

Title (en)

Sample holder for positioning an organic, biological and/or medical sample

Title (de)

Probenträger zum Positionieren einer organischen, biologischen und/oder medizinischen Probe

Title (fr)

Support d'échantillon pour le positionnement d'un échantillon organique, biologique et/ou médical

Publication

EP 2599548 B1 20180704 (DE)

Application

EP 13156764 A 20090513

Priority

- EP 13156764 A 20090513
- EP 09006469 A 20090513

Abstract (en)

[origin: EP2253378A1] The method for positioning an organic, biological and/or medical specimen (1905) in a desired partial region of a specimen carrier, comprises binding the specimen with paramagnetic particles, arranging a magnetic device relative to the specimen carrier, so that a desired magnetic field arrangement is provided in a predetermined region of the specimen carrier, introducing the specimen in the specimen carrier, and arranging the specimen in the desired surface region using the magnetic device. The magnetic device comprises a permanent magnet (1914) and/or an electromagnet. The method for positioning an organic, biological and/or medical specimen (1905) in a desired partial region of a specimen carrier, comprises binding the specimen with paramagnetic particles, arranging a magnetic device relative to the specimen carrier, so that a desired magnetic field arrangement is provided in a predetermined region of the specimen carrier, introducing the specimen in the specimen carrier, and arranging the specimen in the desired surface region using the magnetic device. The magnetic device comprises a permanent magnet (1914) and/or an electromagnet, and includes a tip, which comprises a ferromagnetic material. The arrangement of the specimen comprises an alignment of the specimen in the desired magnetic field arrangement, and a movement of the magnetic device relative to the specimen carrier. The predetermined region of the specimen carrier comprises the desired surface region. The desired magnetic field arrangement has magnetic field strength, magnetic flux and/or magnetic field line distribution. The predetermined region of the specimen carrier comprises a surface region of the specimen carrier, where the amount of the magnetic field strength in the surface region of the carrier has a local maximum and/or a saddle point. The binding of the specimen with the paramagnetic particles comprises an adhesion of the particles on the surface of the specimen and/or a reception or introduction of a particle in the specimen. The desired magnetic field arrangement is formed, so that a magnetic force effects on the particle bound with the specimen and so that the specimen in the desired magnetic field arrangement is moved by magnetic force effect. The magnetic force is larger than a friction force between the specimen and a surface of the specimen carrier and/or a liquid is disposed in the specimen carrier. When the specimen is present in the liquid, the magnetic force is larger than a viscous friction force between the specimen and the liquid. The arrangement of the specimen comprises a movement of the specimen carrier, so that the specimen unbinds from a surface of the specimen carrier when the specimen contacts with the surface of the specimen carrier. The specimen carrier comprises a hollow cavity, where a passage hole guides into the hollow cavity from the top during the operation of the specimen carrier. The process further includes filling the hollow cavity with a first liquid, introducing a second liquid into the passage hole, where the second liquid is a hydrophobic liquid, and introducing the specimen in the second liquid. The second liquid has higher viscosity, lesser density and/or stronger hydrophobic property than the first liquid. The first liquid and/or the second liquid comprise mineral oil or silicone oil.

IPC 8 full level

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CPC (source: EP US)

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Citation (examination)

- JP 2006133077 A 20060525 - SONY CORP
- EP 1741487 A1 20070110 - IBIDI GMBH [DE]
- US 2003003571 A1 20030102 - KANEGASAKI SHIRO [JP], et al

Cited by

DE102012108158A1; DE102012108158B4; US9816916B2

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DOCDB simple family (application)

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