

DETERMINATION OF THE BINDING CAPACITY OF BIOTIN MAGNETIC PARTICLES

MATERIALS:

1. Biotin magnetic particles, 1% w/v, Cat. # TM-40-10 Lot No. J01, 4.32 μm
2. Avidin-FITC solution, Jackson ImmunoResearch, #003-090-083, Lot No. 21452, 5 $\mu\text{g}/\text{mL}$ in 1% diluent.(IBS containing 1% normal goat serum and 1% fetal bovine serum)

PROCEDURES:

1. Adjust the fluorimeter for excitation and emission at 490 and 520 nm respectively.
2. Set 100% emission with the Avidin-FITC solution.
3. Add 25, 50, 75, 100 and 200 μL of Biotin magnetic particles to five 1.5 mL microfuge tubes.
4. Separate the particles magnetically and remove the supernatant.
5. Add 1 mL of Avidin-FITC solution to each tube, vortex and rotate at room temperature for one hour.
6. Separate the Biotin magnetic particles and read the fluorescence of the supernatant.
7. Fluorescence reduction is proportional to the Avidin-FITC bound to the Biotin magnetic particles.

RESULTS:

The binding capacity of Biotin magnetic particles is approximately 4 μg of Avidin-FITC per mg of particles as shown in Fig. 1.

