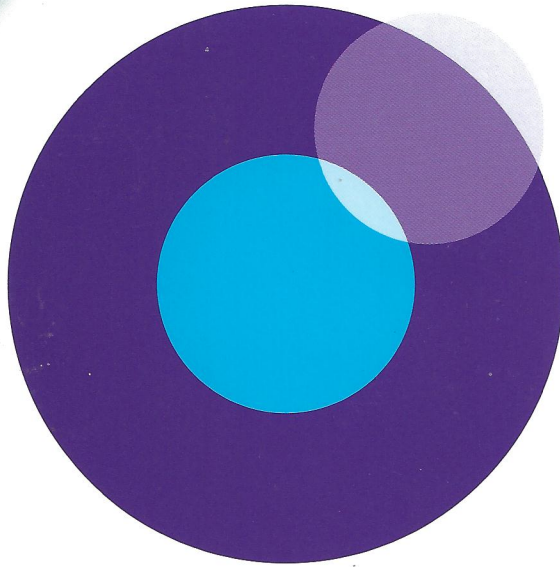


2nd Optometry Conference
of Central and South-Eastern Europe

**Scientific and Professional Conference of Optics,
Optometry and Ophthalmology**

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Book of Abstracts

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OTC (OVER –THE-COUNTER) GLASSES VERSUS PERScription GLASSES

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Abstract

Most of the presbyopic patents (over 40 years) purchase their glasses over the counter readers which are not made by prescription and custom made parameters: sphere power for each eye, cylinder, axis and monocular PD (distance between pupils). They are sold at just about every market, retail chain and boutiques. The cheap price and uninformed patient are the main reasons why most of the people purchase these non-prescribed glasses, mass-produced and poor quality and one size fits all. In the other side prescription glasses are designed specifically for you, the optical centers of each lens (where the lens will optically perform the best) are aligned with the centers of each of your eyes' pupils and could cover all refractive corrections. This work has been done as a part of a wider survey of OTC glasses in Republic of Macedonia. Following the previous results based on the small number of samples, additionally 50 pairs (100 lenses) of OTC glasses were investigated. They were controlled for two parameters: prescribed lens power which is for mostly non-symmetric for both eyes with the power of wearing OTC glasses; as well for PD of patients and optical centre of each lens. For 59 lenses of the total 100, the differences between prescribed and wearing power were obtained; ranged from 0.250 to 3.00 D. The optical center of a lens was shifted away from its expected position (front of the eye) in 90 cases resulted decentration from 1.0 to 6.5 mm. Consequently, induced prismatic effect was in range 0.20 - 1.80^Δ; with an average value of 0.64^Δ. Furthermore, obtained results were compared with ANSI Z-90 Standardization Tolerance Chart. In 59 cases, difference in lens power exceed limit of 0.125D and given limit of 0.33^Δ prismatic effect was not satisfied for 66 lenses. Taking into account both criteria only 11 lenses were safe for using according to investigated parameters and only 3 pairs were pass tolerance standardization. It should be note that even they cannot damage eyes they will impaired the vision and made less productivity and safety in working with them. Vision is something that we should all take seriously, so never risk making eye problems worse by postponing a prescription. The results of this research indicate a necessity for standardizations as well regulations for ophthalmic lenses. Although prescription lenses are more expensive, if they are needed to correct a vision problem, it's advised to wear the prescription, rather than purchase non-prescription OTC glasses.

Keywords: *presbyopia, optical center, pupilar distance, tolerance, lens power, vision*