

Poster title :

Vaccine development with recombinant CHO cells – Raman spectroscopy for in-line monitoring of the antigen accumulation in cell culture

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Abstract :

Off-line data collection and analysis are heavy time-consuming activities; hence the benefit of process analytical tools (PAT). On the other hand, the number of ports for probes or for auto-sampling available in a bioreactor is limited. Raman spectroscopy is a means to get many metabolites and products concentrations with a single probe provided that conversion from spectra to concentrations should be well trained. We have equipped our cell culture lab in Belgium with up-to-date Raman spectroscopy. This poster aims to show that we now routinely measure the amount not only of key metabolites but also of the antigen which accumulate in cell cultures over time. A more global Raman model is under development which would allow such culture follow-up across our whole CHO platform (i.e. dealing with different processes and cells to produce different antigens).

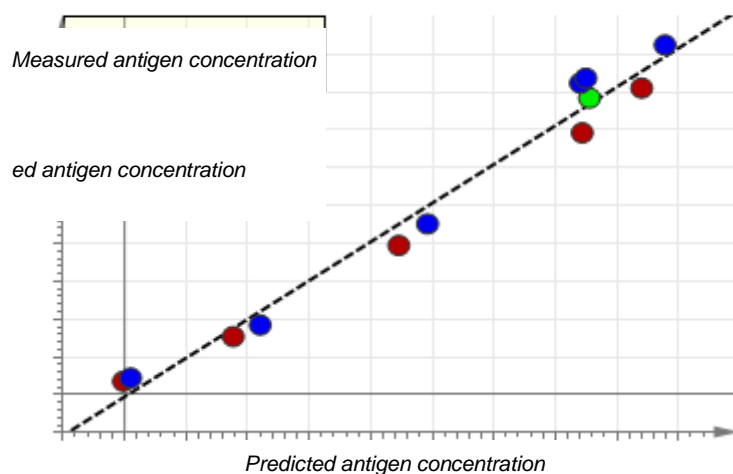


Figure 1 -- Measured over predicted antigen concentration in 3 cell cultures