

Technical Datasheet

Product Name: TetraSlide 05

Catalog Numbers:

- AQC-TS05-001 (1 piece)
- AQC-TS05-005 (5 pieces)

Description:

TetraSlide 05 is a calibration sample specifically designed for fluorescence light microscopy. The sample contains TetraSpeck™ Microspheres, 0.5 µm in size. These well-defined microspheres are distinctly visible under four separate excitation/emission peaks: 360/430 nm (blue), 505/515 nm (green), 560/580 nm (orange), and 660/680 nm (dark red). This characteristic makes the sample ideal for precise calibration and testing of fluorescence imaging systems.

Manufacturing Details:

- **Substrate:** Microscope cover glass, 18x18 mm, grade 1.5H (170 ±5 µm thickness).
- **Coating:** Homogeneous layer of TetraSpeck™ Microspheres.
- **Mounting Medium:** AD-MOUNT H, refractive index 1.45.
- **Particle Density:** Approximately 3000 particles per mm².

Applications:

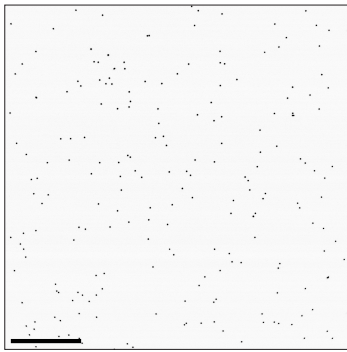
- Conventional fluorescence microscopes
- Confocal laser scanning and/or spinning disk microscopes
- Image-processing equipment, particularly beneficial for multicolor imaging applications, colocalization assays, and chromatic shift compensation

Shelf Life and Storage Conditions:

- **Shelf Life:** 12 months from the date of shipment
- **Storage Conditions:** Store at 4°C in a dark place
- **Note:** Shelf life does not cover damage from mishandling or improper imaging techniques.

Ordering Information:

To order, please reference the appropriate catalog number based on the required quantity.



TetraSlide 05

Illustrative image of homogeneous layer of fluorescent beads

Field of view: $\sim 250 \times 250 \mu\text{m}$

Grayscaled, inverted

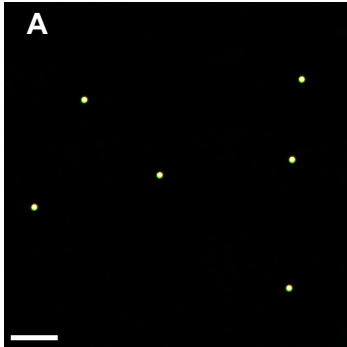
Acquisition conditions:

Confocal laser-scanning microscope

Objective 63x/1.4NA; 60 nm pixel size

HyD-X detector, photon counting mode, linear detection range

Bar $50 \mu\text{m}$



Illustrative detailed zoom image of group of fluorescent beads

Field of view: $\sim 37 \times 37 \mu\text{m}$

A: 4-channels, merged, **B:** individual excitation/emission channels

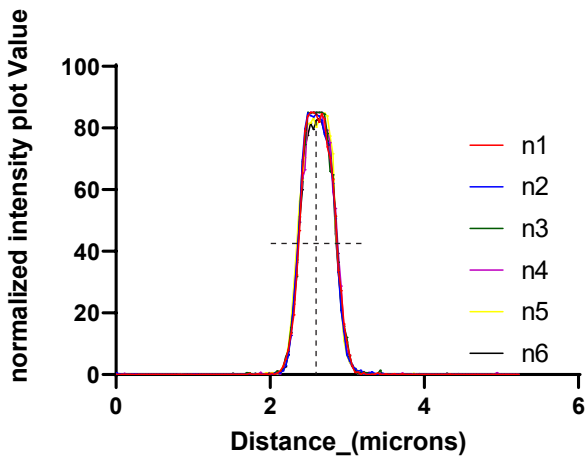
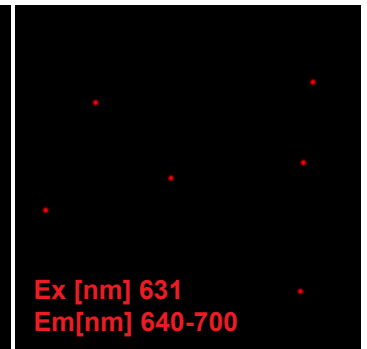
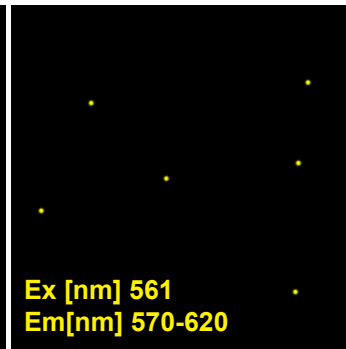
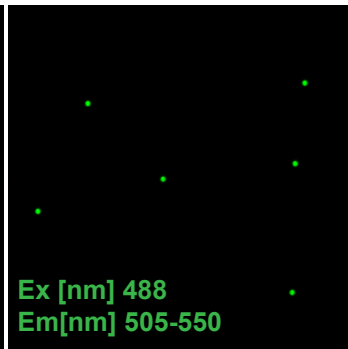
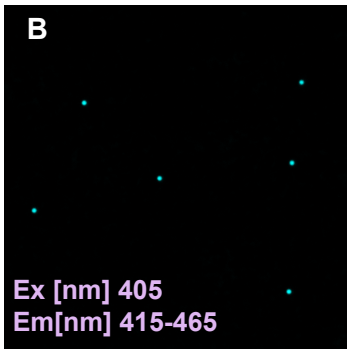
Acquisition conditions:

Confocal laser-scanning microscope

Objective 63x/1.4NA; 36 nm pixel size

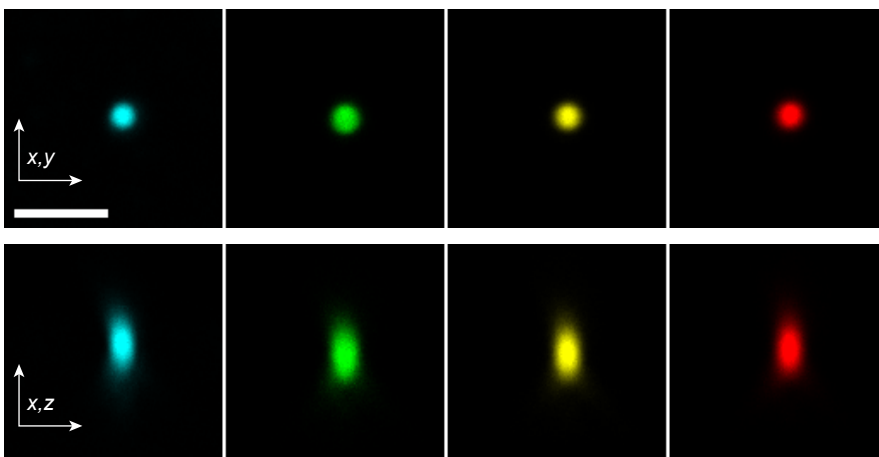
HyD-X detector, photon counting mode, linear detection range

Bar $5 \mu\text{m}$



Intensity line profiles over individual beads are plotted to quantify the fluorescent signal distribution.

The average size of the beads, with a Full Width at Half Maximum (FWHM) of $0.5 \mu\text{m}$, precisely corresponds to the declared size of the original TetraSpeck beads.



Illustrative detailed zoom on one single fluorescent bead

Field of view: $\sim 4.6 \times 4.6 \mu\text{m}$

individual excitation/emission channels

Acquisition conditions:

Confocal laser-scanning microscope

Objective 63x/1.4NA; 36 nm pixel size

xy scan / xz scan

HyD-X detector, photon counting mode,

linear detection range

Bar $2 \mu\text{m}$