

**Summary Report of Experiments Investigating the Sorption
of Mercury to Humasorb**

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For

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This report presents data summarizing the results from a column experiment studying the sorptive capacity of Humasorb 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 320 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 by atomic absorption spectroscopy.

Results in this report are presented below:

Table 1. Sorbent mass, porosity, flow rate and residence time information for the Humasorb column experiment.

Sorbent	Mass Sorbent		Porosity	Flow Rate		Residence (min)
	(kg)	(lb)		(mL/min)	(gal/hr)	
Humasorb	0.129	0.29	0.45	11.4	0.18	15

Table 2. 95% breakthrough for the Humasorb 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)
Humasorb	112	50.4	1680	2637	0.006	20445	0.0204	2.04

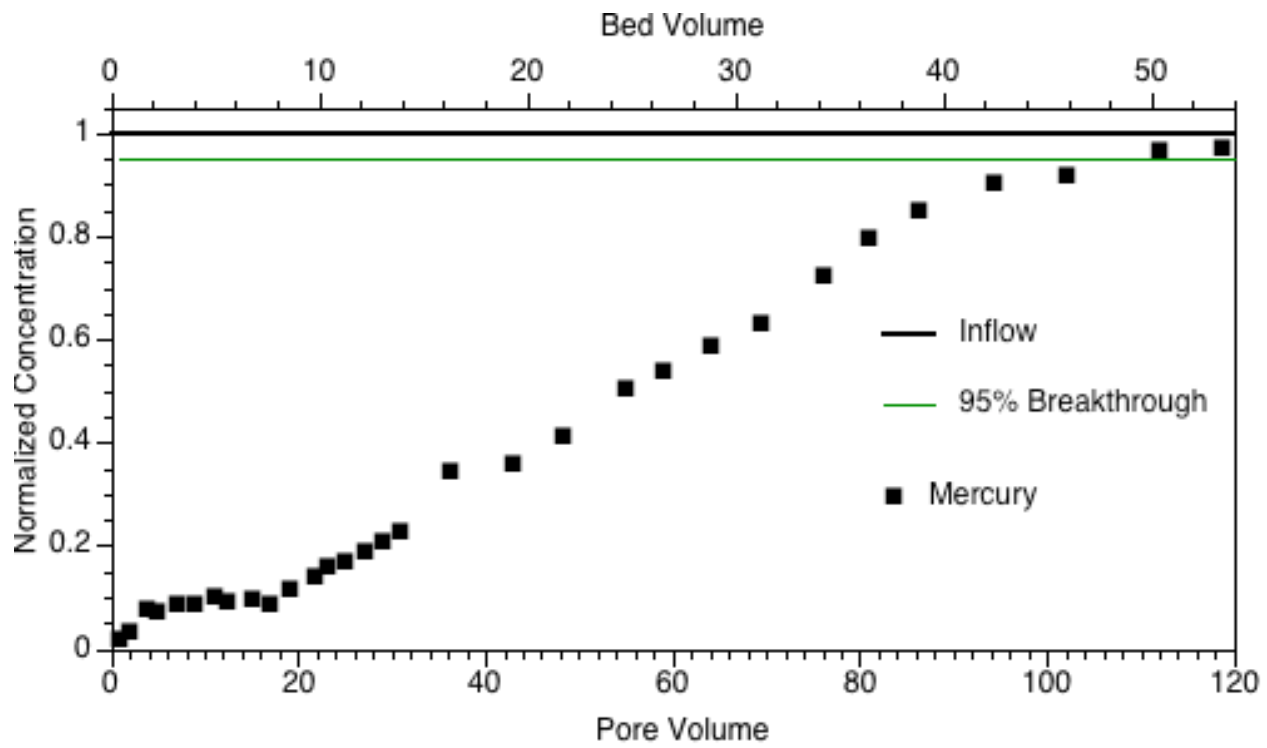


Figure 1. Breakthrough curve of mercury through a column of Humasorb