

An optimized bioluminescent assay for inorganic sulfate quantitation in freshwater

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Supplemental information

Table S1 Center, COSCIND^a and HOIE^b significance testing methods results for the screening designs

	Fractional Factorial Design I		Fractional Factorial Design II		Full Factorial Design	
	Center	COSCIND	Center	COSCIND	Center	HOIE
	ATP concentration / μM (A)	+	NS			NS
ATP sulfurylase ^c concentration / nM (B)	NS	NS	-	5%	NS	NS
Inorganic pyrophosphatase concentration / nM	NS	NS	NS	NS		
Incubation time / minutes	NS	NS	NS	NS		
Temperature of incubation / °C	NS	NS	NS	NS		
Firefly luciferase concentration / nM (C)	+	NS			NS	++
Firefly D-luciferin concentration / μM (D)	+	NS			NS	++
AB					NS	NS
AC					NS	+
AD					NS	NS
BC					NS	NS
BD					NS	NS
CD					NS	NS

^aCOSCIND, Comparison with a Scale-Independent Distribution

^bHOIE, Higher Order Interaction Effects

^c ATP sulfurylase, adenosine-5'-triphosphate sulfurylase

Significance of each effect at 95% level: NS, not significant; from + to +++, positive effect; from - to - - -, negative effect

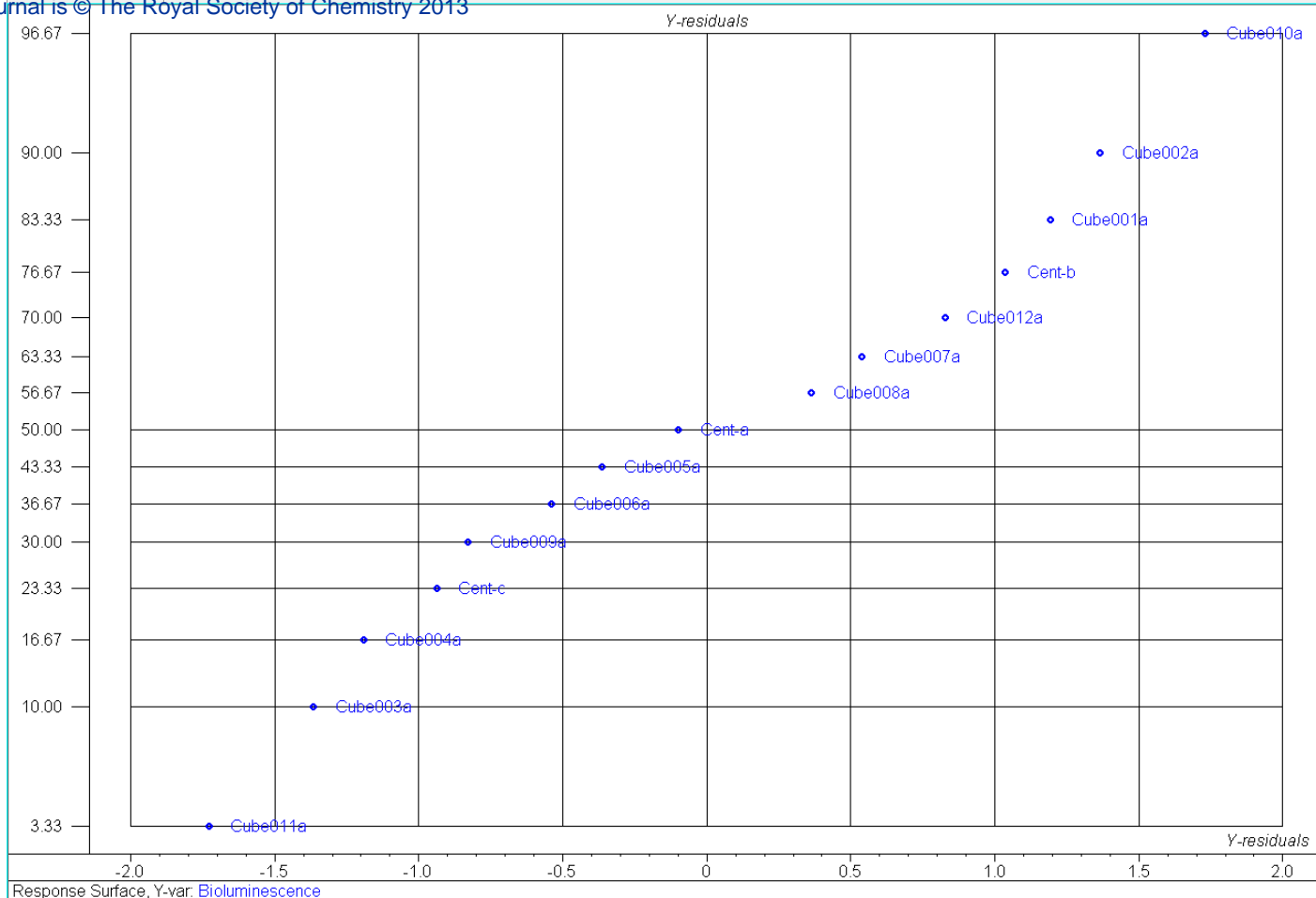


Fig. S1. Normal probability plot of the residuals of the Box Behken optimization design.