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(54) **Title:** UTILIZING MAGNETIC SEPARATION PROCESS TECHNOLOGY TO CAPTURE TARGET COMPOUNDS

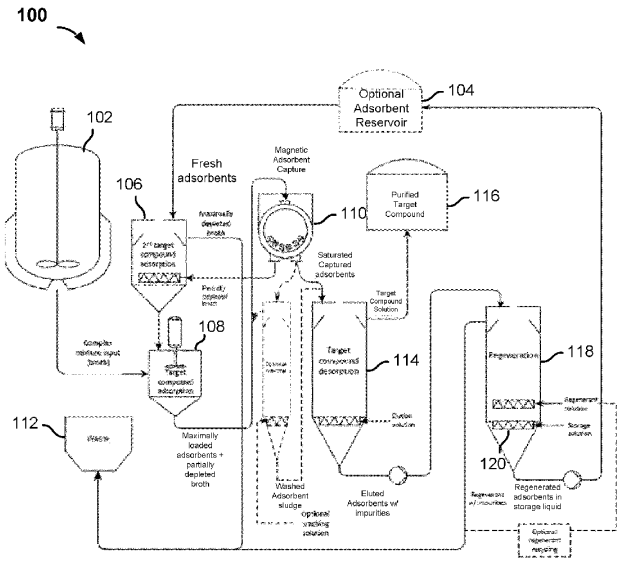


FIG. 1

(57) **Abstract:** A system to capture target compounds includes a first vessel, a magnetic separator, and a second vessel. The first vessel is configured to receive a substantially continual inflow of a liquid containing target compounds during operation of the system and adsorb the target compounds to magnetic adsorbents. The magnetic separator is configured to, during operation of the system, substantially separate a complex mixture that includes the target compounds bound to the magnetic adsorbents into an adsorbent sludge that includes the target compounds and a complex mixture depleted of the target compounds. During operation of the system, the second vessel is configured to substantially continually desorb the target compounds from the adsorbent sludge received from the magnetic separator during operation of the system to substantially continually isolate the target compounds, obtain magnetic adsorbents with a regenerated ability to bind the target compounds, and provide a substantially continual outflow of the magnetic adsorbents with the regenerated

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ability to bind the target compounds back to the first vessel.