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(54) **Title:** COMPUTER IMPLEMENTED METHODS FOR DETECTING ANALYTES IN IMMUNOASSAYS

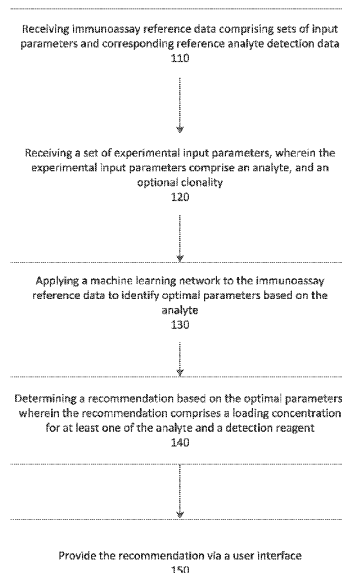


FIGURE 1

(57) **Abstract:** Provided are computer implemented systems and methods for detecting one or more analytes in an immunoassay. Embodiment systems and methods of the disclosure can train a machine learning network using immunoassay reference data on an analyte and output a set of target experimental input parameters to detect the analyte. A machine learning network can utilize the received data to generate target parameters, and can develop an immunoassay parameter set to detect and/or quantify an analyte. Computer implemented systems and methods of the disclosure can also generate troubleshooting assistance outputs for immunoassays.

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