

Title (en)

DETERMINATION OF THE PROPERTIES OF A SOLUTION OR SOLID USING RAMAN RATIOS

Title (de)

BESTIMMUNG DER EIGENSCHAFTEN EINER LÖSUNG ODER EINES FESTSTOFFES UNTER VERWENDUNG VON RAMAN-
VERHÄLTNISSSEN

Title (fr)

DETERMINATION DES PROPRIETES D'UNE SOLUTION OU D'UN SOLIDE PAR L'APPLICATION DES RAPPORTS RAMAN

Publication

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Application

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Abstract (en)

[origin: WO0159437A1] The invention relates to the use of ratios of Raman peak intensities to predict the properties of a solution or a solid such as pulp that is processed with the solution. The intensity of the Raman shifted light is used to create Raman peak intensity ratios. These Raman intensities are related to the concentration of species dissolved in the liquid. The Raman spectra are baseline corrected and the scattering from a water reference is subtracted before extraction of intensities for Raman peak intensity ratios. The Raman scattering intensities provide a good measure of the concentration of small, oxygenated molecules. The potential of an oxidative reductive process is conveniently determined using Raman peak intensity ratios. The method may also be used to determine a property related to the relative size, degree of polymerization, branching or network formation of complexing or polymerized species, or to measure large molecules such as hemicellulose, extractives and pectic substances.

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