

Title (en)

METHOD FOR DETERMINING BISPHENOL A IN BIOLOGICAL MATERIAL, DIAGNOSTIC DEVICE FOR DETECTION OF BISPHENOL A IN BIOLOGICAL MATERIAL, DIAGNOSTIC KIT FOR DETECTION OF BISPHENOL A IN BIOLOGICAL MATERIAL

Title (de)

VERFAHREN ZUR BESTIMMUNG VON BISPHENOL A IN BIOLOGISCHEM MATERIAL, DIAGNOSTISCHE VORRICHTUNG ZUM NACHWEIS VON BISPHENOL A IN EINEM BIOLOGISCHEN MATERIAL, DIAGNOSEKIT ZUM NACHWEIS VON BISPHENOL A IN EINEM BIOLOGISCHEN MATERIAL

Title (fr)

PROCÉDÉ DE DÉTERMINATION DU BISPHÉNOL A DANS UN MATÉRIAU BIOLOGIQUE, DISPOSITIF DE DIAGNOSTIC POUR LA DÉTECTION DU BISPHÉNOL A DANS UN MATÉRIAU BIOLOGIQUE, TROUSSE DE DIAGNOSTIC POUR LA DÉTECTION DU BISPHÉNOL A DANS UN MATÉRIAU BIOLOGIQUE

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Abstract (en)

[origin: WO2018174733A1] Method for determining bisphenol A in biological material that relies on binding BPA from biological material with antibodies against bisphenol A and subsequent quantitative determining of BPA content, characterized in that, a migration membrane is being prepared to determine BPA from the migrating biological material so that the membrane is divided into at least a zone of binding with a carrier, a detection zone and a control zone. Color medium covered with monoclonal or polyclonal antibodies against BPA is placed at the zone of binding with the carrier. The detection zone is divided into at least two detection areas while at the first detection area a selected concentration of antibodies against BPA is adsorbed so that BPA can be detected in the range of 0.5 ng/mL to 50 ng/mL and on the second detection area selected concentration of antibodies against BPA is adsorbed so that BPA can be detected in the 0.5 ng/mL to 50 ng/mL. On the control zone monoclonal or polyclonal antibodies against monoclonal or polyclonal antibodies against BPA. Analysed biological material is being applied at the zone of binding with carrier wherein in case of BPA presence, the BPA is being bound with color medium and thus the created complexes of BPA-color medium are directed into the detection zone in which the complexes of BPA-color medium are bound to the antibodies against BPA while the color medium not bound with BPA are directed to the control zone where the color medium is bound with the antibodies against antibodies against BPA. BPA presence is determined by color indication in at least one detection area of the detection zone and by determination of color at the control zone.

IPC 8 full level

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Citation (search report)

- [I] CN 101533014 A 20090916 - UNIV JIANGNAN
- [I] CN 103869063 A 20140618 - UNIV HEFEI TECHNOLOGY
- [I] CN 102183642 A 20110914 - WUXI ANTIX BIOTECH CO LTD
- [X] TSUKASA KODAIRA ET AL: "Novel ELISA for the Measurement of Immunoreactive Bisphenol A", BIOMEDICAL RESEARCH, vol. 21, no. 2, 1 January 2000 (2000-01-01), Sapporo Japan, pages 117 - 121, XP055765464, ISSN: 0388-6107, DOI: 10.2220/biomedres.21.117
- [I] ZHANLONG MEI ET AL: "Immunochromatographic lateral flow strip for on-site detection of bisphenol A", MICROCHIMICA ACTA ; AN INTERNATIONAL JOURNAL ON MICRO AND TRACEANALYSIS, SPRINGER-VERLAG, VI, vol. 180, no. 3 - 4, 20 December 2012 (2012-12-20), pages 279 - 285, XP035167952, ISSN: 1436-5073, DOI: 10.1007/S00604-012-0930-2
- [I] ZHANLONG MEI ET AL: "One-step signal amplified lateralfow strip biosensor for ultrasensitiveand on-site detection of bisphenol A (BPA) in aqueous samples", BIOSENSORS AND BIOELECTRONICS, vol. 49, 11 June 2013 (2013-06-11), pages 457 - 461, XP055764908
- [T] SCHORINGHUMER ET AL: "Sample clean-up with sol-gel enzyme and immunoaffinity columns for the determination of bisphenol A in human urine", JOURNAL OF CHROMATOGRAPHY B, ELSEVIER, AMSTERDAM, NL, vol. 850, no. 1-2, 24 April 2007 (2007-04-24), pages 361 - 369, XP022044082, ISSN: 1570-0232, DOI: 10.1016/J.JCHROMB.2006.12.002
- [T] DEKANT ET AL: "Human exposure to bisphenol A by biomonitoring: Methods, results and assessment of environmental exposures", TOXICOLOGY AND APPLIED PHARMACOLOGY, ACADEMIC PRESS, AMSTERDAM, NL, vol. 228, no. 1, 14 December 2007 (2007-12-14), pages 114 - 134, XP022537451, ISSN: 0041-008X, DOI: 10.1016/J.TAAP.2007.12.008
- See references of WO 2018174733A1

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