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(21) International Application Number: PCT/US95/05991 (22) International Filing Date: 15 May 1995 (15.05.95) (30) Priority Data: 250,396 27 May 1994 (27.05.94) US (71) Applicant: EASTMAN CHEMICAL COMPANY [US/US]; 100 North Eastman Road, Kingsport, TN 37660 (US). (72) Inventors: ALSMEYER, Daniel, Charles; 104 Shadow Wood Lane, Kingsport, TN 37663 (US). GALA, Brinda, Ashok; 2624 Wildwood Drive, Kingsport, TN 37660 (US). NICELY, Vincent, Alvin; 2605 Suffolk Street, Kingsport, TN 37660 (US). (74) Agent: STEVENS, John, F.; P.O. Box 511, Kingsport, TN 37662-5075 (US).		(81) Designated States: AU, BR, CA, CN, CZ, HU, JP, KR, MX, PL, RU, SG, SK, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> 9612002-7 RTMP/5 copy
(54) Title: RAMAN SPECTROMETRY APPARATUS AND METHOD (57) Abstract A Raman spectrometry apparatus that is capable of measuring and compensating for variabilities in the apparatus comprises a source of substantially monochromatic radiation, means for simultaneously interfacing the radiation with a sample and a reference material, means for simultaneously acquiring at more than one wavelength a convolved Raman spectrum of the sample and the convolved spectrum of the reference material, and means for determining the convolution function of the convolved spectra and applying the convolution function to adjust the convolved Raman spectrum of the sample to produce thereby the standard Raman spectrum of the sample. A method for obtaining the standard Raman spectrum of a sample comprises: (a) simultaneous irradiating the sample and a reference material with a substantially monochromatic radiation source; (b) simultaneously acquiring at more than one wavelength a convolved Raman spectrum of the sample and a convolved spectrum of the reference material; (c) choosing the standard spectrum of the reference material; (d) from the convolved Raman spectrum of the sample and the convolved spectrum of the reference material and the standard spectrum of the reference material, determining the convolution function of the convolved spectra; and (e) applying the convolution function to adjust the convolved Raman spectrum of the sample to produce thereby the standard Raman spectrum of the sample.		