Product Data Sheet 556

# BioMag® Dextran-coated Charcoal Concentrate

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Bangs Laboratories, Inc.

B E A D S ● A B O V E T H E R E S T ™

## Description

BioMag Dextran-coated Charcoal Concentrate is a suspension of BioMag particles covalently attached to NORIT® activated carbon and dextran. The suspension is supplied in distilled water with 0.1% sodium azide added as a preservative. A 1:5 dilution of this concentrate with phosphate buffered saline (PBS) is necessary before use. After shaking vigorously or vortexing, the diluted suspension is ready to use.

## Characteristics

| | |
|---|---|
| Mean Diameter: | 1-10µm |
| Concentration: | 50mg/mL |
| Binding Capacity: | 750µL (3.75mg) of dilution per assay tube is sufficient to adsorb free unlabeled and tritium ($^3$H)-labeled analyte in a typical competitive radioimmunoassay. **Use only the diluted product in immunoassays.** |

## Material

### Material Supplied

- BioMag Dextran-coated Charcoal Concentrate: 1000mL

### Material Required

- Phosphate buffered saline
- Magnetic separator
- Test tubes
- Scintillation vials

## Procedure

Researchers are advised to optimize the use of BioMag in any application as procedures designed by other manufacturers may not be ideal.

A 1:5 dilution of this concentrate with phosphate buffered saline (PBS) is necessary before use. Add 4 parts PBS to 1 part concentrate. Shake vigorously before dilution and use. BioMag Dextran-coated Charcoal (diluted from concentrate) can be used in tritiated radioimmunoassays to simplify charcoal-based separations. The dextran coating on the charcoal serves a gatekeeping function, permitting small molecules to pass between dextran molecules into the charcoal, while excluding larger complexes. Free unlabeled and radiolabeled analyte may thus be separated from the antibody-bound fraction.

Assay tubes are placed in a magnetic separation unit that pulls BioMag Dextran-coated Charcoal Concentrate containing the free radiolabeled and unlabeled analyte to the bottom of the test tubes, leaving the antibody-bound analyte in the supernatant. The entire separation unit is inverted to simultaneously decant thirty test tubes into scintillation vials to quantify antibody-bound analyte. Please inquire for further information on the BioMag separation device best suited to your application.

## References

1. **Wu, Y-W., Y-H Tsai.** 2006. A rapid transglutaminase assay for high-throughput screening applications. *J Biomol Screening*, 11(7): 836-843.

2. **Poznanski, N., U.J. Poznanski.** 1969. Laboratory application of the dextran-coated-charcoal radioimmunoassay of insulin. *Clin Chem*, 15(9):908-918.
3. **Herbert, V., K-S Lau, C.W. Gottlieb, S.J. Bleicher.** 1965. Coated charcoal immunoassay of insulin. *J Clin Endocr*, 25:1375-1384.

## Trademarks and Registered Trademarks

1. BioMag® is a registered trademark of Polysciences, Inc.
2. NORIT® is a registered trademark of Norit N.V.

## Storage and Stability

Store at 2-8˚C. Freezing, drying, or centrifuging particles may result in irreversible aggregation and loss of binding activity.

## Safety

This particle suspension contains sodium azide. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Upon disposal of material, flush with a large volume of water to prevent azide accumulation. Please consult the Material Safety Data Sheet for more information.

Observe your institution's guidelines for safe handling and disposal of radiolabled materials if using BioMag Dextran-coated Charcoal Concentrate in radiometric assays or isolations.

**This product is for research use only and is not intended for use in humans or for *in vitro* diagnostic use.**

## Ordering Information

| Catalog Code | Description | Size |
|---|---|---|
| BM556 | BioMag® Dextran-coated Charcoal Concentrate | 1000mL |

## Related Product

| Catalog Code | Description | Size |
|---|---|---|
| BM555 | BioMag® Dextran-coated Charcoal | 100mL |

Order online anytime at **www.bangslabs.com**.