

## Protein Dispense Test – NKI, Amsterdam, 2005/2006

Each protein solution was dispensed 24 times by each robot and fluorescence was measured. The precision is given by the coefficient of variation (CV), which is the (standard deviation)/(average) for each set of measurements. The accuracy of each machine is calculated by comparing the average of each set of 24 measurements with a standard curve of that protein.

Easy protein: – 25mg/ml lysozyme, 10mg/ml BSA, 0.5mg/ml fluorescein, 20mM tris pH 8.0)

Sticky protein: – 25mg/ml lysozyme, 10mg/ml BSA, 50% glycerol, 1% Tween 80, 0.5mg/ml fluorescein, 20mM tris pH 8.0

CV(%)	Oryx		Mosquito		96+8		Microsys		961	
	Easy	Sticky	Easy	Sticky	Easy	Sticky	Easy	Sticky	Easy	Sticky
20nl	12,7	16,8	17,9 (9,5)*	22,6 (8,6)*	3,7	8,0	18,7	76,4	65,3	65,6
50nl	13,3	8,2	7,6	4,8	7,9	4,6	8,5	8,4	16,5	13,5
100nl	6,5	8,6	6,8	2,2	1,5	4,5	9,5	4,0	5,9	4,6
200nl	2,9	6,9	3,1	2,6	3,0	10,1	12,5	3,3	3,8	17,1

  

Volume (nl)	Oryx		Mosquito		96+8		Microsys		961	
	Easy	Sticky	Easy	Sticky	Easy	Sticky	Easy	Sticky	Easy	Sticky
20nl	24	25	24	24	30	32	21	17	2	2
50nl	49	59	64	55	57	70	42	52	36	2
100nl	77	112	120	119	116	141	72	96	79	63
200nl	144	217	220	240	201	234	121	185	156	119

0-50%   51-80%   81-120%   120-150%   151%+

\* when the first column of the 20 nl drops is not taken into account, the CV falls within the 10% range. There are 3 columns (24 drops) prepared with each volume. Apparently a multidispense (one aspiration and 3 dispenses) at 20nl volume causes an inaccuracy at the first dispense.

**NOTE:** For more details please read the Dispense report