

UNIVERSITY OF CALIFORNIA, BERKELEY



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ACHROMATS (rod monochromats, autosomal recessive achromats)

Red or red/brown lenses are used. In some cases, incomplete achromats seem to like a little brown or it can be used cosmetically to dull the red somewhat. For indoor glasses a lighter red or red/brown is used.

Pre-tinted plano sunglasses

NoIR Medical Technologies makes plano sunglasses that can be used over glasses or by themselves. We use the following:

U90-Red

U93-Dark Red

799-Dark Red, this is darker than U93 and only one person I know is wearing it

For kids we use S90 or S93.

The lenses scratch easily but they can be hard coated for a minimal charge.

NoIR Medical Technologies
Medical Product Division
PO BOX 159
SOUTH LYON MI 48178
1-800-521-9746
313-769-5565
FAX 313-769-1708

Hand tinted spectacle lenses

To tint a spectacle lens red use BPI Deep Red #37880 and soak it a long time, typically at least two hours. The lens will turn orange before it turns red. I usually tint CR-39 lenses without coatings but have successfully tinted some higher index lenses. Polycarbonate lenses, although recommended for children, will not tint dark enough but the CR-39 lenses should be thick enough to meet industrial safety standards. BPI Deep Red is the most common tint I use for achromats. Each bottle of dye costs about \$40.00 and contains 6 oz.

For a lighter red use BPI Red #31900. For a red/brown I use AO Sahara #21100. AO Sahara can be used for a light indoor tint or darkened enough for outdoors for someone who is only mildly photophobic.

BPI
4470 SW 74 AVENUE
MIAMI FL 33155
800-327-2250
305-264-4465

FAX 305-264-1467

Frames

For outdoor glasses it is important to use frames that fit close to the face to minimize light leakage around the frame. The frame can't have too much wrap or horizontal dimension or prescription lenses will not fit well. Hats help and leather side shields can be attached to conventional frames if the services of a skilled optician are available. For young children we use soft frames from i care and insert our own prescription lenses. Lenticular lenses are used for kids with high plus prescriptions to minimize weight and thickness.

i care international-currently unavailable
505 S LOUISE ST
GLENDALE CA 91205
800-594-2273
818-241-0705
FAX 818-241-7663

Infants-order wee care in the wrap design
Toddlers- order 2 to 4 Care in the wrap design

Elementary school children-The frame I use currently is Rayban RJ9034S in black or XS Fives by Oakley. I have historically used frames by Bushnell/Bolle but they have discontinued the frames I have used. It is difficult to find a good frame for children.

Teenagers and adults- Recently I have used Marchon/Nike Tarj Classic, GDO Box or Sera for adults or teenagers. I have also used "glacier glasses" and other designs.

Bushnell/Bolle Inc.
9200 CODY
OVERLAND PARK KS
800-22-BOLLE
www.bolle.com

www.oakley.com

Attachable leather side shields (#130200) can be ordered from B & K Optical Tools and Supply, 888-429-577, www.bk-tools.com.

Contact lenses

Some adults and children prefer to wear red tinted contact lenses rather than spectacles. The tint on the contacts needs to be light enough to allow adequate vision indoors and dark enough to be worn outside with conventional sunglasses. I use soft contact lenses either spherical or toric from Kontur. The red zone of the contact lenses needs to cover the entire iris but not overlap onto the white sclera where the tint is obvious. The tint zone needs to be 10-12mm in diameter and the tint is K21 with the minutes in the dye following the color, i.e. K21-40. The 40 stands for the minutes in the red dye. I have used K21-20, K21-35, K21-40 and K21-50. The intermediate tint times are the most commonly used. A red tinted contact will only darken a brown eye but the red color will show on a blue eye. If cosmesis is a problem a little bit of brown can be added K25/50. Have Kontur convert spectacle prescriptions into contact lens powers because they have a unique conversion formula.

Kontur Soft Lenses
642 Alfred Nobel Dr

HERCULES CA 94547
800-227-1320

BLUE CONE MONOCHROMATS (sex linked achromatopsia)

Magenta lenses are used, dark for outside and lighter for inside. To tint a spectacle lens magenta it is first tinted in BPI Red #31900 and then in BPI blue #31300. The lens after tinting should transmit both red and blue light. To check the tint, look at both red and blue objects through the lens, if blue or red darken too much add the appropriate color. Greens should darken. All the same frame and lens considerations apply to blue cone monochromats. The best NoIR frame is 795. I have a custom magenta contact lens I can order from Kontur designed specifically for me to use with blue cone monochromats.

In addition to indoor and outdoor glasses, swim goggles and lenses for sport glasses can be tinted. Since polycarbonate lenses can't be tinted dark enough new lenses have to be made with or without prescription and then tinted. For swim goggles an optician who can hand edge lenses is necessary. Since achromats lack the ability to adapt to a range of light level several sunglasses and/or combinations of eyewear and protective headwear may be needed.

Barracuda Swim Goggles-Standard for adults, Medalist for kids
Skyline Northwest Corp.
0224 SW HAMILTON ST
PORTLAND OR 97201
800-547-8664

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