



FastTag® labeling of nucleic acids:

Reconstitute Texas Red® Maleimide with 500 µl of anhydrous dimethyl sulfoxide (DMSO) and store at -20 °C to -80 °C in the dark. Use the labeled control DNA as a standard to verify successful labeling.

Follow the labeling procedure included in the FastTag® system labeling products with the following important modification because of the solubility of FastTag® Texas Red®-labeled nucleic acids in alcohol. Replace the ethanol precipitation steps of the FastTag® protocol with spin column chromatographic separation as described:

1. Prepare a Sephadex® G-50 (or G-25 for oligonucleotides) spin column using a 3 ml syringe as described in many molecular biology protocol manuals (e.g. 3).
2. Wash the column 3 times by centrifugation with one sample volume of TEN (10 mM Tris, pH 8, 1 mM EDTA, 0.15 M NaCl).
3. Load sample (in TEN) onto the column and equilibrate for 5 minutes.
4. Centrifuge the sample through the column into a clean tube.

Applications requiring extremely pure probes (e.g. *in situ* hybridization) may require further purification using an additional Sephadex® spin column.

5' EndTag™ or 3' EndTag™ labeling of nucleic acids:

Reconstitute Texas Red® Maleimide with 500 µl of anhydrous dimethyl sulfoxide (DMSO) and store at -20 °C to -80 °C in the dark.

Follow the labeling procedure included with the 5' EndTag™ or 3' EndTag™ systems.

Protein labeling procedure:

1. Dissolve the protein to be labeled in 0.1 M phosphate buffer, 5 mM EDTA, pH 7, at a concentration of 5 mg/ml.
2. Dissolve a slight excess of the Texas Red® Maleimide needed in dimethyl sulfoxide (DMSO) at 20 mg/ml.
3. Add 25 µl Texas Red® Maleimide per ml of protein solution.
4. Incubate at room temperature for 3 hours with occasional stirring.
5. Separate the unreacted material from the protein by gel filtration or dialysis.

References:

¹Deziel, M. and M. Mau, 1990. Biotin-conjugated reagents as site-specific probes of membrane protein structure: application to the study of the human erythrocyte hexose transporter. *Anal. Biochem.* 190:297-303.

²Daniel, S., M. Westling, M. Moss and B. Kanagy. 1998. FastTag™ Nucleic Acid Labeling System: A versatile method for incorporating haptens, fluorochromes and affinity ligands into DNA, RNA and oligonucleotides. *BioTechniques.* 24:484-89.

³Sambrook, J., Fritsch, E.F., and Maniatis, T. 1989. *Molecular Cloning: A Laboratory Manual*. 2nd ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y

Selected reagents for the detection of the Texas Red® label:

Alkaline Phosphatase Anti-Rhodamine*, made in goat	MB-1920	•	150µg
Biotinylated Anti-Rhodamine*, made in goat	BA-0605	•	0.5mg

**Binds most rhodamines including Texas Red®*

Texas Red is a trademark of Molecular Probes

Sephadex is a trademark of Pharmacia