SUMMARY

[0009a] According to a first aspect, there is provided a method of producing an analyte-free eluent, including: processing a fluid sample including an analyte in an analyte concentrator system, the analyte concentrator system retaining at least a portion of the analyte and discharging an effluent of the fluid sample that is free of the analyte; generating an eluent from the discharged effluent, the eluent being free of the analyte; and eluting at least a portion of the analyte retained by the analyte concentrator system with the eluent or storing the eluent for later use, wherein generating the eluent from the discharged effluent includes passing the discharged effluent into an eluent generation module, the eluent generation module producing the eluent from the discharged effluent; and wherein passing the discharged effluent into an eluent generation module includes passing the discharged effluent through a fluid coupling extending between the analyte concentrator system and the eluent generation module.

[0009b] According to a second aspect, there is provided an analyte concentrator system, including: an analyte concentrator assembly, including: a first fluid inlet for receiving a fluid sample including an analyte; an analyte retention mechanism coupled with the first fluid inlet, the analyte retention mechanism being configured to retain at least a portion of the analyte; a first fluid outlet for discharging an effluent of the fluid sample, the first fluid outlet being coupled with the analyte retention mechanism; and a second fluid inlet for receiving an eluent, the analyte retention mechanism being coupled with the second fluid inlet so as to receive the eluent; and an eluent generation module coupled with the first fluid outlet and with the second fluid inlet of the analyte concentrator assembly, the eluent generation module being configured to receive the discharged effluent and to generate the eluent from the discharged effluent, the eluent being free of the analyte.

[0009c] Disclosed herein is a method of concentrating an analyte, including: processing a first portion of a fluid sample including an analyte in a first analyte concentrator assembly, the first analyte concentrator assembly retaining a first portion of the analyte and discharging a first effluent that is free of the analyte, the discharged first effluent being fluid transferred from the first analyte concentrator assembly to an eluent generation module; processing a second portion of the fluid sample including the analyte in a second analyte concentrator