

Title (en)

CORNEAL TOPOGRAPHY APPARATUS WITH FURTHER INTEGRATED DEVICES

Title (de)

HORNHAUTTOPOGRAPHIEGERÄT MIT WEITEREN INTEGRIERTEN VORRICHTUNGEN

Title (fr)

APPAREIL DE TOPOGRAPHIE CORNÉENNE À DISPOSITIFS SUPPLÉMENTAIRES INTÉGRÉS

Publication

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Application

EP 05805155 A 20051014

Priority

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Abstract (en)

[origin: WO2007042854A1] An apparatus for corneal topographic analysis, determining the precise curvature of a cornea and the position of the optical axis giving a map of such curvature to an operator, and also for pupillometric analysis, determining the pupil contour and the relative centre both in steady and dynamic conditions during transients of contraction (passage from scotopic to photopic condition) and dilation (passage from photopic condition to scotopic), and/or for a real analysis by fluoresceine by testing a contact lens fitting on a cornea. The apparatus comprises a measuring head (6) having a Placido disc (2) backlighted with a light source (31), suitable for causing the pupil to contract. Coaxial to the disc (2) a videocamera (10) is mounted, comprising an optical unit (11) for focusing on a shot image. The measuring head (6) comprises a plurality of infrared LEDs, for example respectively four LEDs (14, 15, 16, 17), suitable for lighting the eye in a way suitable not to disturb the aperture of the pupil and two visible light LEDs (18, 19) arranged on the Placido disc (2) suitable for causing the contraction of the pupil. The head (6) comprises also a visible light fixation LED (13), incident on a beam splitter (12) inclined suitable to align the eye (23) with respect to the videocamera (10). The head (6) may comprise two LEDs (95 and 96) that emit light in the spectrum of excitation of fluoresceine, previously arranged between a cornea and a contact lens, and a yellow fixed filter (100) mounted on said lamina (12), suitable for causing only the light of interest for the analysis to pass towards the videocamera (10).

IPC 8 full level

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Citation (search report)

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