Patents Assigned to NIR Technologies, Inc.
https://patents.justia.com/assignee/nir-technologies-inc

- **Measurement and control of body fat percent during pregnancy**

  Patent number: US 10,271,789

  Abstract: The present invention provides a method for measuring the body fat percent and fat accretion during pregnancy, which preferably utilizes a Fourier transform near infrared spectroscopy (FT-NIR) fat determination method. The FT-NIR results can be used to measure and monitor body fat percent and used to measure the mother's fat accretion rate. A method to monitor weight gain in a pregnant subject is provided wherein the body fat percentage of the subject is maintained at a constant level during gestation, and the subject's fat accretion rate is monitored so as to follow the fat accretion rate provided by using pre-defined fat accretion determination formulae. By measurement of the body fat percent and fat accretion rates, the weight gain of a subject can be monitored and/or controlled during pregnancy.

  Type: Grant

  Filed: February 13, 2015

  Date of Patent: April 30, 2019

  Assignee: NIR Technologies Inc.

  Inventor: Hormoz Azizian

- **Verification of olive oil composition**

  Patent number: UA 10,119,905

  Abstract: A new rapid Fourier transform near infrared (FT-NIR) spectroscopic method is described to screen for the authenticity of edible oils, and in particular, extra virgin olive oils (EVOO). To screen these oils, the samples to be tested are pre-classified into one of a series of classification groups using a suitable classification criteria, such as fatty acid (FA) content. As a result, the oils are classified into Groups having similar properties. FT-NIR partial least squares (PLS1) calibration models are prepared for each group, based on FT-NIR analysis of authentic oils, and oils spiked with a specific type and amount of an adulterant. Using these different PLS1 calibration models, a more rapid method for analyzing commercial extra virgin olive oils for adulteration is provided.

  Type: Grant

  Filed: April 13, 2017

  Date of Patent: November 6, 2018

  Assignee: NIR Technologies Inc.

Inventor: Hormoz Azizian

- **Method of in-vivo measurement of fat content of a body and apparatus therefor**

Patent number: US 7,711,411

Abstract: A method of in-vivo fat measurement of humans or animals by scanning the ear of the subject using a fibre optic probe delivering a light beam of Near infrared wavelengths provided by a NIR source. Passing the beam through an interferometer to encode data from the whole spectral range simultaneously. Detecting reflected light by a detector and applying Fourier Transform techniques to determine the intensity of the light in at least one narrow wave band selected for its correspondence to a form of fat. Recording the NIR response and determining the fat content of the body by either comparison to known reference samples or by use of an empirical formula.

Type: Grant

Filed: November 13, 2002

Date of Patent: May 4, 2010

Assignee: NIR Technologies Inc.

Inventors: Hormoz Azizian, Suzanna Winsborough, Michael Younikian, Carolyn Winsborough

- **FT-NIR fatty acid determination method**

Patent number: UA 7,329,547

Abstract: A method for the rapid analysis of the fatty acid components present in a fat and/or oil-containing material is provided wherein the levels and types of fatty acids present in a sample are determined using Fourier Transform Near Infrared (FT-NIR) spectroscopy. The FT-NIR technique is developed by preparing a calibration matrix based on FT-NIR and Gas Chromatography (GC) analysis of known standards, and subsequently using the calibration matrix to analyze the FT-NIR spectral data obtained from a sample to be tested.

Type: Grant

Filed: May 23, 2005

Date of Patent: February 12, 2008

Assignee: NIR Technologies, Inc.

Inventor: Hormoz Azizian