



**Supplementary data 1.** Average operating pressures during the BSA-LF mixture loading step at flow rates of 12.0, 18.0 and 24.0 BV·min<sup>-1</sup> using the monolith ( $H = 3$  mm), membrane ( $H = 3$  mm) in the CIM housing and Sartobind S75 device ( $H = 4$  mm).