

Title (en)
HANDHELD INFRARED SPECTROMETER

Title (de)
HANDINFRAROTSPEKTROMETER

Title (fr)
SPECTROMETRE A INFRAROUGES TENU DANS LA MAIN

Publication
EP 0847524 A4 19991013 (EN)

Application
EP 96929884 A 19960830

Priority
• US 9614128 W 19960830
• US 304795 P 19950831

Abstract (en)
[origin: WO9708537A1] A handheld device for infrared reflectance measurements of samples (M) for identification of the sample materials is a self-contained portable unit built into a handheld housing (10). The housing (10) includes a window (15) and optics on a bench (100) adjacent the window (15), so that the optics will be aligned with the sample (M) when the device is placed directly against the sample (M). The optics include a broad-band IR light source (110) shining onto an acousto-optic tunable filter (AOTF) (120), which passes narrow-band IR light with a swept frequency; a lens (130) focussing the IR through the window (15) onto the sample (M); and a reflectance detector (140) aligned with the window (15) of the housing (10) to detect reflected light. A computer (202), which may be mounted in the housing (10), compares the detected reflectance spectrum with stored sample data spectra, and identifies the material (M) or the components of the material (M) and their proportions.

IPC 1-7
G01N 21/35

IPC 8 full level
G01J 3/02 (2006.01); **G01J 3/10** (2006.01); **G01J 3/12** (2006.01); **G01J 3/42** (2006.01); **G01N 21/35** (2006.01)

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Citation (search report)
• [DYA] US 4883963 A 19891128 - KEMENY GABOR J [US], et al
• [Y] US 5319437 A 19940607 - VAN AKEN HAROLD [US], et al
• [PA] WO 9702481 A1 19970123 - DSM NV [NL], et al
• [A] A.GUILLERMO, T.CZUPPON, G.PATONAY: "Long-wavelength fluorescence probes-chemistry and semiconductor lasers: A difficult marriage", PROCEEDINGS OF THE SPIE, vol. 2138, 27 January 1994 (1994-01-27) - 28 January 1994 (1994-01-28), Los Angeles, pages 228 - 240, XP002112427
• See references of WO 9708537A1

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