			1.		2.	3.	4.
Dilution factor	**Infected wells**	**Uninfected wells**	**Cumulative infected**		**Cumulative uninfected**	**Ratio**	**% Infected**
100	3/4	1/4	13		1	13/14	92.86
400	3/4	1/4	10		2	10/12	83.33
1600	2/4	2/4	7		4	7/11	63.64
6400	2/4	2/4	5		6	5/11	45.45
25600	2/4	2/4	3		8	3/11	27.27
102400	1/4	3/4	1		11	1/12	9.09
409600	0/4	4/4	0		15	0/15	0

Largest dilution factor for which % infected is >50

Dilution factor closest to 50% without being equal to or over 50

1. Count total infected wells from bottom of the table to the top

2. Count total uninfected wells from top of the table to the bottom

3. Calculate a ratio of total infected wells to total uninfected for each dilution, using the numbers calculated in (1) and (2) as numerator and denominator.

4. Express ratio calculated in (3) as a percentage to determine cumulative percent positive wells for each dilution.

5. Calculate proportionate distance (PD):

$$PD = \frac{(\%\text{infected} > 50) - 50}{(\%\text{infected} > 50) - (\%\text{infected} < 50)} = \frac{63.64 - 50}{63.64 - 45.45} = \frac{13.64}{18.19} = 0.750$$

6. Calculate TCID50:

$\log \text{TCID50/ml} = \log(\text{inoculum volume})^{-1} + \log(\text{dil. factor}>50) + \text{PD} \log(\text{serial dil. factor})$

$\log \text{TCID50/ml} = \log(0.1)^{-1} + \log(1600) + (0.75)\log(4)$

$\log \text{TCID50/ml} = 1 + (3.204 + 0.452) = 4.656$

$\text{TCID50/ml} = 10^{4.656} = 45289$