Walk-Away Automation of Cell Immunostaining Assays by Centrifuge-Less Laminar Wash™

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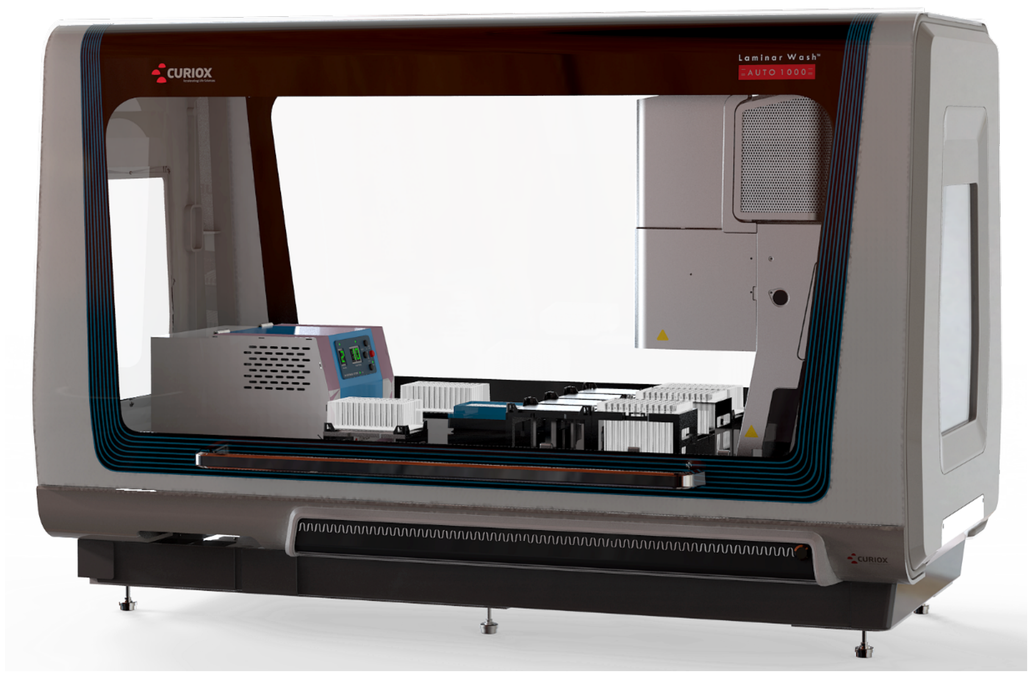
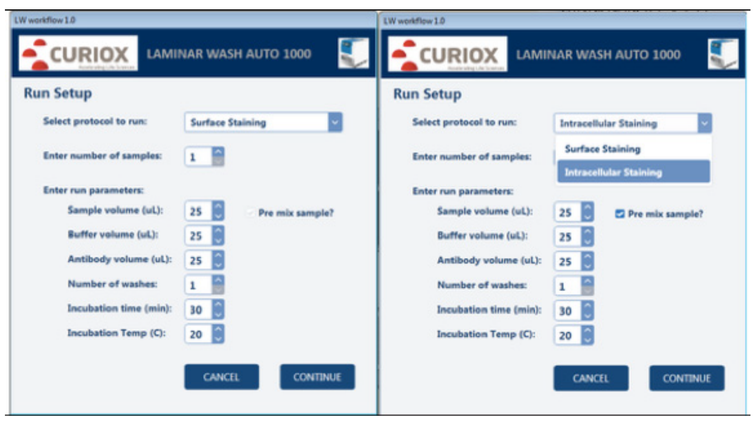
FULL AUTOMATION for CELLULAR STAINING and WHOLE BLOOD PROCESSING for FLOW CYTOMETRY ASSAYS



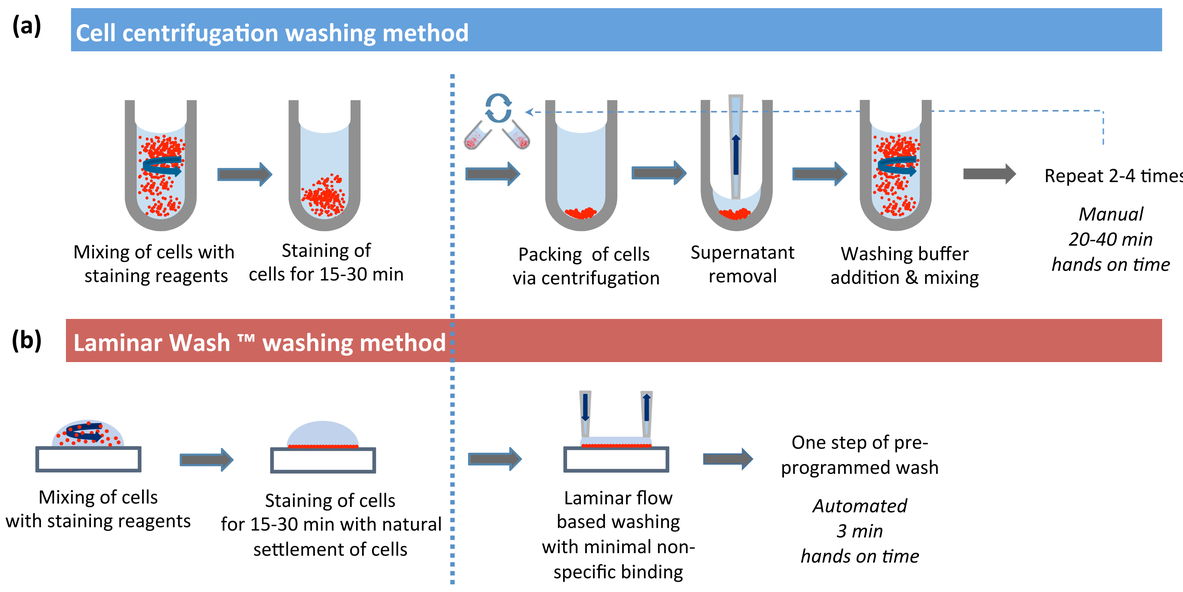


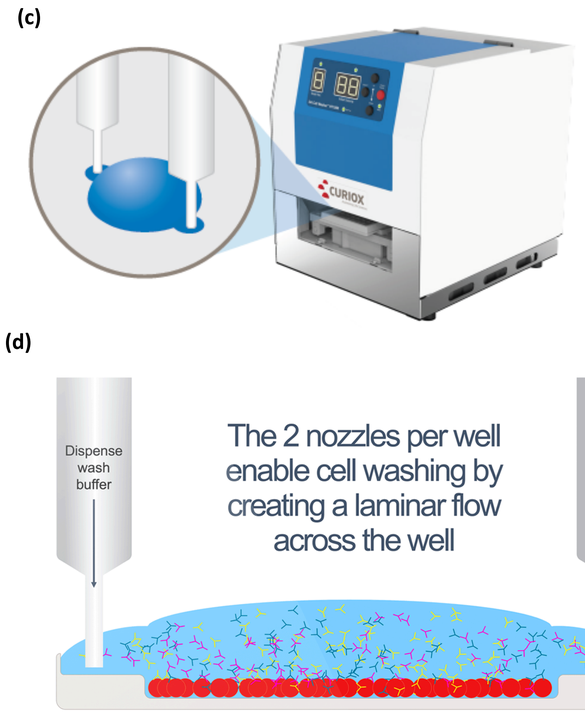
The **Laminar Wash™ AUTO 1000** software interface allows modifications to sample volume, buffer volume, antibody volume, number of washes, incubation time and temperature. In addition, it comes with pre-programmed protocols to ensure user consistency.

The software prompts the user to enter the parameters of existing SOPs or protocols with no coding or programming of the liquid handling system.

- **Automated –** reduces manual pipetting errors and errors associated with multiple personnel changes
- **Turnkey surface and intracellular staining** – automation improves lab efficiency and reduces waste by reducing repeat experiments
- **Enables compliance –** every step of the protocol is recorded in the software
- **Rapid time to results –** AUTO 1000 processes 2 plates in under 2 hours using pre-programmed intracellular staining protocols
- **Consistent results –** across users and locations
- **Cleaner data –** Laminar Wash™ reduces the amount of background and debris, especially with tissue samples

CURIOX'S LAMINAR WASH TECHNOLOGY





Curiox's centrifuge-less cell preparation platform is enabled by our **wall-less plate** and **laminar flow washer**. The Laminar Wash™ (LW) 96-well plate consists of an array of hydrophilic spots surrounded by hydrophobic surface, which functions as a virtual wall that separates each spot.

Each spot can process from a single cell to as many as 10 million cells with without the mechanical stress and cell losses associated with centrifugation.

Fig 1 Schematic showing comparison of cell staining and washing by conventional centrifuge-based method **(a)** or **Laminar Wash™** method **(b)**.
Fig 1(c) Laminar Wash™ LW washer with dispensing and aspirating nozzle in each of 96-well illustrated.
Fig 1(d) Schematic of efficient wash by laminar flow. Low flow rate ensures cells settled on plate are not resuspended and lost, while multiple exchange of buffer during wash ensures dilution and removal of reagents in less than 6 minutes.

LAMINAR WASH™ IMPROVED VIABILITY and RETENTION

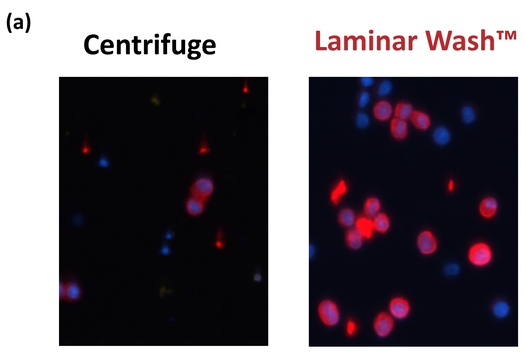


Fig 2(a) In processing of low cell numbers (50-100), LW retained higher cell count with better cellular morphology and brighter endogenous fluorescent expression. The dim protein expression is evidence of mechanic stresses caused by centrifugation.
Data from a biotech company in San Diego

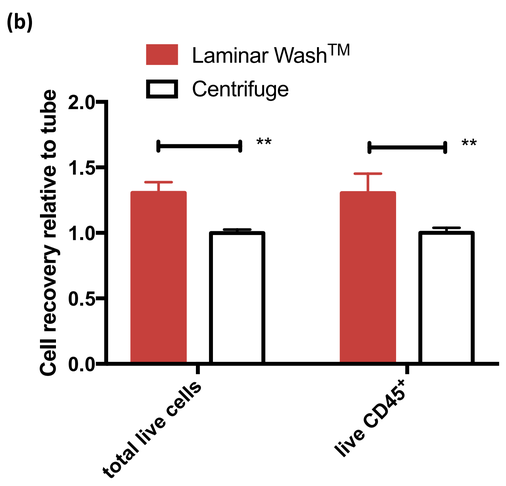
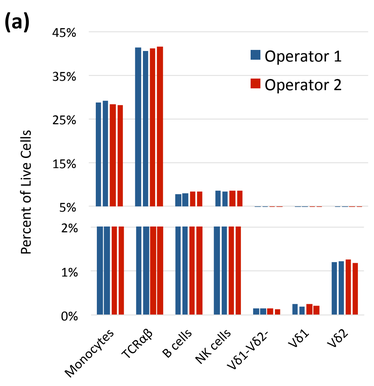


Fig 2(b) In subcutaneous murine melanoma tumor samples, LW retained 40% more live cells than centrifuge, with less tumor debris and better antibody staining.

AUTOMATED LAMINAR WASH™ PRODUCED CONSISTENT DATA with LOW COEFFICIENT of VARIANCE



(b)

Population	% CV
Monocytes	1.5
TCRαβ	1.0
B cells	3.4
NK cells	1.2
Vδ1	11.1
Vδ1-Vδ2-	10.1
Vδ2	2.4

Conventional method ~20% CV

Fig 3 By using Laminar Wash™ in a single wash step during immunophenotyping of human PBMCs, the user achieved **(a)** consistency and **(b)** lower coefficient of variance even between different operators.
Data obtained from webinar by Dr. Arnaud Colantonio, Associate Director of Process Development, Adicet Bio, available on www.curiox.com.

LAMINAR WASH™ ENABLED ACCURATE IDENTIFICATION of TUMOR INFILTRATING LYMPHOCYTE (TIL) POPULATION

Fig 4(a) Centrifuge wash method – cell loss and mechanical stress through sequential pelleting and resuspension

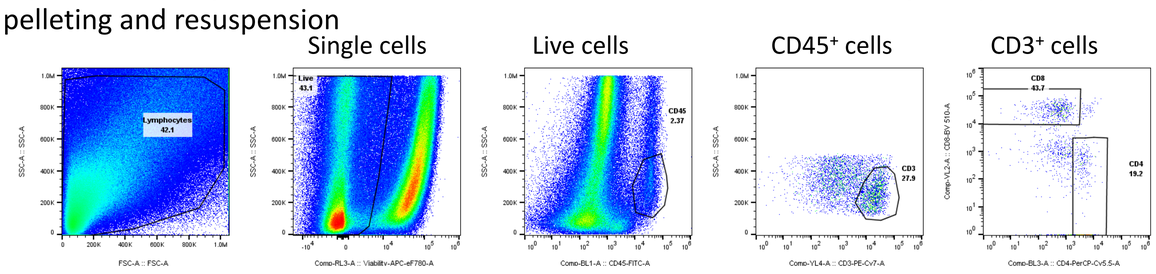
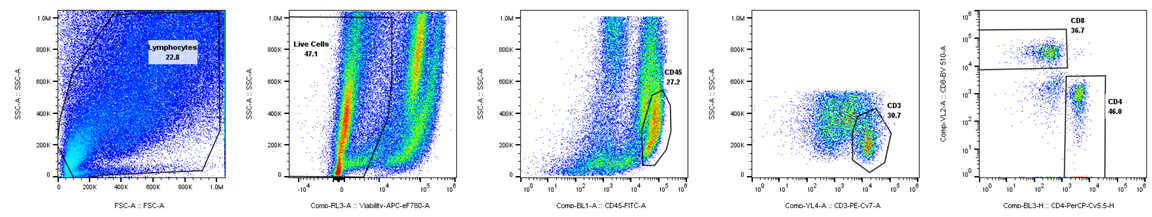


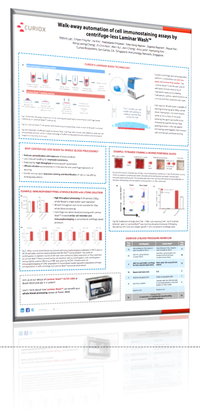
Fig 4(b) Laminar Wash™ method – less tumor debris, but higher retention of TILs and better resolution of populations



Data from leading CRO

Join us at our debut of **Laminar Wash™ AUTO 1000** at Booth #223 and see it in action!

Learn more about how **Laminar Wash™** can benefit your **whole blood processing** assays at Poster #848.



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