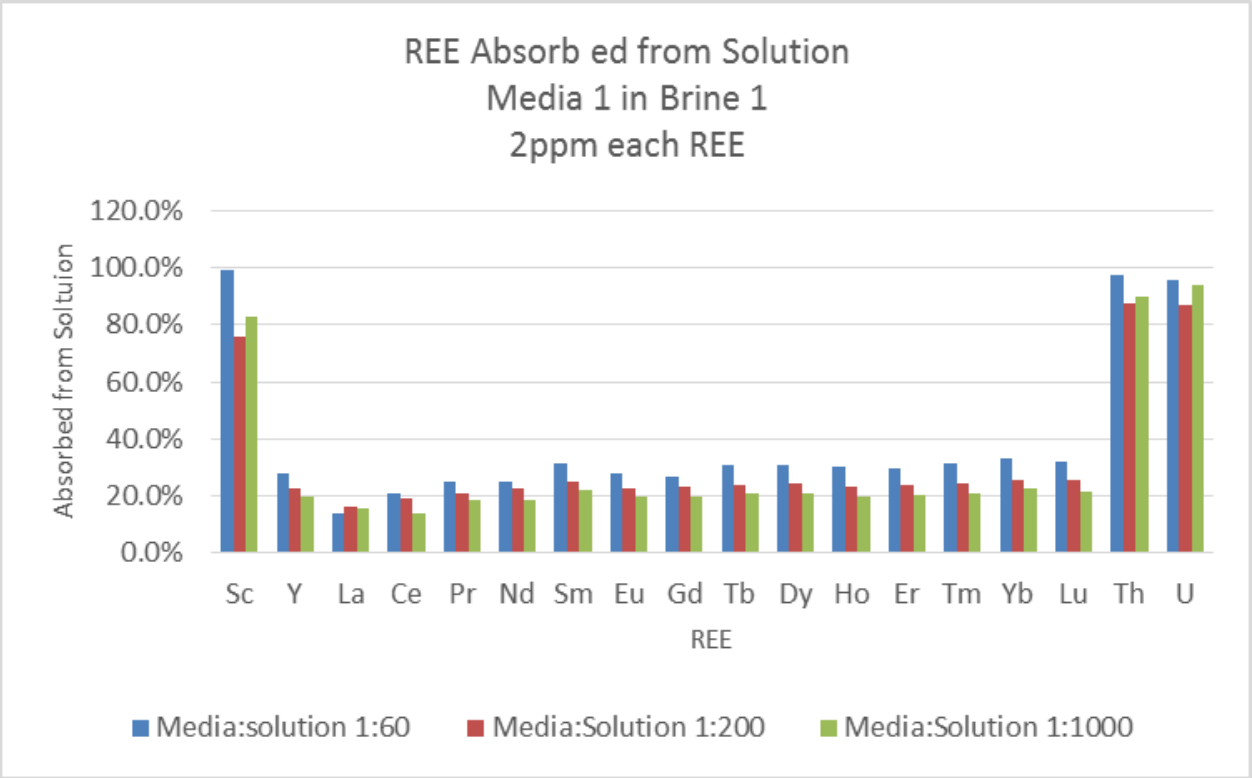
REE Sorption Study for Media #1 and Media #2 in Brine's #1 and #2 at Different Liquid to Solid Ratio's at Ambient Temperature

This data set shows the absorbance curves for Brine #1 on Media #1 and Media #2, and Brine #2 on Media #1 and Media #2. The experiments were performed at ambient temperature with open flask's on a shakertable , shaking at 310 rpm for 90 minutes. The experiments were run at 3 different liquid to solid ratio's; 1000:1(500mL-0.5g), 200:1(150mL-0.75g), and 60:1(150mL-2.5g). Each element concentration was at 2ppm.

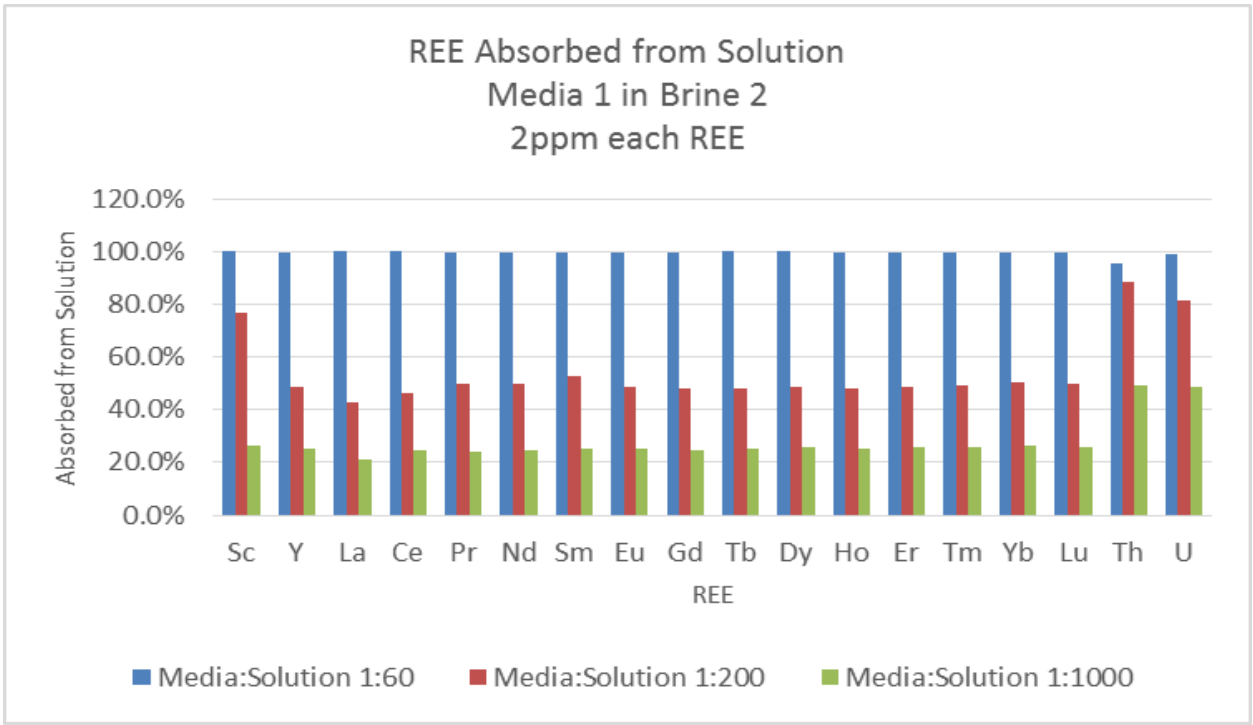
Table 1: Formulation concentrations of simulant Geothermal Brine's 1 and 2

Brine #1 M		**Brine #2 M**	
Element	Concentration (ppm)	Element	Concentration (ppm)
Na	43,183	Na	281.9
K	17,424	K	56.2
Ca	14,297	Ca	7.2
La	2	La	2
Ce	2	Ce	2
Tb	2	Tb	2
Eu	2	Eu	2
Dy	2	Dy	2
Pr	2	Pr	2
Nd	2	Nd	2
Cl	107,680	Cl	321
NO_3	909.6	NO_3	909.6
OH	119	SO_4	334
		OH	68

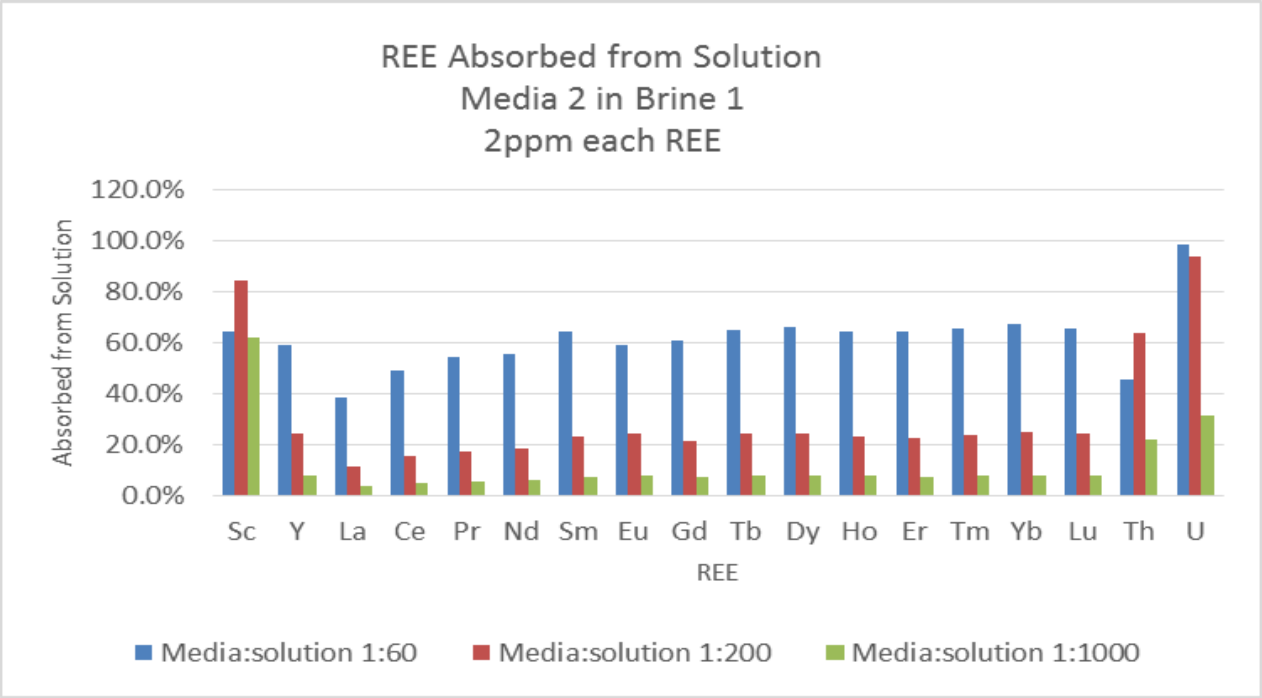
Graph 1: Rare Earths absorbed from solution for Media #1 in Brine#1 at 2ppm each element.



Graph 2: Rare Earths absorbed from solution for Media #1 in Brine #2 at 2ppm each element.



Graph 3: Rare Earths absorbed from solution for Media #2 in Brine #1 at 2ppm each element.



Graph 4: Rare Earths absorbed from solution for Media #2 in Brine #2 at 2ppm each element.