



**PROFESSIONAL BOARD FOR OPTOMETRY AND DISPENSING
OPTICIANS**

CLINICAL GUIDELINES FOR DISPENSING

1. INTRODUCTION

Ophthalmic lenses and contact lenses are medical devices and may only be dispensed by a registered eye care professional. The dispensing of ophthalmic lenses/devices falls within the scope of practice of Dispensing Opticians and Optometrists in South Africa and is therefore regulated by the Health Professions Council of South Africa. This document serves as a guideline to practitioners with respect to the minimum clinical requirements for dispensing and provision of ophthalmic lenses/devices.

The dispensing of ophthalmic lenses/devices is an integral part of the clinical care offered by Dispensing Opticians and Optometrists and should not be a duty of non-registered frontline or support staff. Practitioners must at all times take full responsibility for all aspects of dispensing ophthalmic lenses/devices. The following must be considered before dispensing of either ophthalmic lenses or spectacle frames:

- a. Consider the patient's occupational/vocational/environmental visual requirements;
- b. Analyze the prescription for potential problems and resolve;
- c. Selection of suitable lens materials;
- d. Suitable refractive indices;
- e. Lens treatments; and
- f. Suitable frame selection based on the refraction as well as patients' requirements.

Precise lens manufacturing and mounting are important requirements to provide quality spectacles to patients.

2. OPHTHALMIC LENSES

2.1 Ensuring Standards of Optical Manufacturing

2.1.1 Lens Performance -- optical and geometric properties specified in ISO 8980

2.1.2 Lens design

- a. The minimization of risk to the wearer is of primary concern.
- b. Ensure that lens designs used are manufactured according to internationally accepted industry standards.
- c. Evaluate for acceptable levels of tolerances with respect to aberrations distortion etc.

2.1.2 Lens material

- a. Materials must be non-toxic, non-allergenic and non-combustible.
- b. Ensure that lens materials selected are suited to the patients requirements.
- c. Ensure that the lens material is safe. CR39 is the preferred material over glass lenses however, glass lenses may be indicated for certain professions or environments. Polycarbonate/trivex maybe preferred over CR39 for patients who are at greater risk for ocular injuries. Mechanical strength/robustness is measured by the impact of a 22 mm diameter steel ball at 100 Newtons

2.1.3 Lens Transmittance and Coatings

- a. Luminosity and UV absorbance of lenses are specified in ISO 8980. Ensure that lenses comply with this standard.
- b. Standards for durability of coatings, spectral reflectance and other related properties must be complied with.

3. FRONT OFFICE AND PRE-EXAMINATION PROCEDURES

Document all necessary patient demographic details: Name, address, date of birth etc. Thereafter, conduct a thorough case history to ascertain:

- a. Occupation and job-related requirements i.e., vocational vision requirements;
- b. Lifestyle and hobby related requirements i.e., sports and/or recreational requirements;
- c. Occupational health and safety considerations – to ensure appropriate lens material and frame selection;

- d. Evaluate the type and/or design of lenses previously worn, previous frames style; and
- e. Allergic reactions to frame materials.

4. CLINICAL PROCESSES AND PROCEDURES

4.1 Prescription verification and analysis be able to determine

- a. the lens power
- b. lens material
- c. Lens design and type
- d. Refractive index
- e. lens treatments

4.2 Assist with a selection of suitable frames taking into consideration

- a. Facial measurements
- b. the refractive error
- c. occupational health, and safety considerations
- d. Patient lifestyle and hobbies
- e. frame material allergies
- f. optometric/orthoptic recommendations or requirements.

4.3 Accurately measure the following.

- a. interpupillary distance (PD)
- b. eye point (EP)
- c. optical height (OP)
- d. segment height (SH)
- e. Pantoscopic angle
- f. Frame form wrap back vertex distance

4.4 Create and submit the lab order for the spectacles with all necessary information Advise the patient on the expected turnaround and collection time. Monitor the progress of the order.

5. DISPENSING OF SPECTACLES

Verify all parameters of the prescription to ensure that they are correct:

- a. verify the ordered PD – use prism PD ruler;
- b. UV400 Light to verify if various lens treatments were done as ordered
- c. Check coatings;
- d. Check lenses for any aberrations;
- e. Refer back to supplier if finished product fails meet quality standards;
- f. Frame and lens alignment; and
- g. Once the final product has been confirmed and passes quality control, fit the patient with a verified set of spectacles.
- h. Ensure that procedures and processes are in place to provide aftercare and ongoing support.

6. BASIC EQUIPMENT

The following equipment is considered necessary for clinical dispensing opticianry:

- a. PD rule and/or Pupilometer, for measuring the pupillary distance;
- b. A lensometer or vertometer for verification of ophthalmic lens prescriptions;
- c. A lens clock for front and back curve measurement of ophthalmic lenses;
- d. Hand tools for frame fitting, adjustments, and repairs e.g., precision screw drivers, sizing pliers, bowing pliers, frame bowing pliers, nose pad adjusting pliers;
- e. Spare nose pads, screws etc;
- f. heat blower or bead bath;
- g. Appropriate Visual Acuity (VA) Chart/s – to assess unaided and aided VAs.

Additional equipment: Autorefractor for objective estimation of the patient's refractive error prior to having an eye examination.

References

1. Jalie, M. (2021). Principles of Ophthalmic lenses. (6th ed). Association of British Dispensing Opticians.
2. Tunnacliffe, A.H. & Hirst, J.G. (2007). Optics. (2nd ed). Association of British Dispensing Opticians.
3. Tunnacliffe, A.H. (2021). Introduction to Visual Optics. (4th ed). Association of British Dispensing Opticians.