The MonCV3 and MonPack Eye can display any type of image adapted for the study of eye gaze strategy: reading text, driving scenes, counting tests,…

Moreover they are equipped with an illumination and near infra-red image sensor allowing the simultaneous and dynamic recording of the images of both eyes.

Visual stimulation and collection of eye movements

Real time analysis

The images of the eye are analyzed in real time (30 images per second or 200 with the high frequency camera) to determine the direction of the gaze and the pupil size.

The direction of the gaze is "calibrated" to be superimposed to the image of stimulation by the fixation of 5 reference dots.

Application to reading

The analysis of eye scan path analysis during the reading shows the fixations position and duration (position and size of the red dots) as well as the saccades separating the fixations.

The program also determines the number of fixations and their average duration as well as the number of saccades and their average amplitude in the reading direction and its opposite (retro saccades).

The last information is the average pupil size during the recording.
The analysis of eye scan path analysis during the exploration of a visual scene shows the position and duration of fixations (position and size of the red dots) as well as the string of fixations.

In the example of a driving scene, the program indicates which elements of the image have been looked at by the subject and those he ignored.

The visual scene can also be divided into areas of interest. The program indicates the time before the first access to each zone and the time of fixation within each zone.

The clinical applications of this program are numerous:

- study of reading and its dysfunctions,
- check-up and follow up of re-education of hemianopsia and hemi neglect
- check-up and follow-up of low vision re-education,
- ability to drive.

References