

## 2-D Protein Extraction Buffers

### Introduction

2-D Protein Extraction Buffers are modifications of well-studied protein solubilization and IPG-strip rehydration buffers designed to produce better spot resolution for 2D gel analysis.

Depending on the nature of your samples, one of the following buffers will be suitable for most of your applications.

Extraction Buffer-I and -II are suitable for most applications. However, for stronger solubilization effects, the Extraction Buffer-III, -IV, -V or -VI may be used.

### Compatibility

2-D Protein Extraction Buffers are compatible with CyDye™ DIGE Fluors with following exceptions:

- 2-D Protein Extraction Buffer -I is not recommended when CyDye DIGE Fluor minimal dye is used. The labelling efficiency will be slightly reduced.
- 2-D Protein Extraction Buffer-III and -IV are not suitable when CyDye DIGE Fluor labelling kit for scarce samples is used. Labelling efficiency is significantly reduced.

### Items included

2-D Protein Extraction Buffer	Content
2-D Protein Extraction Buffer-I with DILUENT-I	Urea and NP-40, For 50 ml (25 g)
2-D Protein Extraction Buffer-II with DILUENT-II	Urea and CHAPS, For 50 ml (25 g)
2-D Protein Extraction Buffer-III with DILUENT-III	Urea, Thiourea, CHAPS & ASB-16, For 50 ml (25 g)
2-D Protein Extraction Buffer-IV with DILUENT-III	Urea, Thiourea, CHAPS & SB 3-10, For 50 ml (25 g)
2-D Protein Extraction Buffer-V with DILUENT-II	Urea, Thiourea & CHAPS, For 50 ml (25 g)
2-D Protein Extraction Buffer-VI with DILUENT-III	Urea, Thiourea, CHAPS & NDSB 201, For 50 ml (25 g)

### Storage condition

The kit is shipped at ambient temperature. Upon arrival, store 2-D Protein Extraction Buffers at 15°C to 30°C and DILUENTS at 4°C to 8°C after opening.

### Instructions for use

The 2-D Extraction Buffers are intended for research use only.

Reconstitute the 2-D Protein Extraction Buffers by adding specific DILUENT as described below:

- 1 Shake the bottle 10–15 seconds.
- 2 Weigh an appropriate amount. Each gram of dry reagent will prepare about 2 ml buffer solution.
- 3 For each gram of dry reagent, add 1 or 1.15 ml of DILUENT, as directed by table below.
- 4 Add needed agents such as reducing agents, inhibitors, carrier ampholyte, dye BPB, etc.
- 5 Mix periodically and incubate at room temperature until you have a clear solution.

**Note:** Extraction Buffer-IV might require warming for a short period at 25°C to 30°C (water bath).

With any unused buffer, aliquot and store below -18 °C.

### Diluents

Type of DILUENT to use with 2-D Protein Extraction Buffers -I to -VI:

2-D Protein Extraction Buffer	Type of DILUENT to add	W/V Ratio of 2-D Protein Extraction Buffer & DILUENT
2-D Protein Extraction Buffer-I	DILUENT-I	1 g dry powder per 1.15 ml DILUENT-I
2-D Protein Extraction Buffer-II	DILUENT-II	1 g dry powder per 1.15 ml DILUENT-II
2-D Protein Extraction Buffer-III	DILUENT-III	1 g dry powder per 1 ml DILUENT-III
2-D Protein Extraction Buffer-IV	DILUENT-III	1 g dry powder per 1 ml DILUENT-III
2-D Protein Extraction Buffer-V	DILUENT-II	1 g dry powder per 1.15 ml DILUENT-II
2-D Protein Extraction Buffer-VI	DILUENT-III	1 g dry powder per 1 ml DILUENT-III



## Order information

Product	Quantity	Code No.
2-D Protein Extraction Buffer-I	For 50 ml	28-9435-23
2-D Protein Extraction Buffer-II	For 50 ml	28-9435-24
2-D Protein Extraction Buffer-III	For 50 ml	28-9435-25
2-D Protein Extraction Buffer-IV	For 50 ml	28-9435-26
2-D Protein Extraction Buffer-V	For 50 ml	28-9435-27
2-D Protein Extraction Buffer-VI	For 50 ml	28-9435-28

## Related products

Product	Quantity	Code No.
2-D Protein Extraction Buffer – Trial Kit	For 6 × 10 ml	28-9435-22
Sample Grinding Kit	50 samples	80-6483-37
Albumin and IgG Removal Kit	10 samples	RPN6300
2D Quant Kit	500 assays	80-6483-56
2D Fractionation Kit	10 samples	80-6501-04
Nuclease Mix	0.5 ml	80-6501-42
Protease Inhibitor Mix	1 ml	80-6501-23
2D Clean-Up Kit	50 samples	80-6484-51
DeStreak Rehydration Solution	5 × 3 ml	17-6003-19
DeStreak Reagent	1 ml	17-6003-18

Product	Quantity	Code No.
CyDye DIGE Fluor minimal dye labeling kit (2 nmol)	1	28-9345-30
CyDye DIGE Fluor, minimal labeling kit (5 nmol)	1	25-8010-65
DIGE Trial Pack, incl. CyDye DIGE Fluor minimal dye labeling kit (2 nmol) + 1 month free DeCyder 2-D trial license	1	28-9373-73
CyDye DIGE Fluor, Cy2 minimal dye	5 nmol	25-8010-82
CyDye DIGE Fluor, Cy3 minimal dye	5 nmol	25-8010-83
CyDye DIGE Fluor, Cy5 minimal dye	5 nmol	25-8010-85
CyDye DIGE Fluor, Cy2 minimal dye	10 nmol	25-8008-60
CyDye DIGE Fluor, Cy3 minimal dye	10 nmol	25-8008-61
CyDye DIGE Fluor, Cy5 minimal dye	10 nmol	25-8008-62
CyDye DIGE Fluor, Cy2 minimal dye	25 nmol	RPK0272
CyDye DIGE Fluor, Cy3 minimal dye	25 nmol	RPK0273
CyDye DIGE Fluor, Cy5 minimal dye	25 nmol	RPK0275
CyDye DIGE Fluor Labeling Kit for Scarce Samples	1	25-8009-83
CyDye DIGE Fluor Labeling Kit for Scarce Samples and Preparative Gel Labeling	1	25-8009-84

For other related products, visit our web site at [www.gelifesciences.com](http://www.gelifesciences.com) or contact our technical dept.

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