

Determination of functional viral titer (TU/ml) using the ZMC p24 Antigen ELISA

There are approximately 2000 molecules of p24 per physical particle (PP) of lentivirus: $(2 \times 10^3) \times (24 \times 10^3 \text{ Da of p24 per PP}), 48 \times 10^6 / \text{Avogadro} = (48 \times 10^6) / (6 \times 10^{23}) = 8 \times 10^{-17} \text{ g of p24 per PP}$, approximately 1 PP per $1 \times 10^{-16} \text{ g of p24}$, $1 \times 10^4 \text{ PP per pg of p24}$.

A reasonably well packaged, VSV-G pseudotyped lentiviral vector will have an infectivity index in the range of 1 TU per 1000 physical particles (PP) to 1 TU per 100 PP (or less).

Thus, the range is approximately 10 to 100 TU/pg of p24. It is through this conversion that TU/ml is obtained.

*This conversion is derived from **Didier Trono** to determine the relationship between pg/ml p24 and viral titer or MOI and can also be found on the **Sigma Aldrich FAQ site**.*

Do not hesitate to contact us for any further questions you might have.

Best regards,

HELVETICA HEALTH CARE