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(71) Applicant (for all treaty states *other than the US):*
GLUKOMEDITECH AG [Germany/Germany]
Alfred-Herrhausen-Strasse 44
D-58455 Witten (Germany)

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*
PÖTZSCHKE, Harald (Germany/Germany)
Weidenstrasse 4,
D-65207 Wiesbaden (Germany)
BARNIKOL, Wolfgang (Germany/Germany)
Lanzelhohl 66,
D-55128 Mainz (Germany)
ZIRK, Kai (Germany/Germany)
Marktstrasse 3a,
D-97645 Ostheim (Germany)

(74) Attorney:
BEIL, Hans;
Hansmann & Vogeser,
Adelonstrasse 58,
D-65929 Frankfurt am Main (Germany)

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(54) **Title:** POLARIMETRIC METHOD FOR DETERMINING THE (MAIN) VIBRATION PLANE OF POLARIZED LIGHT TO ABOUT 0.1 m° AND MINIATURIZED DEVICE FOR ITS IMPLEMENTATION [See Tr. Note 1]

(57) [English abstract]

(57) [German] Summary

In a process or device for very accurate determination of the plane of polarization of polarized light, the light from a light source (1) is polarized by means of a polarizing filter (2) which has a certain setting angle θ_0 with respect to the first reference plane, the plane of incidence on the reflecting surface (4). The polarized beam (12) passes through the sample in the measurement chamber (3), in which the angle of rotation is changed by the small angle θ_{MG}. The sum of θ_0 and θ_{MG} gives the angle of rotation θ_e, at which the beam (13) emerging from the measurement chamber is partially reflected at the surface of a medium of higher refractive index (4). The reflected beam is then separated into two partial beams (15a: extraordinary beam; 15b: ordinary beam), with vibration directions exactly perpendicular to each other, in a polarizing prism (5), the reference plane of which, the plane of vibration of the ordinary beam, has a certain setting angle (θ^*) with respect to the first reference plane. The intensities I_o and I_a of the two partial beams are determined photometrically by detectors (6a,b) and the ratio (Q) of the measured intensities is determined (quotient determiner 8).

[See Tr. Note 2]

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