SPHERO™ Technical Note **STN-5 Rev B 011507**

DETERMINATION OF THE BINDING CAPACITY OF STREPTAVIDIN MAGNETIC PARTICLES

MATERIALS:

1. Streptavidin magnetic particles, 1% w/v, Cat. # SVM-40-5 Lot No. Y01, 4.35 µm

2. Biotin-FA solution, Spherotech, Lot No. 021688, 533 nM 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 Biotin-FA solution.

3. Add 50, 100, 150, 200, 300, and 400 µL of Streptavidin magnetic particles to six 1.5 ml microfuge tubes.

4. Separate the particles magnetically and remove the supernatant.

5. Add 1 ml of Biotin-FA solution to each tube, vortex and rotate at room temperature for one hour.

6. Separate the Streptavidin magnetic particles and read the fluorescence of the supernatant.

7. Fluorescence reduction is proportional to the Biotin-FA bound to the Streptavidin magnetic particles.

RESULTS:

The binding capacity of Streptavidin magnetic particles, 1% w/v, Cat. # SVM-40-5 Lot No. Y01, 4.35 µm is approximately 0.29 nmole of Biotin-FA per mg of particles.