

VoluPAC tubes



Disposable spin tubes for the determination of biomass in cell culture suspensions, expressed as packed cell volume (PCV)

Maintaining cell lines in culture, under optimal growth conditions, is essential for production of recombinant proteins and monoclonal antibodies. The overall health of the culture, whether in a bioreactor or flask, is generally assessed by the determination of both cell concentration and percentage of viable cells.

Many labs still rely on a method, which has already been used for decades: manual cell count using the hemacytometer. This method is both time consuming and labor-intensive. Observed variation in results can be significant among users due to the subjective nature of the determination. In addition, only several hundred cells are generally counted, which means statistical confidence is low. Even with careful attention to detail, the overall error cannot be reduced to less than 15%!

Automated devices for cell count and viability determination are available, which are based on either digital image recognition, the electrical impedance principle or flow cytometry,

respectively. They offer a faster and more precise approach, but are usually regarded as costly concepts and often require additional dilution steps and frequent calibration.

The VoluPAC tubes provide a fast, easy to use, reproducible and reliable alternative to manual cell counting. They are 15 times faster and 5 times more accurate (margin of error less than 5%).

The VoluPAC tubes enable the determination of the packed cell volume (PCV) in a cell suspension, resulting in absolute data correlating with parameters like protein content, cell count, metabolic activity and others.

The VoluPAC tubes are particularly convenient to work with, requiring neither special training nor sophisticated expensive machines – in contrast to automated cell counting devices.

Fast – 1 min centrifugation compared to 5-15 min counting under the microscope

Reliable – Less prone to statistical errors due to the high number of cells in the pellet

Reproducible – No user to user variations; no dilutions, manipulations, or calibrations are necessary

Convenient and easy to use – Even for inexperienced users, no elaborate training necessary

Works for all cell lines – No problems with cells forming microclusters

Allows parallel determination of many samples – Manual counting has to be performed sequentially

Compatible with standard rotors – No additional equipment required except a bench top centrifuge

Disposable – Does not afford preliminary cleaning steps

Cost effective – Compared to highly sophisticated techniques, particularly under concern of initial investment costs and maintenance

Provides absolute data – Irrespective of the actual volume of the cell culture

With these features biomass determination with VoluPAC is one of the simplest and most rapid methods for obtaining precise information about a cell culture. The overall accuracy competes with the best currently available techniques.

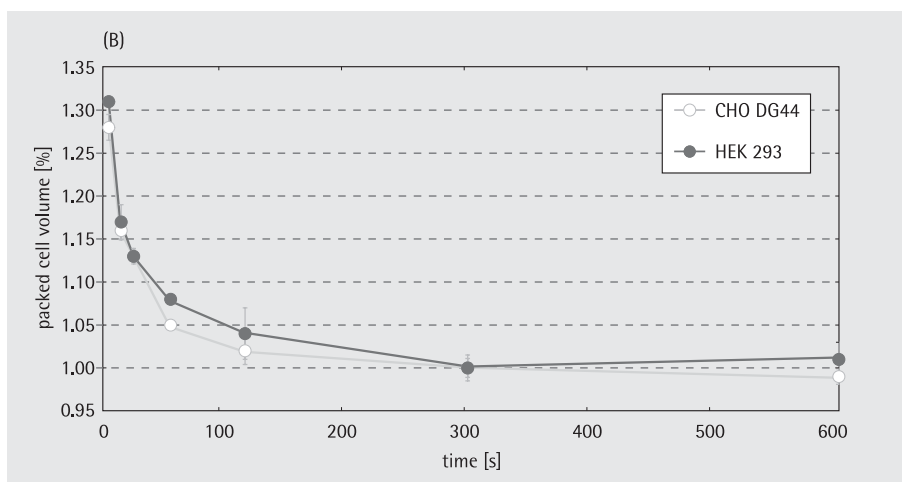
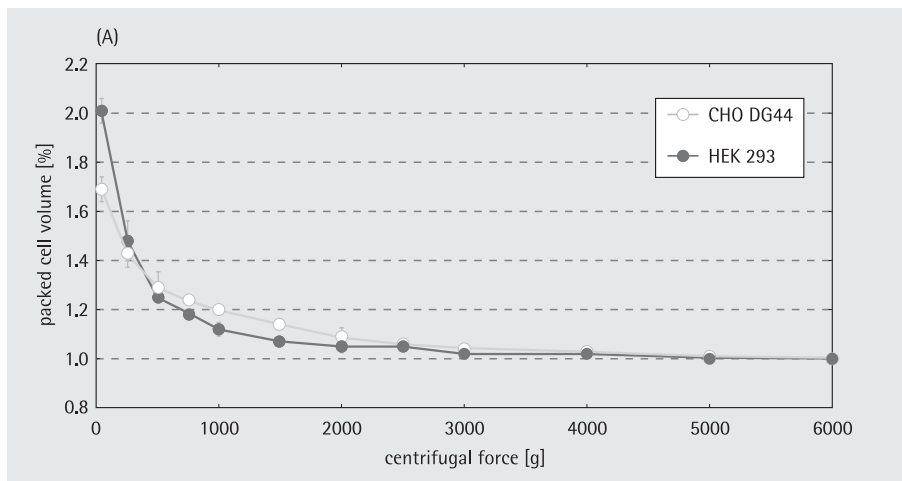
Cell Culture

Ordering | pricing information

Article no.	Description
DCC0304W-----K	VoluPAC tubes for reproducible determination of packed cell volume (PCV) as an alternative to manual cell count, Box of 50
DCC0304W-----S	VoluPAC tubes for reproducible determination of packed cell volume (PCV) as an alternative to manual cell count, Box of 200

Related Products

Article no.	Description
DF-50MB-SSH---4	CultiFlask 50 disposable bioreactor
10014 (230 V 50/60 Hz)	Sigma 1-14 basic benchtop centrifuge for microtubes
10015 (100 120 V 50 60 Hz)	
18080-M	Sartolab 150v 0.2 µm disposable PES vacuum filtration unit



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