

**Summary Report of Experiments Investigating the Sorption
of Mercury to Zeolite EC-MCL**

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For

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This report presents Tables and Figures summarizing the results from a column experiment studying the sorptive capacity of ZEOLITE EC-MCL to an aqueous-mercury solution. A 13-inch long (33.1 cm) by 1.5-inch diameter (3.8 cm) glass column was used and filled with the sorbent material to be studied. A peristaltic pump forced an aqueous solution containing in the range of 298 mg/L mercury up through the column to displace void-space air and ensure maximum contact with the sorbent material. Samples were collected periodically at the outflow of the column and analyzed using atomic absorption equipment.

Results in this report are presented below:

Table 1. Sorbent mass, porosity, flow rate and residence time information for the Zeolite EC-MCL column experiments.

Sorbent	Mass Sorbent		Porosity	Flow Rate		Residence (min)
	(kg)	(lb)		(mL/min)	(gal/hr)	
Zeolite EC-MCL	0.149	0.33	0.46	13.3	0.21	13

Table 2. 95% breakthrough for the Zeolite EC-MCL given in pore volumes and minutes along with estimated mass of mercury sorbed per mass of sorbent in mg/kg, lb/lb and percent basis.

Sorbent	Breakthrough			Mass sorbed		Mass Sorbed/Mass Sorbent		
	PV	BV	min	(mg)	(lb)	(mg/kg)	(lb/lb)	(% by sorbent)
Zeolite EC-MCL	80	36.8	1040	2347	0.005	15752	0.0157	1.57

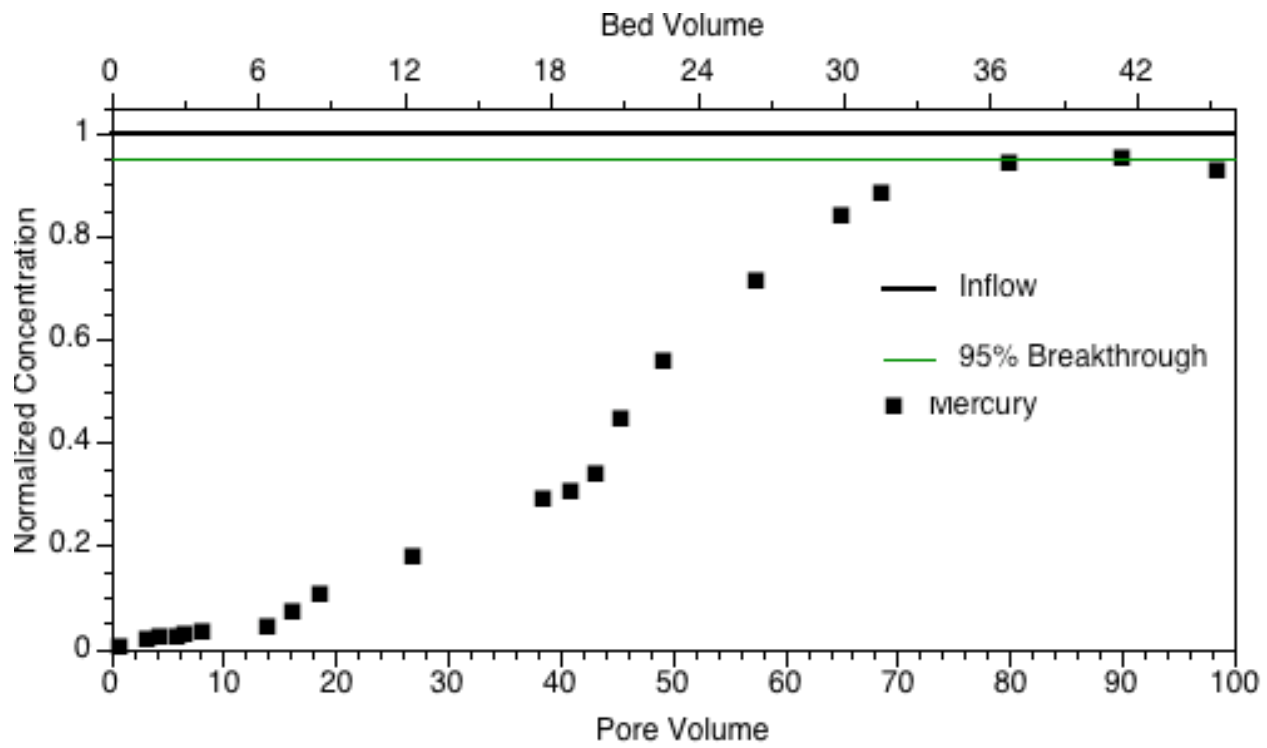


Figure 1. Breakthrough curve of mercury through a column of Zeolite EC-MCL