Title (en)

APPARATUS AND METHOD FOR MEASURING AND CORRELATING CHARACTERISTICS OF FRUIT WITH VISIBLE/NEAR INFRA-RED SPECTRUM

Title (de)

VERFAHREN UND VORRICHTUNG ZUR MESSUNG UND KORRELATION VON EIGENSCHAFTEN VON OBST MIT DEM SICHTBAREN SPEKTRUM UND IM NAHEN INFRAROTBEREICH

Title (fr)

APPAREIL ET PROCEDE DE MESURE ET DE CORRELATION DE CARACTERISTIQUES DE FRUITS AVEC UN SPECTRE VISIBLE/ INFRAROUGE PROCHE

Publication

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Application

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Abstract (en)

[origin: WO0169191A1] This disclosure is of 1) the utilization of the spectrum from 250 nm to 1150 nm for measurement or prediction of one or more parameters, e.g., brix, firmness, acidity, density, pH, color and external and internal defects and disorders including, for example, surface and subsurface bruises, scarring, sun scald, punctures, in N-H, C-H and O-H samples including fruit; 2) an apparatus and method of detecting emitted light from samples exposed to the above spectrum in at least one spectrum range and, in the preferred embodiment, in at least two spectrum ranges of 250 to 499 nm and 500 nm to 1150 nm; 3) the use of the chlorophyl band, peaking at 680 nm, in combination with the spectrum from 700 nm and above to predict one or more of the above parameters; 4) the use of the visible pigment region, including xanthophyll, from approximately 250 nm to 499 nm and anthocyanin from approximately 500 to 550 nm, in combination with the chlorophyl band and the spectrum from 700 nm and above to predict the all of the above parameters.

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