648

Patent Number(s): DE102010050595-A1

Title: Method for detecting organic matter e.g. lactose using tetra Hertz spectroscopy, involves detecting radiation beam transmitted through sample and/or reflected from sample, and analyzing detected radiation for identifying organic matter

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Abstract: NOVELTY - The method (100) involves suspending organic matter (105) in a medium and drying the organic matter (106) to form a sample. The sample is irradiated (110) with light or an exposure beam e.g. time domain-pulsed exposure beam and continuous frequency domain radiation, electromagnetic radiation in a drying box, where the exposure beam comprises frequencies in a range about 100 GHz to 2 THz. The radiation beam transmitted through the sample and/or reflected from the sample are detected (112). The detected radiation is analyzed (114) for identifying the organic matter.

USE - Method for detecting an organic matter e.g. carbohydrate such as monosaccharide e.g. glucose, galactose and fructose, and disaccharide e.g. sucrose, lactulose, lactose, maltose, trehalose and cellobiose, (all claimed) using tetra hertz spectroscopy. Can also be used for detecting oligosaccharides, polysaccharides, synthetic compounds and natural compounds e.g. sugars or simple carbohydrates.

ADVANTAGE - The organic matter is suspended in the medium, so that the organic matter is stabilized for effective THz spectroscopy while enabling detection intramolecular vibration modes and intermolecular vibration modes.

DETAILED DESCRIPTION - The medium is selected from a group consisting agar, guar gum, gellan gum, carrageenan, xantham gum, fibrous sodium pectate, acrylamide and other agar substitutes.

DESCRIPTION DRAWING(S) - The drawing shows a flowchart illustrating a method for detecting an organic matter.'(Drawing includes non-English language text)'

Organic matter detection method (100)

Step for suspending organic matter (105)

Step for drying organic matter (106)

Step for irradiating sample (110)

Step for detecting transmitted and/or reflected radiation beam (112)

Step for analyzing detected radiation (114)

Drawing:

Derwent Class Code(s): A89 (Photographic, laboratory equipment, optical); S03 (Scientific Instrumentation, photometry, calorimetry)

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