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(54) Title: SPOILAGE DETECTION USING ELECTROMAGNETIC SIGNAL AND MATHEMATICAL MODELING

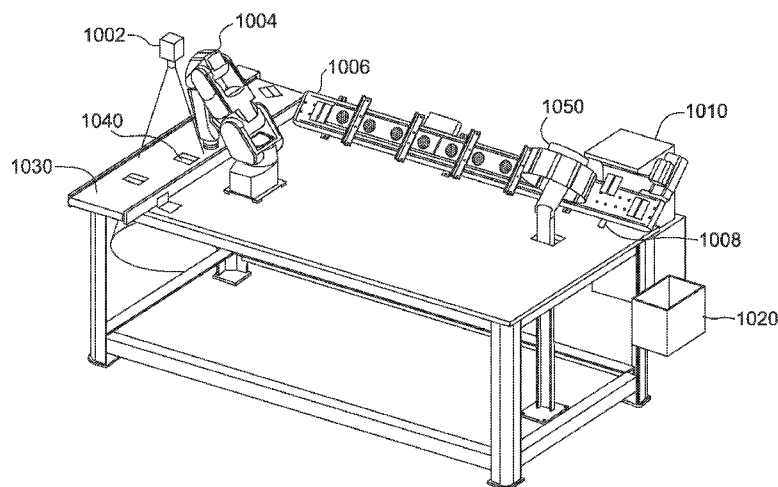


FIG. 10

(57) Abstract: The present disclosure provides a system for inspecting a package (1040) having a substance subject to spoilage. An electromagnetic signal (e.g., a terahertz frequency signal) is directed to the package (1040), and an attenuated signal is received and sampled to generate a set of data points. A peak within the set of data points is detected, and the data points are shifted with respect to time to align the detected peak with a predetermined time. The set of shifted data points are compared to a mathematical model to determine whether the substance in the package (1040) is spoiled.

