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CAN CELL VIABILITY REAGENTS DAMAGE YOUR VI-CELL?

The purpose of this note is to clarify any concern regarding a possible damage to the Vi-CELL instrument by using the reagents from Cell Viability Inc.

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The Vi-Cell Pump assembly, manufactured by Klohen (Kloehn Norgren, part of IMI Precision Engineering), incorporates the syringe pump assembly along with the distribution valve for fluidics. This pump interfaces bi-directionally through a 9-pin serial cable and COM port on the computer. It sends commands to the various Vi-CELL electrical components via the Control PCB and contains two stepper motors: one rotates the distribution valve to select the proper fluidics from the reagent pack, and one controls the syringe operation for aspiration of fluids. The Pump also contains the CPU function, the NOVRAM where the calibration data, focus data, serial number, and firmware and various other memory values are stored.

During operation, the Vi-Cell Syringe pump aspirates cell cultures and the individual reagent components (Trypan Blue, Water, Enzymatic Cleaner and Disinfectant) via thin PTFE tubing into the glass syringe. The glass syringe is also responsible for pushing the sample to the Quartz Flow Cell via similar tubing and later does a cleaning in preparation for the next sample. The figure below shows the basic fluidic layout of the Vi-Cell system.



Main Block Diagram

Parts that are in contact with fluids from the reagent pack, from Beckman Coulter or Cell Viability Inc, are as follows:

- Teflon (PTFE) Tubing
- Quartz Flow cell
- Distribution valve with fittings and Teflon washers
- Glass Syringe
- Sipper arm (PTFE and Stainless Steel)
- Waste bottle

ALL parts listed above are chemically resistant to reagent pack component fluids found in both the Beckman Coulter and Cell Viability reagent packs.

With respect to equivalency, below is a list of the components of both reagent packs. The table below was created using the Material Data Safety Sheets for both the Beckman Coulter and Cell Viability reagent packs.

Component	Beckman Coulter Name & Contents	Cell Viability Name &	Equivalency
	a contents	Contenta	
Trypan Blue Dye	Trypan Blue 0.4%	Trypan Blue Solution, 0.4%	✓ Equivalent
Disinfectant	Disinfectant: Isopropyl	Isopropyl alcohol, 70% in	✓ Equivalent
	Alcohol, % by wt., 70	water	-
Buffer Solution	Buffer Solution	Buffer Solution	✓ Equivalent
Cleaning Agent	Cleaning Agent	Cleaning Agent- Enzymatic	✓ Equivalent
		Cleaner	

Showing the above, it is evident that the two reagent packs are fully equivalent and under normal circumstances, neither can damage the Vi-Cell system.

Please be sure to see additional Technical Note on decontamination process required to remove excessive sample protein buildup

For additional Information, please contact us directly: Cell Viability Inc 8724 Sunset Drive #403 Miami, Florida 33173 Phone – 1-800-618-7660 Fax – 305-574-7800 E-mail: <u>Sales@CellViability.com</u> www.CellViability.com

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