

Title (en)
METHOD FOR DETERMINING THE PRESENCE OF A CHEMICAL COMPOUND WHICH IS HOMOGENEOUSLY DISTRIBUTED IN A MEDIUM BY MEANS OF CROSS-CORRELATING A MEASURING SPECTRUM WITH REFERENCE SPECTRA

Title (de)
VERFAHREN ZUR BESTIMMUNG DES VORHANDENSEINS EINER IN EINEM MEDIUM HOMOGEN VERTEILTEN CHEMISCHEN VERBINDUNG MITTELS KREUZKORRELATION EINES MESSPEKTRUMS MIT REFERENZSPEKTREN

Title (fr)
PROCEDE POUR DETERMINER LA PRESENCE D'UN COMPOSE CHIMIQUE REPARTI DE MANIERE HOMOGENE DANS UN MILIEU PAR CORRELATION CROISEE D'UN SPECTRE DE MESURE AVEC DES SPECTRES DE REFERENCE

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Application
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Abstract (en)
[origin: WO2006010527A1] The invention relates to a method for determining the identity or non-identity of at least one chemical compound V' which is homogeneously distributed in a medium by a) irradiating the medium containing at least one homogeneously distributed chemical compound V' with analytical radiation of the variable wavelength λ , and b) determining the spectral measuring function $I'(\lambda)$ using the absorbed, reflected, emitted and/or scattered radiation. The inventive method is characterized by determining a correlation function $K(d\lambda, c', c)$ in accordance with equation (I), wherein $K(d\lambda, c', c)$ represents the relative shift $d\lambda$ of the functions $I'(\lambda, c')$ and $I(\lambda, c)$ and the concentrations c' and c of the at least one chemical compound V' and V dependent correlation; c' represents the concentration of the at least one chemical compound V' of known or suspected identity which is homogeneously distributed in the medium; c represents the concentration of the at least one chemical compound V of known identity which is homogeneously distributed in the medium, $I'(\lambda, c')$ is the measuring function of the at least one chemical compound V' which is homogeneously distributed in the medium in the concentration c' , $I(\lambda, c)$ is the comparative function of the at least one chemical compound V which is homogeneously distributed in the medium in the concentration c , and N is the scaling factor; and determining the identity and/or non-identity of compounds V' and V in relation to each other using the correlation function $K(d\lambda, c', c)$.

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Citation (examination)
MANN C.K. ET AL: "Spectrophotometric Analysis by Cross-correlation", APPLIED SPECTROSCOPY, vol. 36, no. 3, 1982, pages 223 - 227

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