

Amersham **CyDye** DIGE Fluor Cy5(minimal dye) - For 2-D Fluorescence Difference Gel Electrophoresis

Product Specification Sheet

Introduction

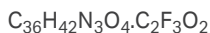
Product code

25800862

About

Reagents for labelling protein, prior to 2-dimensional separation, with CyDye™ DIGE Fluor Cy™5 minimal dye.

Cy5 NHS-Ester



Important

Read these instructions carefully before using the products.

Intended use

The products are intended for research use only, and shall not be used in any clinical or *in vitro* procedures for diagnostic purposes.

Safety

For use and handling of the products in a safe way, refer to the Safety Data Sheets.



CAUTION

This dye is intensely colored and very reactive. Care must be exercised when handling the dye to avoid staining clothing, skin and other items. The toxicity of Cy5 NHS Ester has not yet been evaluated.

Storage

Store at -15°C to -30°C. Avoid light, store in the dark.

Expiry

The expiry date will be at least 12 weeks from the date of despatch.

Components

- Two vials containing 5 nmol each of Cy5 dye.
- Product specification sheet.
- Protocol booklet for 2-D DIGE.

Other materials required

Note: For further information please read protocol booklet before use.

- Anhydrous Dimethylformamide 99.8% (DMF) (Important: To be used in accordance with recommended Cytiva DIGE protocols).
- 10 mM Lysine.
- Small volume tubes, pipettes and microfuge.

Recommended procedure for use

It is essential to read the detailed procedure in the protocol booklet before use. A complete protocol for labelling proteins can be found in the accompanying protocol booklet (RPK0272PL).

Step	Action
1	Reconstitute the dye: allow the dye tube to warm to room temperature for 5 min.
2	Add 5 µL DMF to one of the dye tubes and mix. The tube now contains 1 mM Cy5 dye in DMF. This solution must be returned to -15°C to -30°C as soon as possible.

Cyanine dye reagents have been shown to be useful as fluorescent labels for biological compounds(1,2). A complete protocol for labelling proteins can be found in the *Ettan DIGE User Manual, 18-1173-17*, see cytiva.com. The protocol has been designed to label epsilon amino groups on Lysine. The ratio of dye to protein ensures that the majority of individual proteins present in the sample do not have a dye molecule attached. Do not increase the dye to protein ratio above that recommended.

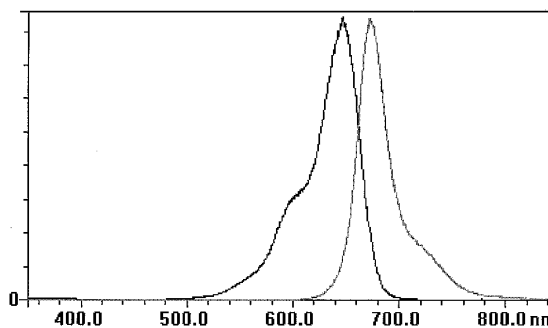


Fig 1. Cy5 NHS Ester in Dimethylformamide absorption and emission spectra.

Cy5 NHS Ester dye characteristics

Formula weight (of dye cation)	580.74
Formula weight (of TFA salt)	693.77

Absorption max (in DMF)	648 ± 3 nm
Emission max (in DMF)	669 ± 5 nm

Structure confirmed by NMR.

Related products

CyDye DIGE Fluors 10 nmol pack size	
Cy2 minimal dye	25800860
Cy3 minimal dye	25800861

CyDye DIGE Fluors 25 nmol pack size	
Cy2 minimal dye	RPK0272
Cy3 minimal dye	RPK0273
Cy5 minimal dye	RPK0275

References

1. Mujumdar, R.B. *et al.*, *Bioconjugate Chemistry* **4**(2), 105-111 (1993).
2. Yu, H. *et al.*, *Nucleic Acids Research* **22**(15), 3226-3232 (1994).

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