



Grading Scales

Alcon®

GRADE 0

GRADE 1

GRADE 2

GRADE 3

GRADE 4

Bulbar redness

Etiology Dilation of bulbar vessels, e.g. due to mechanical stimulation, allergy/hypersensitivity etc

Normal grade Up to grade 2

Comment Useful to evaluate using the same magnification each time

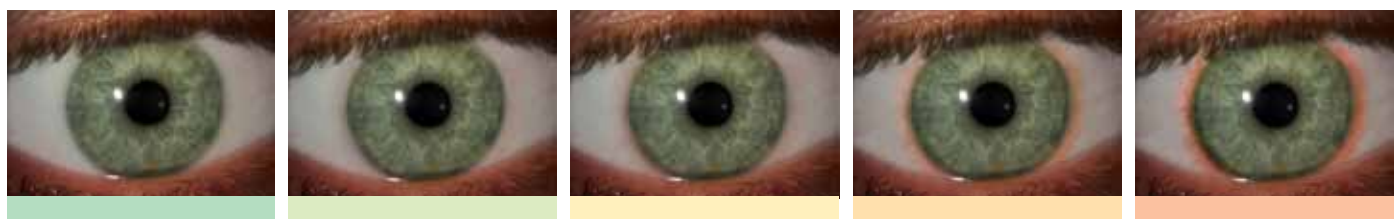


Limbal redness

Etiology Dilation of bulbar vessels, e.g. due to hypoxia

Normal grade Up to grade 2

Comment Often seen in combination with bulbar redness



Tarsal redness

Etiology Dilation of tarsal vessels, e.g. due to preservatives in lens care products, ocular dryness, mechanical irritation etc

Normal grade Up to grade 2

Comment Roughness of the tarsal conjunctiva increases in higher grades



Corneal neovascularisation

Etiology Primarily due to corneal hypoxia

Normal grade Grade 0

Comment Classification based on the extent of blood vessel ingrowth



GRADE 0

GRADE 1

GRADE 2

GRADE 3

GRADE 4

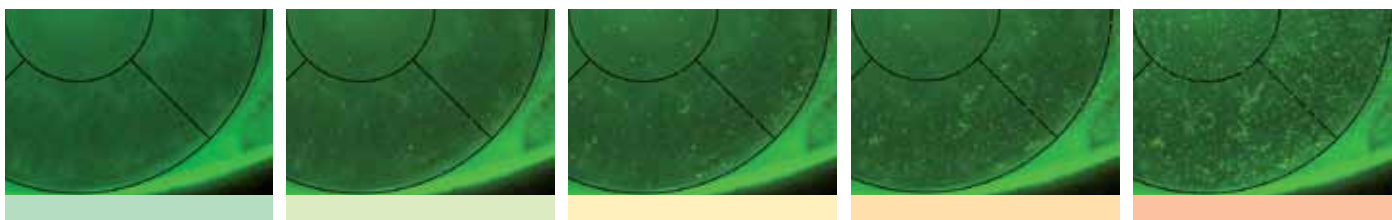
Corneal staining: Dessication

Etiology	Superficial cells of the corneal epithelium become damaged
Normal grade	Grade 0. Grade 1 may be a normal consequence of an incomplete blink
Comment	Stain with fluorescein, view with blue light and a yellow filter



SICS – Solution induced corneal staining

Etiology	Toxic reaction to contact lens solution
Normal grade	Grade 0
Comment	Stain with fluorescein, view with blue light and a yellow filter. Consider changing the solution type



Polymegethism

Etiology	Variation in the endothelial cell size; normally age related, in CL wear due to hypoxia
Normal grade	Cells appear roughly hexagonal and of approximately equal size
Comment	Best observed using specular reflection of the corneal endothelium



Patient benefits of upgrading to silicone hydrogel lenses

- Superior comfort¹.
- Significantly lower likelihood of common hypoxic complications².
- Improved longevity of contact lens wear versus hydrogel wearers³.

1. Dillehay SM, Miller MB. Performance of Lotrafilcon B Silicone Hydrogel Contact Lenses in Experienced Low-Dk/t Daily Lens Wearers. *Eye and Contact Lens*; 33 (6): 272-277, 2007
 2. Alvord L, Hall J, Keyes D, et al. Corneal Oxygen Distribution With Contact Lens Wear. *Cornea*; 26 (6): 64-64, 2007
 3. Sweeney D. Silicone Hydrogels, are they the answer? AAO 2000. Orlando, Florida.

Defining locations on the cornea

Purpose Describing/documenting the corneal location of a slit lamp finding

Indication Infiltrates, staining, foreign bodies etc



Practice orientated

C – central
S – superior
I – inferior
N – nasal
T – temporal

P – para-central



Scientific/research

Defining locations on the tarsal conjunctiva

Purpose To grade tarsal slit lamp findings exactly if there are local differences

Indication Papillae, foreign body, redness/hypaemia, follicles etc



C – central
S – superior
I – inferior
N – nasal
T – temporal

Striae and folds in Descemet's membrane

Etiology Indicative of corneal oedema, e.g. due to hypoxia

Normal grade No folds. Some striae may be visible immediately following waking

Comment Document the size, location, orientation and number



0 % corneal oedema: no striae
5 % corneal oedema: very few striae
7 % corneal oedema: more striae
12 % corneal oedema: striae and folds
16 % corneal oedema: striae, folds, microcysts and vacuoles

Microcysts and vacuoles

Etiology Indicative of chronic hypoxic stress

Normal grade No microcysts or vacuoles

Comment High magnification, monitor in the reflected light, note the quantity



Microcysts (display reversed illumination)



Vacuoles (display unreversed illumination)

