

# Amersham CyDye DIGE Fluor Cy3(minimal dye) - For 2-D Fluorescence Difference Gel Electrophoresis

## Product Specification Sheet

### Introduction

#### Product code

25800861

#### About

Reagents for labelling protein, prior to 2-dimensional separation, with CyDye™ DIGE Fluor Cy™3 minimal dye

#### 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.

#### 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 Cy3 dye.
- Product specification sheet.
- Protocol booklet for 2-D DIGE.

#### Other materials required

For further information, 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.

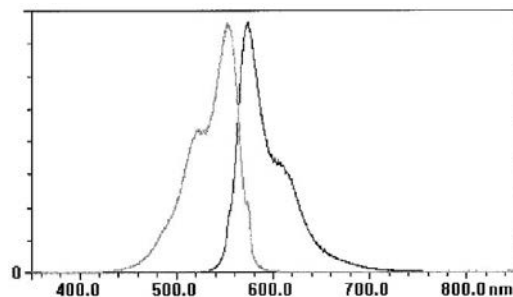
#### Recommended procedure for use

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 minutes.
2	Add 5 µL DMF to one of the dye tubes and mix.  <i>Result:</i> The tube now contains 1 mM Cy3 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 which is available on the Cytiva website.

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.** Cy3 NHS Ester in Dimethylformamide absorption and emission spectra.

#### Cy3 NHS Ester dye characteristics

Formula weight (of dye cation)	582.76
Formula weight (of TFA salt)	663.64
	695.79
	693.77
Absorption max (in DMF)	553 ± 3 nm
Emission max (in DMF)	572 ± 5 nm
Structure confirmed by NMR.	

## 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).

## Related Products

CyDye DIGE Fluors 10 nmol pack size

Cy2 minimal dye 25800860

Cy5 minimal dye 25800862

CyDye DIGE Fluors 25 nmol pack size

Cy2 minimal dye RPK0272

Cy3 minimal dye RPK0273

Cy5 minimal dye RPK0275

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