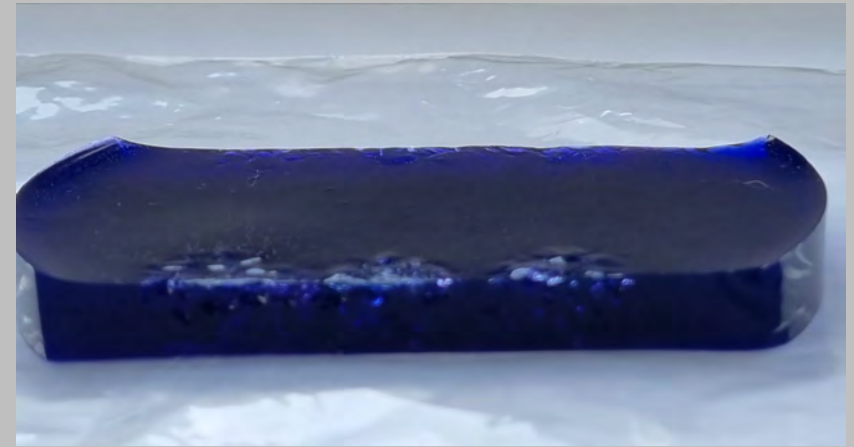
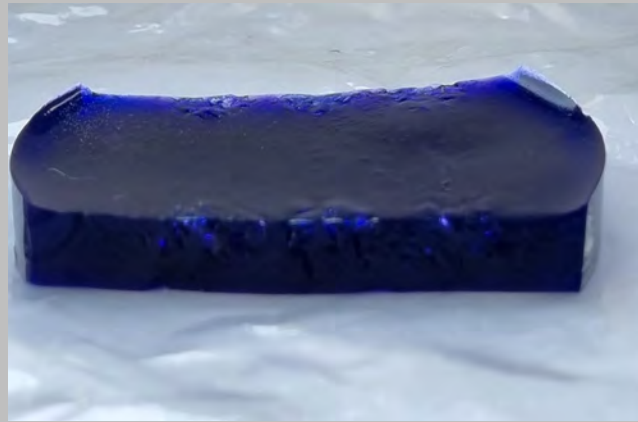
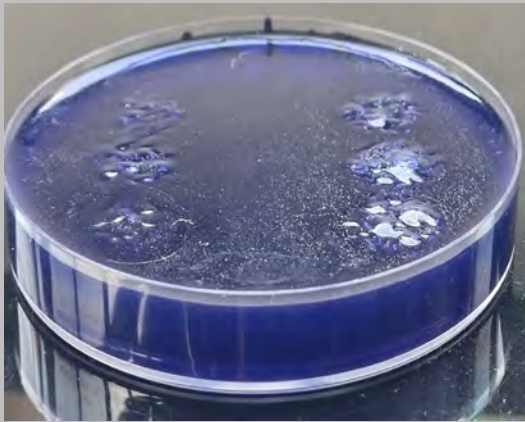
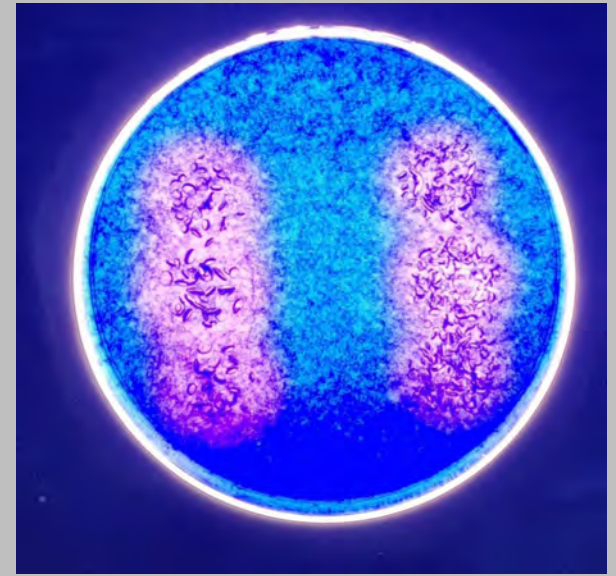
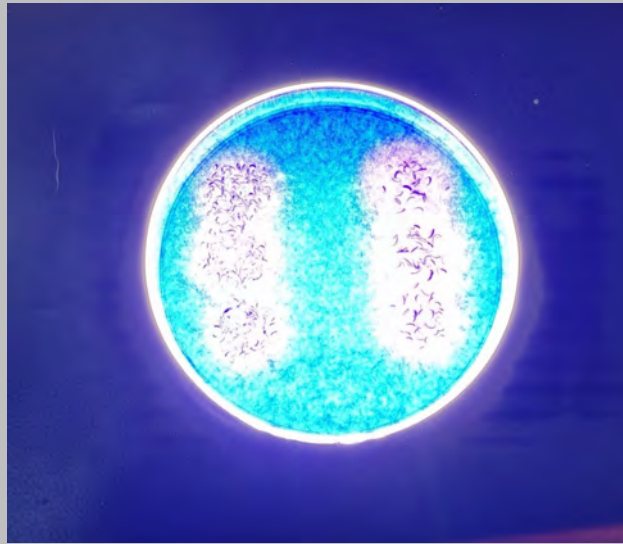
After 24 hours, 3LT group.





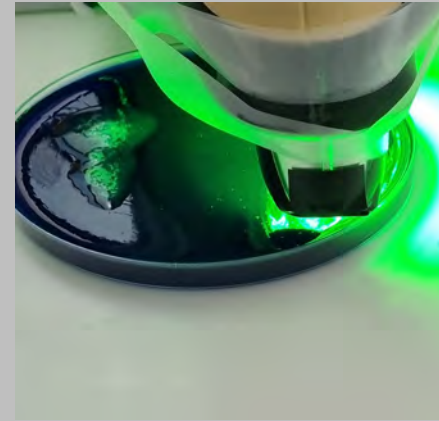


After 24 hours, Philips led group.

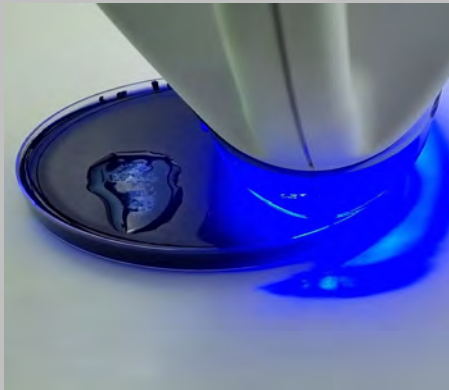




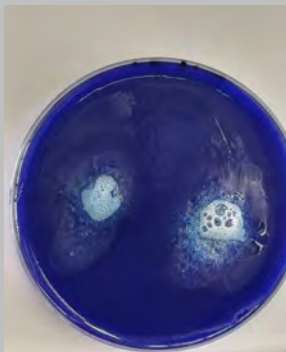
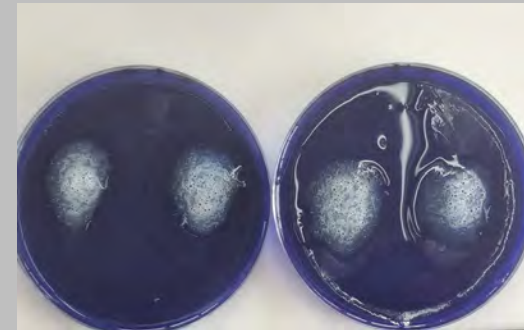
Zoomgel.



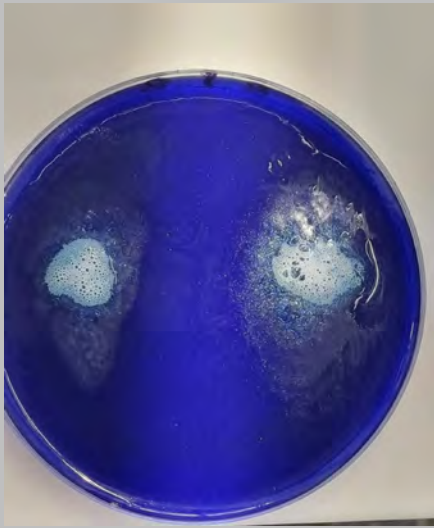
Zoomgel and 3LT illumination, Zoom protocol, 4 times 15' while applying fresh gel.



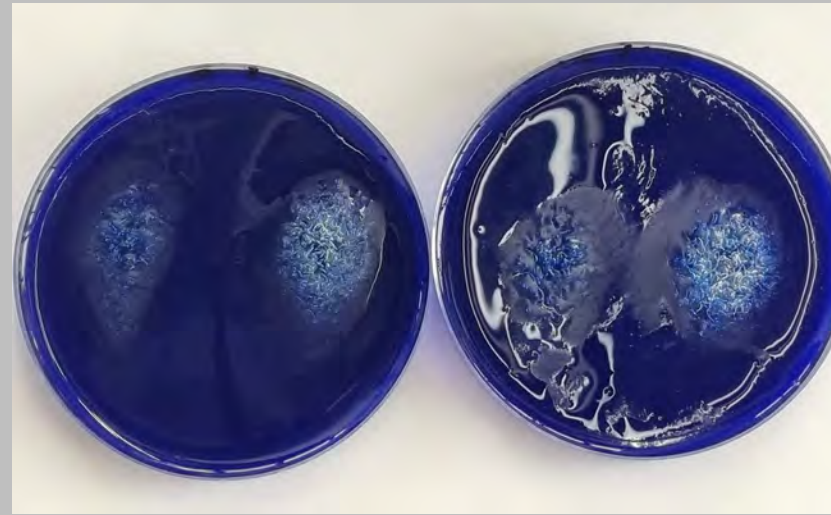
Zoomgel and Philips led illumination, Zoom protocol.



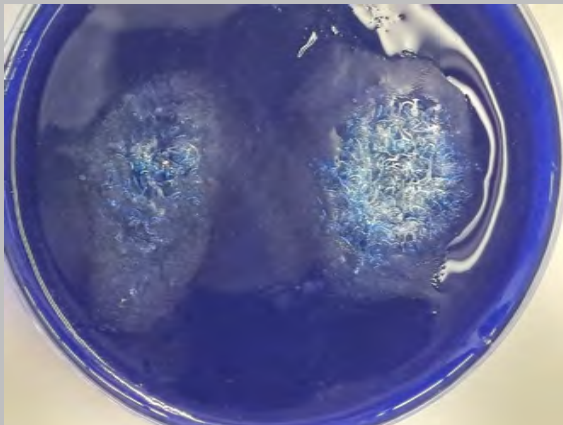
Right: .3LT.



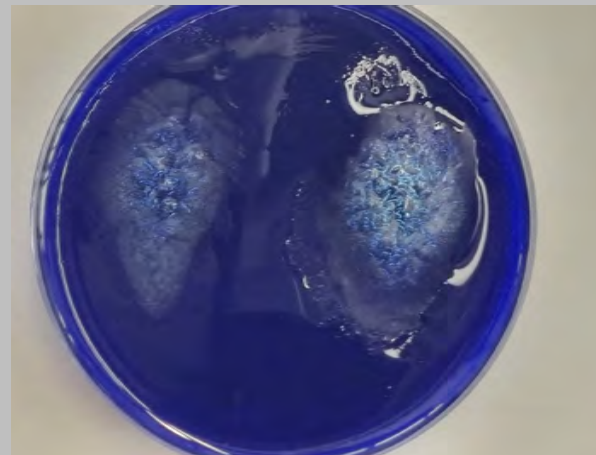
Right: Philips led illumination.



Left: 3LT & controle group. Right: Philips led & controle group.

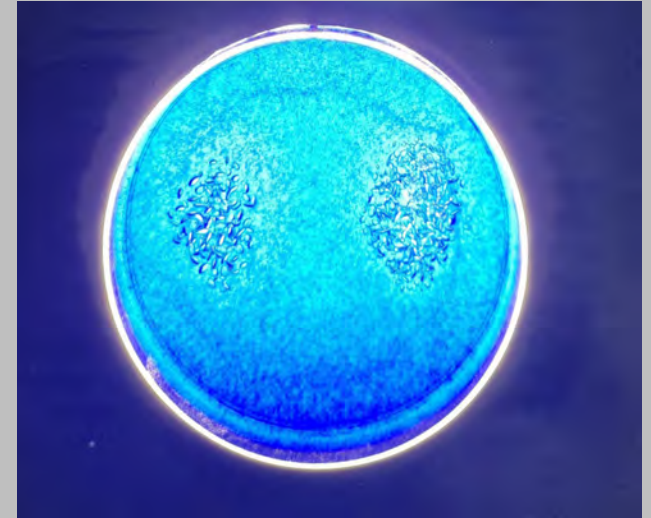
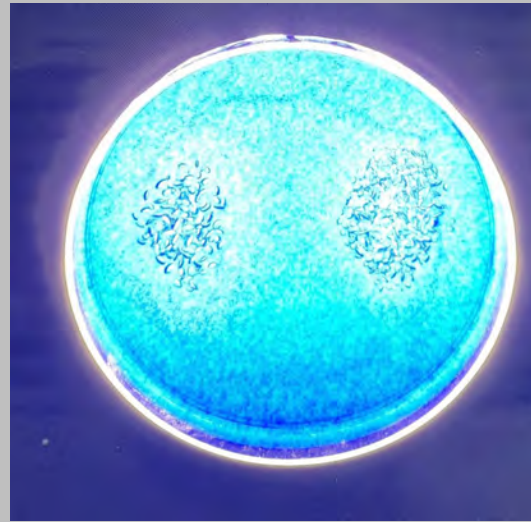


3LT & controle after 24 hours.

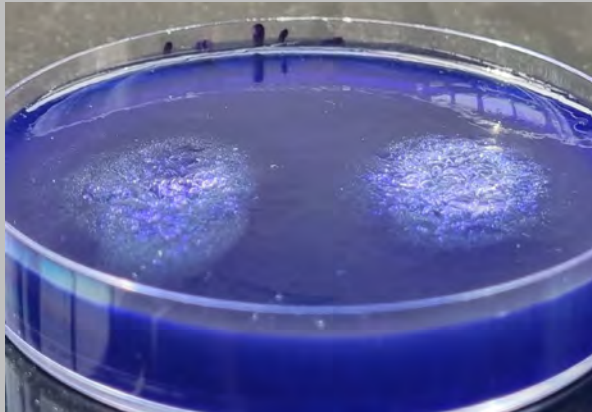


Philips led & controle after 24 hours.

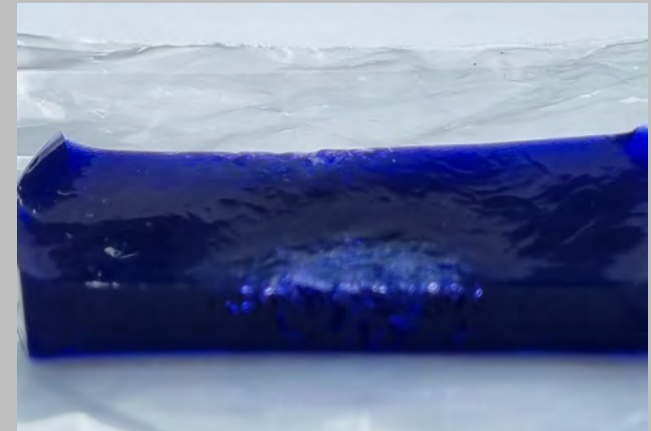




Zoomgel, Zoom protocol, left controle,  
right, 3LT illumination.



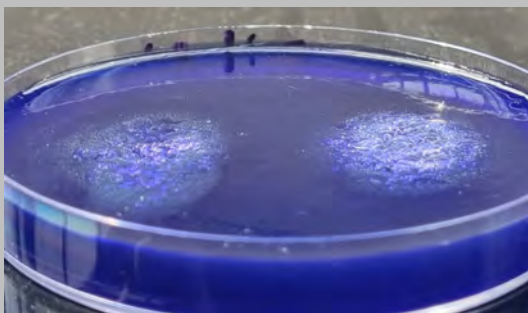
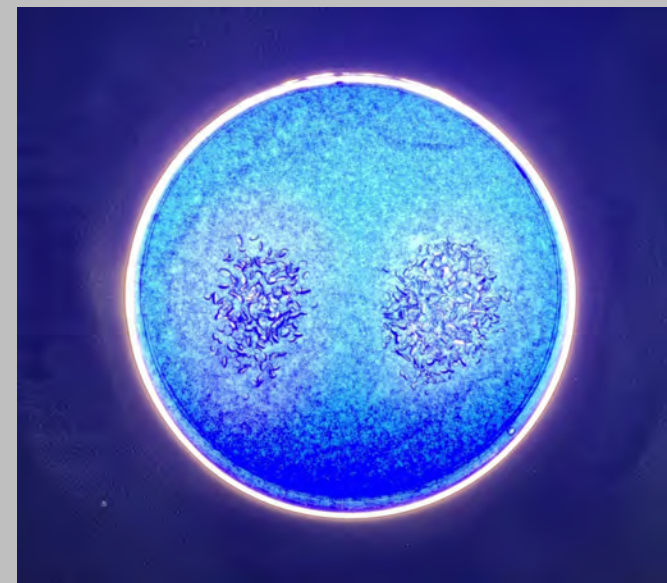
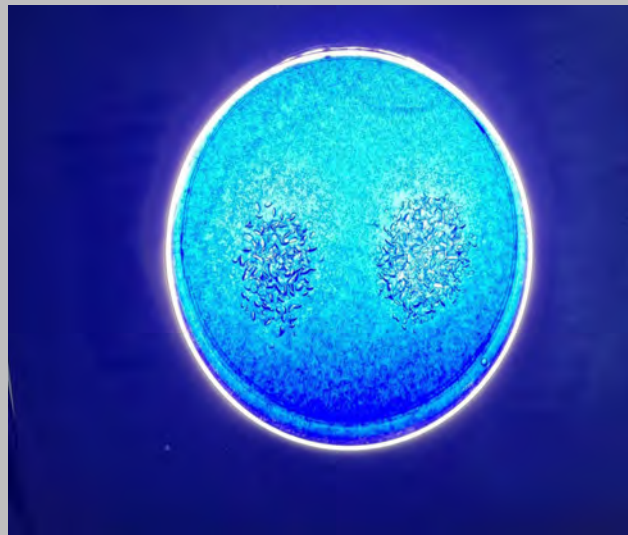
No illumination.



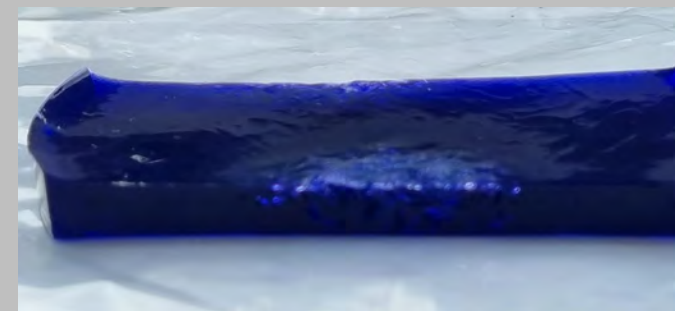
4 times 15' 3LT illumination.



Zoomgel, Zoomprotocol, left no illumination, right, 4 times 15' Philips illumination.

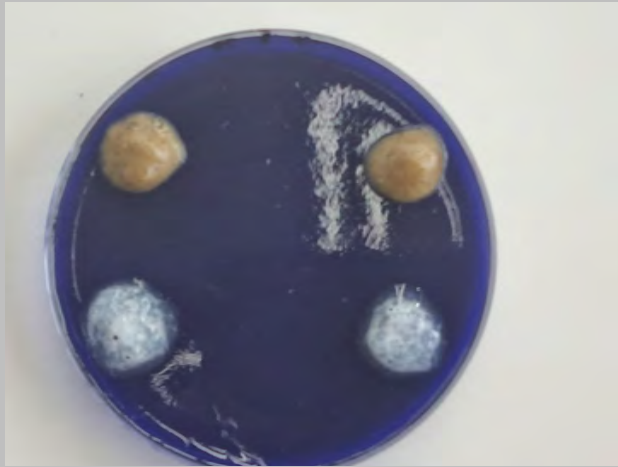


No illumination.

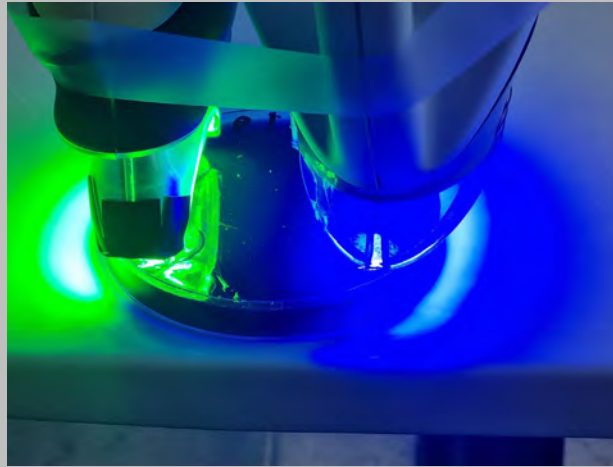


4 times 15' Philips led illumination.

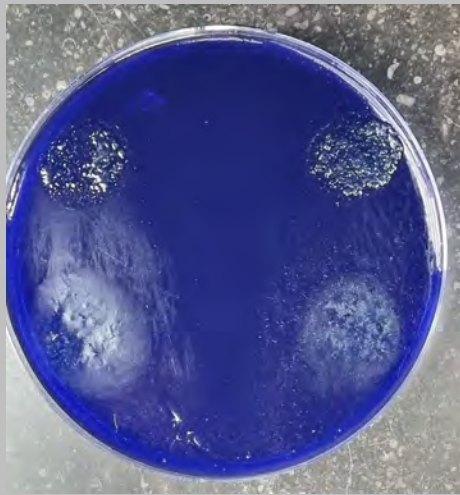




Up: NW gel. Down: Zoom gel.



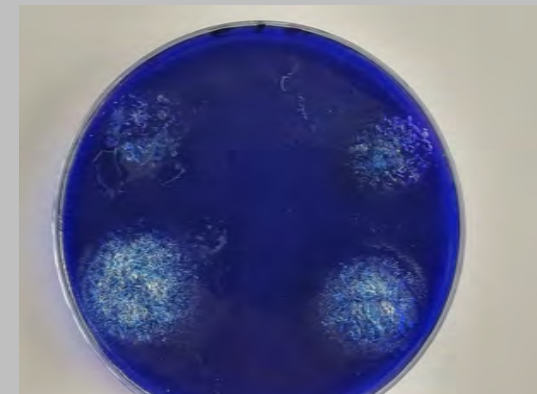
Left: 3LT illumination. Right, Philips led illuminatiion. Both sides, 3LT protocol.



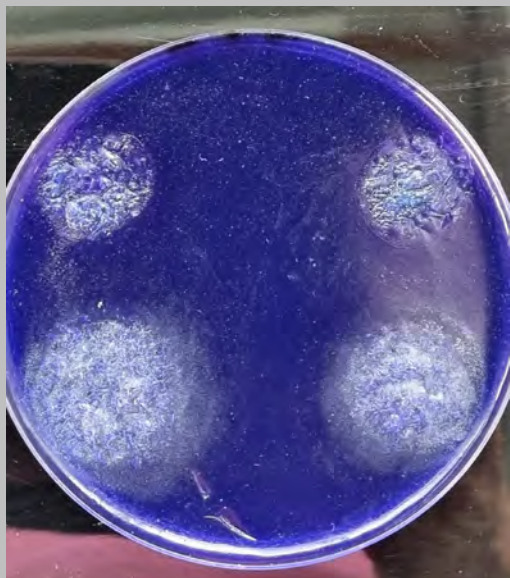
After 1 path.



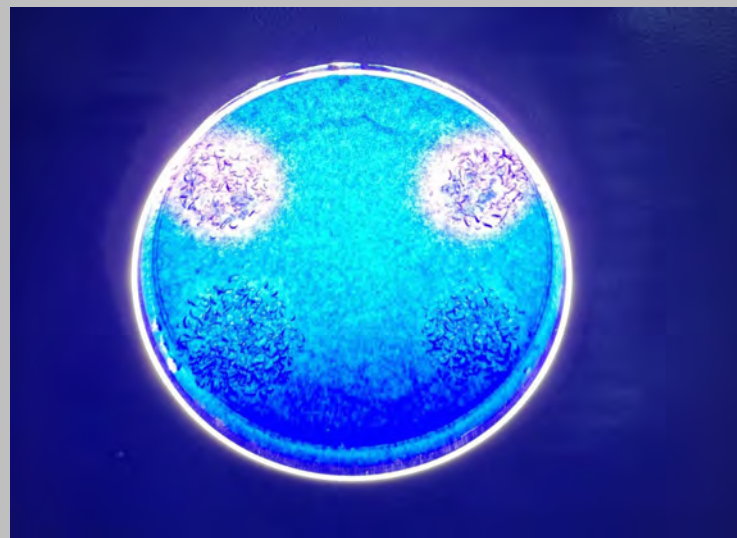
Before second path.



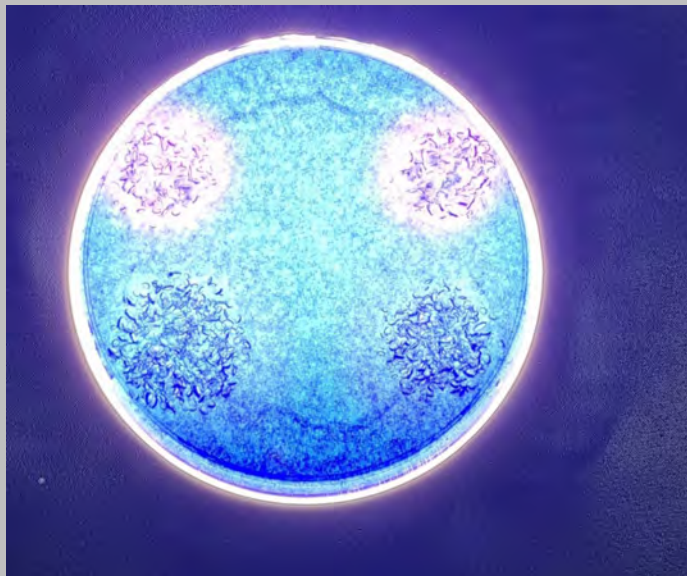
After second path.



Up: NW gel. Down, Zoom gel.



Up: NW gel, left 3LT illumination, right Philips led illumination, both 3LT protocol.  
Down: idem, Zoom gel.

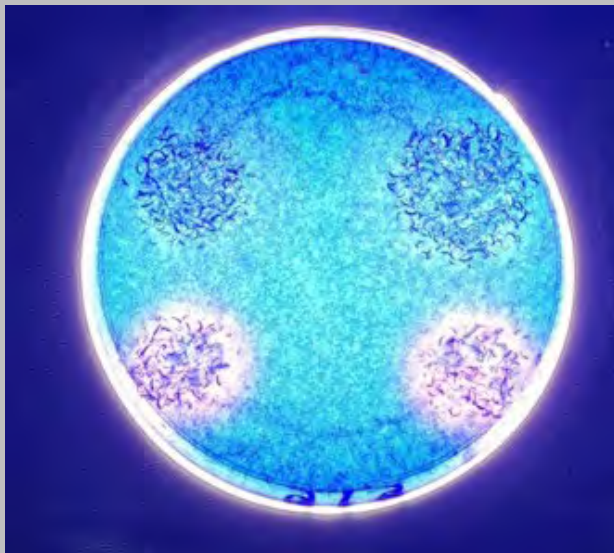


Idem.

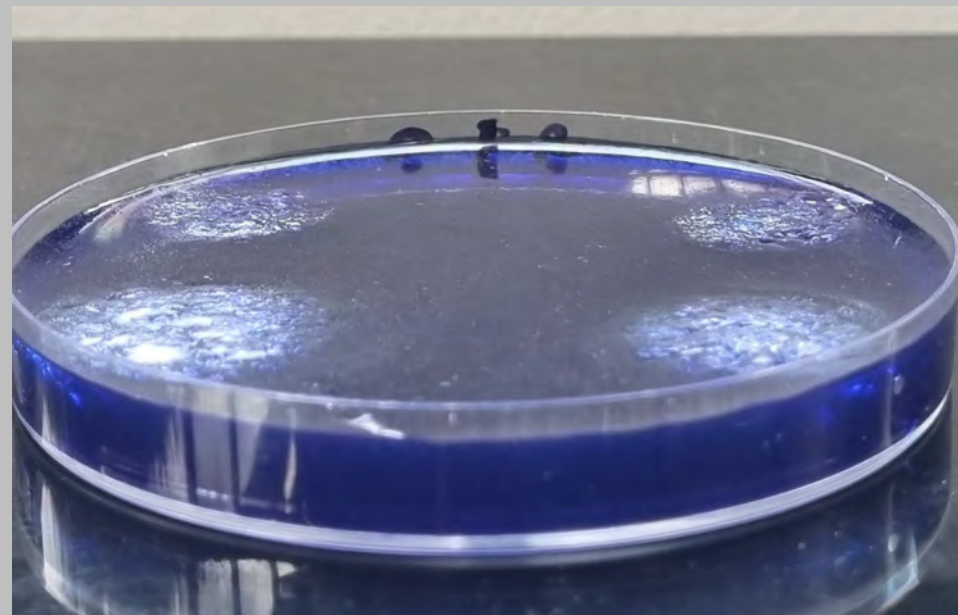


Petri scale turned upside down: down, NW gel, left Philips led illumination,  
right, 3LT illumination, 3LT protocol.

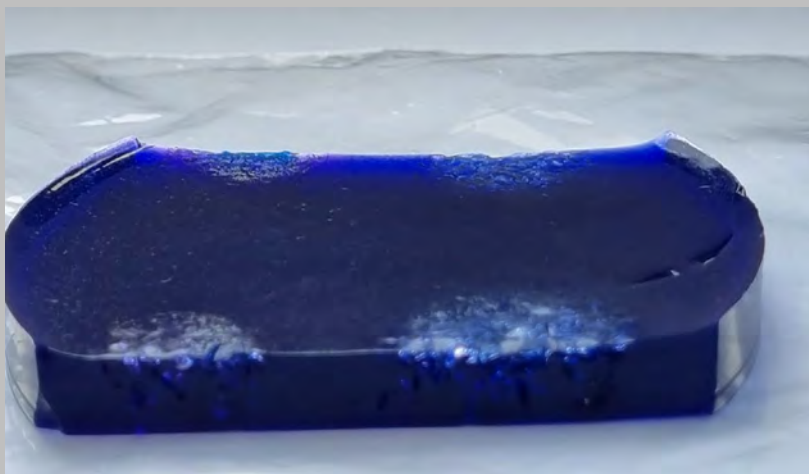




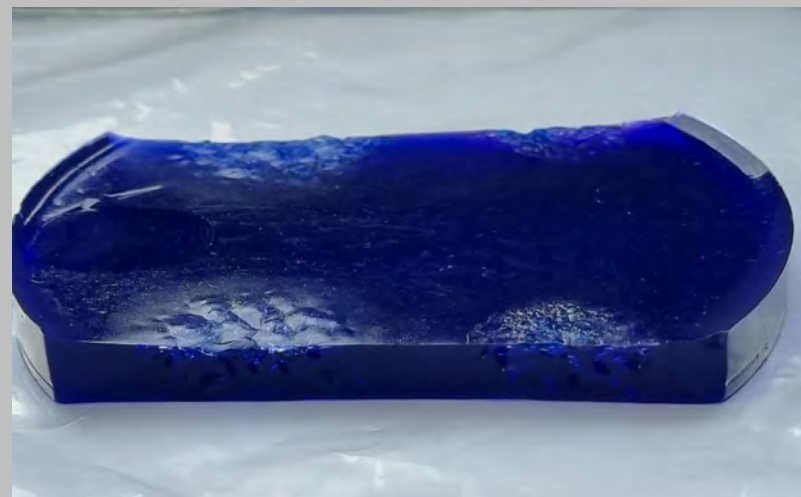
NW gel down, Zoomgel up. Left, Philips led, right, 3LT illumination.



NW gel up, Zoomgel down. Left 3LT, right Philips led illumination, 3LT protocol.



Left, NW gel, right, Zoomgel, 3LT illumination.



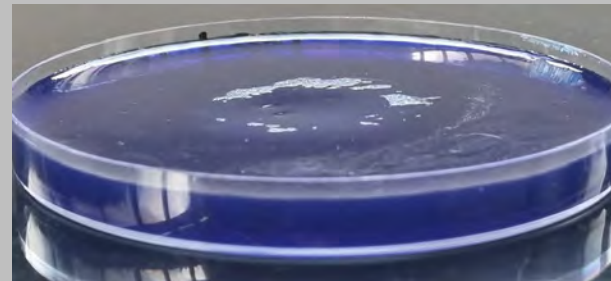
Left, Zoomgel, right, NW gel, Philips led illumination, 3LT protocol.



Middle: Zoom Nite White, 16% CP, 7 hours application.



Right: Cavex 6% H<sub>2</sub>O<sub>2</sub>, 90' application. Left, Cavex 16% CP, 6 hours application.

















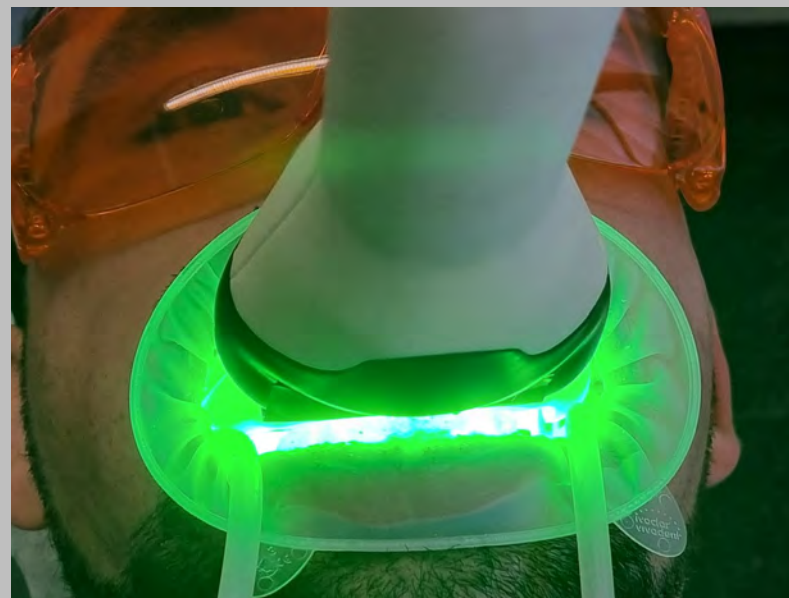
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NanoWhite  
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