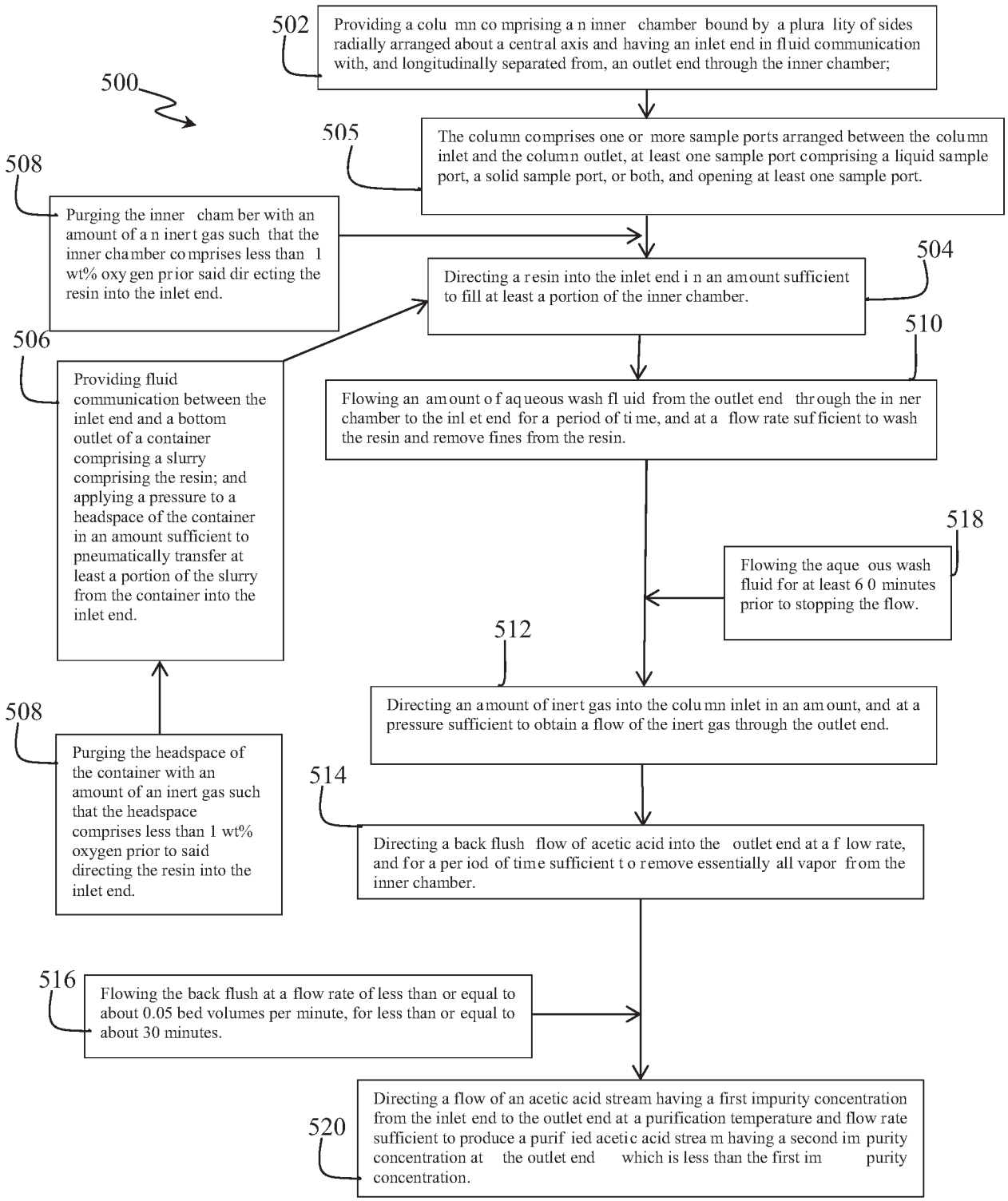
500
502
Providing a column comprising an inner chamber bound by a plurality of sides radially arranged about a central axis and having an inlet end in fluid communication with, and longitudinally separated from, an outlet end through the inner chamber;
505
The column comprises one or more sample ports arranged between the column inlet and the column outlet, at least one sample port comprising a liquid sample port, a solid sample port, or both, and opening at least one sample port.
508
Purging the inner chamber with an amount of an inert gas such that the inner chamber comprises less than 1 wt% oxygen prior said directing the resin into the inlet end.
504
Directing a resin into the inlet end in an amount sufficient to fill at least a portion of the inner chamber.
506
Providing fluid communication between the inlet end and a bottom outlet of a container comprising a slurry comprising the resin; and applying a pressure to a headspace of the container in an amount sufficient to pneumatically transfer at least a portion of the slurry from the container into the inlet end.
510
Flowing an amount of aqueous wash fluid from the outlet end through the inner chamber to the inlet end for a period of time, and at a flow rate sufficient to wash the resin and remove fines from the resin.
518
Flowing the aqueous wash fluid for at least 60 minutes prior to stopping the flow.
512
Directing an amount of inert gas into the column inlet in an amount, and at a pressure sufficient to obtain a flow of the inert gas through the outlet end.
508
Purging the headspace of the container with an amount of an inert gas such that the headspace comprises less than 1 wt% oxygen prior to said directing the resin into the inlet end.
514
Directing a back flush flow of acetic acid into the outlet end at a flow rate, and for a period of time sufficient to remove essentially all vapor from the inner chamber.
516
Flowing the back flush at a flow rate of less than or equal to about 0.05 bed volumes per minute, for less than or equal to about 30 minutes.
520
Directing a flow of an acetic acid stream having a first impurity concentration from the inlet end to the outlet end at a purification temperature and flow rate sufficient to produce a purified acetic acid stream having a second impurity concentration at the outlet end which is less than the first impurity concentration.

FIG. 5