

## VisionSort Calibration & Performance Bead Set

rev.1/25

Cat# TCK002

### MATERIALS PROVIDED

No	Item	Catalog Number	Volume/Units	Storage Temp	Handling Instructions
1	VS C-Beads	TCB-CB001-1	100 $\mu$ L	4°C	Light sensitive
2	VS P-RBW Beads	TCB-RBW001-1	200 $\mu$ L	4°C	Light sensitive
3	VisionBeads	TCB-VB001-1	1.2 mL	4°C	Light sensitive

### INSTRUCTIONS FOR USE

#### VS C-Beads (Cat#TCB-CB001-1):

VS C (Calibration)-Beads are used for calibrating the sample stream to the optical plane of focus and to check instrument stability during start-up procedures, ensuring reliable and reproducible data generation during instrument use.

- To set up automatic calibration, vortex the bottle to ensure even bead distribution, fill a sample tube with **10  $\mu$ L** of VS C-Beads and **500  $\mu$ L** of VS Suspension Solution, then insert tube into the tube holder. Place the tube holder into the sample inlet and close the door fully.

#### VS P-RBW Beads (Cat#TCB-RBW001-1):

VS P-RBW (Performance-Rainbow) beads contain a mixture of fluorescent particles of 6 different intensities that are excited by the violet, blue, and red lasers (405, 488, 637nm).

- For VS P-RBW Beads, vortex the bottle to ensure even bead distribution and dilute **20  $\mu$ L** of VS P-RBW Beads with **500  $\mu$ L** of VS Suspension Solution and calibrate accordingly.

#### VisionBeads (Cat#TCB-VB001-1):

VisionBeads serve as an essential control to evaluate the performance of VisionSort. It is recommended to run VisionBeads daily to assess the classification performance of supervised machine learning (SVM) and the appearance of uniform manifold approximation and projection (UMAP) plots.

- To use VisionBeads, vortex the vial to ensure even bead distribution. Add **120  $\mu$ L** of VS Suspension Solution to the FACS tube then add **120  $\mu$ L** of the bead suspension. Vortex the sample before running the beads on VisionSort.

For VisionBeads data analysis, please refer to the VisionBeads User Guide.

**Note: Beads should be stored at 4°C. Resuspend the particles by vortexing before use.**

The diluted beads are usable for 24 hrs. Using diluted beads beyond 24 hrs. results in reduced fluorescence intensity and can cause instrument clogging.

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