



Kowa Information Sheets

Image Artefacts

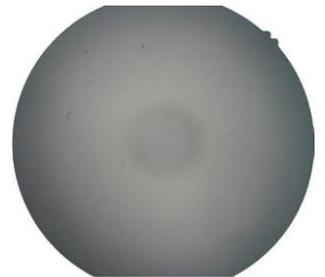
Artefacts are anomalies in the optical imaging pathway that appear on images for a variety of reasons.

Normally it is fairly easy to differentiate them from possible pathology because they appear in the same place on all images. Always check to see if an unusual appearance is repeated on a different image of the same eye and/or in the images of the other eye. Any effect which appears in the same place within the field on all images must be an artefact not pathology. An effect which appears in the same place on the retina in both fields of the same eye must be retinal. A cloudy patch which moves slightly and is present in one eye only is likely to be a vitreous floater (see below).

Dust on the sensor tends to take the form of dark specs and will disappear or move if the sensor is cleaned. Hold a piece of white card in front of the objective lens (a few inches away or reduce the flash intensity if you hold it close) and the resultant photo will clearly show any sensor dust. There may also be a 'hot spot' centrally. The camera is designed to spread the light evenly over the curved retina of the typical eye after passing through the cornea and crystalline lens. Clearly a flat white piece of card falls outside the norm and can result in an uneven spread of light.

Kowa Optimed recommend that the sensor is cleaned by a Kowa engineer.

Dust on Sensor

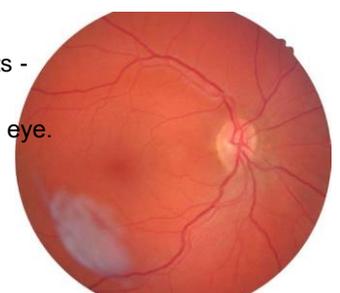


Soft central cloudy spots that start to appear quite frequently on images usually indicate a build up of film on the internal condensing lens. To clean this requires a visit from the service engineer.

Darker central hot spots often appear on photos of very myopic patients and are due to the ocular dimensions being outside the normal range.

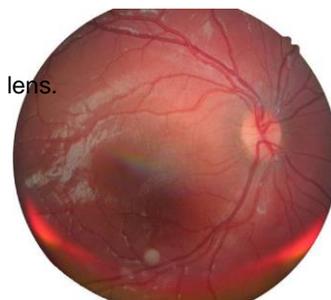
Dust, dirt or fingerprints on the objective lens can cause quite dramatic effects - often large silvery areas. Smaller patches, however, can look similar to floaters - the difference being that they appear on pictures of both eyes and don't move in sequential pictures of the same eye.

Grease on Sensor



Shower of bright spots

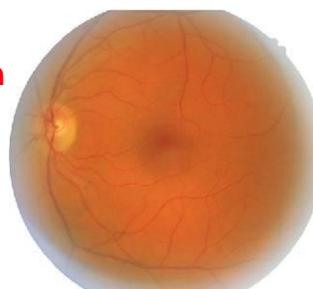
A shower of bright spots on pictures taken slightly out of line is dust on the objective lens.



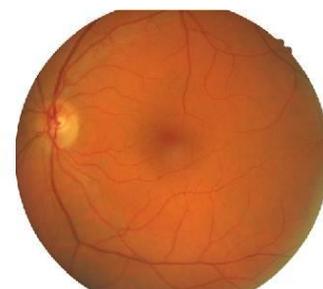
A bright crescent usually appears at one side when the eye is not quite lined up - often the patient has lost fixation at the last moment.

A pale ring or loss of contrast and increase in brightness at the edge is due to incorrect positioning - too close or too far away.

Wrong working distance

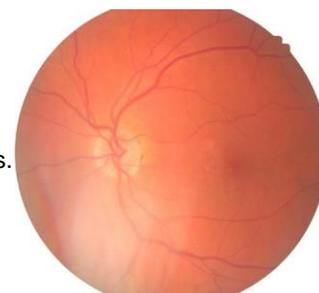


Right working distance



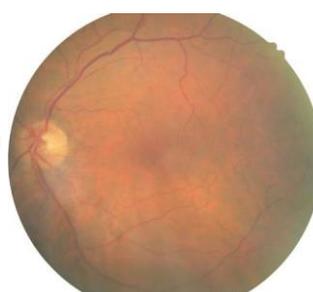
Hairs and eyelashes cause streaks across the photo - so keep long fringes away from the eyes, and try holding the lids wider apart for long eye lashes.

Eyelashes



Dry eyes can reduce the contrast and clarity of images. If the working distance spots start to haze up in the viewfinder, then suspect dry eyes. Either ask the patient to blink just before taking a photograph or instil some artificial tears.

Before blink



After blink

