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## Clinical refraction and the effects of optical filters

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This subject arises from the research carried out at the University of Uruguay, in the optics and optometry career, on the effect and incidence of optical filters on the final clinical refraction, where the prescription may not correct the refractive errors determined. Analyzing the spectrum of visible light, mainly the wavelengths of its ends, such as red light and blue light, a study is made about how the filters affect these wavelengths, in the refraction that corrects myopia and hyperopia mainly, in addition to the total astigmatism. Corrections for presbyopia, if they use a coloration or an absorption or interference filter, can improve the performance of visual performance and interact in accommodative convergence. The use of technologies, such as cell phones, tablets, computers and any electronic device that emits light at wavelengths close to ultraviolet, such as blue, directly affect not only the prescribed refraction, but also alter the accommodation and the convergence, because these devices are used in near vision. This investigation shows that optical filters are more convenient according to the refractive error to be corrected and the relationship between accommodative convergence and accommodation.

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