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(54) Title: IN-PROCESS VERIFICATION OF CALIBRATION STATUS OF PH PROBES

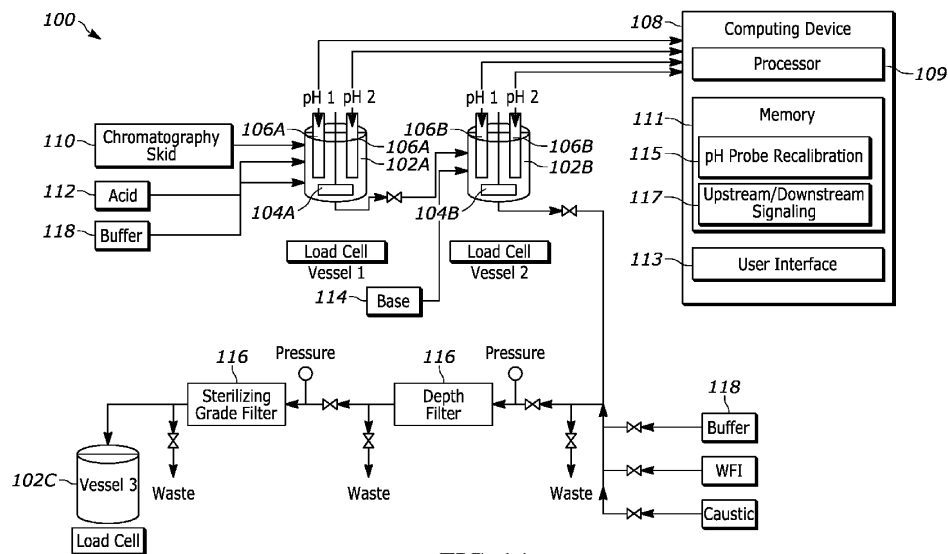


FIG. 1A

(57) Abstract: Automated systems and methods for low-pH viral inactivation include adding an elution pool to a first vessel with an acid. Once first vessel pH probes measure sufficiently low pH, the pool is transferred to a second vessel, where the pH is checked again, and the pool is held for a time sufficient to reduce virus concentration to a safe level, and neutralized, filtered, and transferred to a third vessel. Meanwhile, the first vessel is filled with a known-pH buffer, which is checked against readings from first vessel pH probes to determine whether recalibration is needed. After the pool is transferred to the third vessel, the second vessel is filled with a known-pH buffer, which is checked against readings from second vessel pH probes to determine whether recalibration is needed. The process repeats when the known-pH buffer is dumped and a new elution pool is added to the first vessel.

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