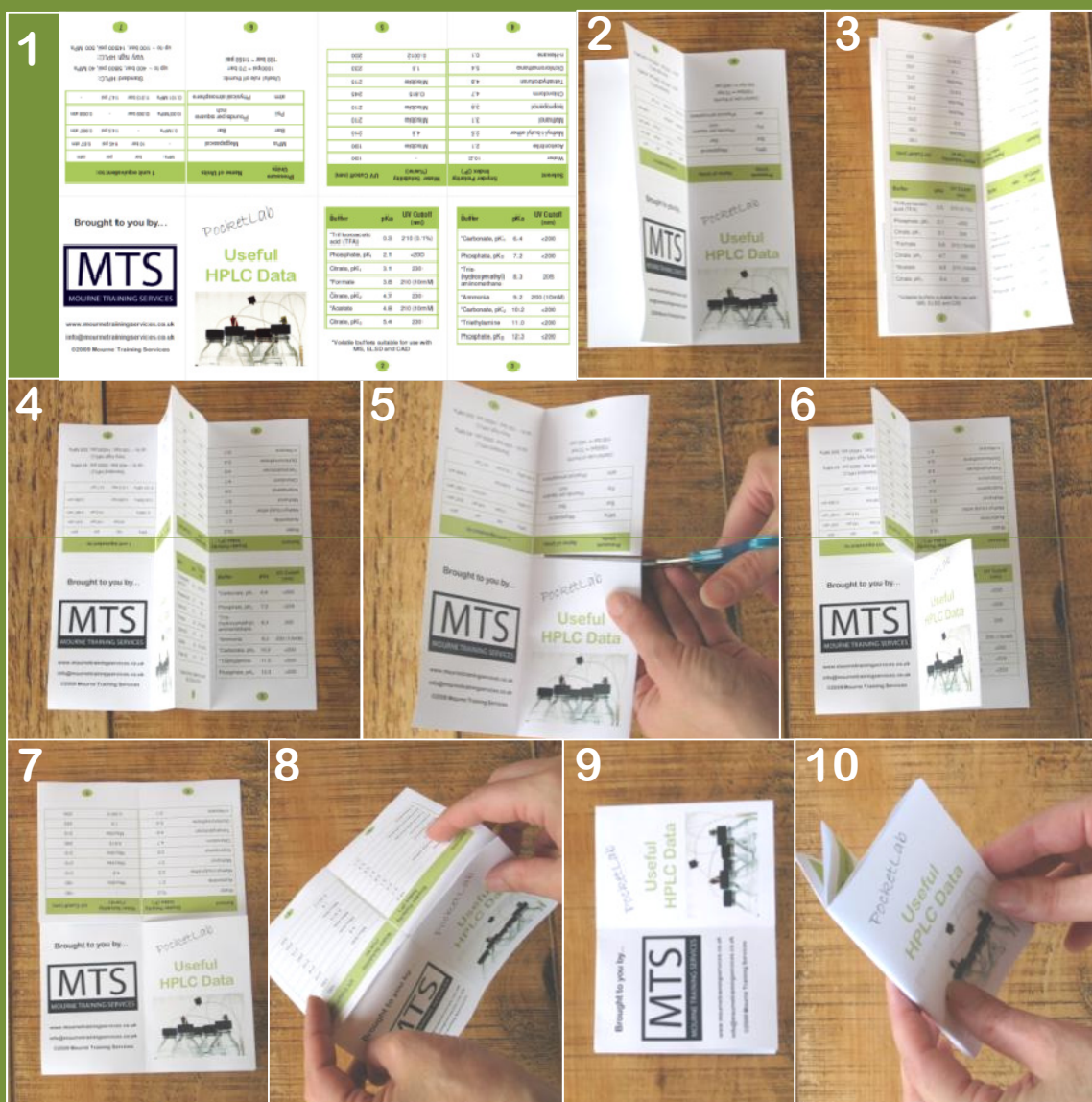


PocketLab

# A useful little book full of HPLC data for your lab coat pocket!

## Instructions:

- |   |   |  |   |  |
|---|---|--|---|--|
| <p><b>Step 1</b></p> <p>Print off page 2 of this document. Make sure to set the page scaling to 'None'.</p> | <p><b>Step 2</b></p> <p>Fold the page in half along the shorter edge. Then fold again as shown.</p> | <p><b>Step 3</b></p> <p>Turn over and fold again as shown.</p> | <p><b>Step 4</b></p> <p>Place the folded page as shown.</p>             | <p><b>Step 5</b></p> <p>Cut along the dotted line.</p>                             |
| <p><b>Step 6</b></p> <p>Fold the cut parts in opposite directions as shown.</p>                             | <p><b>Step 7</b></p> <p>Your folded page should now look like this.</p>                             | <p><b>Step 8</b></p> <p>Fold again in half as shown.</p>       | <p><b>Step 9</b></p> <p>Your folded page should now look like this.</p> | <p><b>Step 10</b></p> <p>Fold in half again to finish your Pocket Lab booklet.</p> |



**1**

Retention Time (min)	Peak Name	Retention Time (min)	Peak Name
1.1	Acetone	1.1	Acetone
1.2	Water	1.2	Water
1.3	Methanol	1.3	Methanol
1.4	Acetonitrile	1.4	Acetonitrile
1.5	Dimethyl sulfoxide	1.5	Dimethyl sulfoxide
1.6	Propylene glycol	1.6	Propylene glycol
1.7	Glycerol	1.7	Glycerol
1.8	1,2-Ethylene glycol	1.8	1,2-Ethylene glycol
1.9	1,3-Propanediol	1.9	1,3-Propanediol
2.0	Diethylene glycol	2.0	Diethylene glycol
2.1	Triethylene glycol	2.1	Triethylene glycol
2.2	1,4-Butanediol	2.2	1,4-Butanediol
2.3	1,5-Pentanediol	2.3	1,5-Pentanediol
2.4	1,6-Hexanediol	2.4	1,6-Hexanediol
2.5	1,7-Heptanediol	2.5	1,7-Heptanediol
2.6	1,8-Octanediol	2.6	1,8-Octanediol
2.7	1,9-Nonanediol	2.7	1,9-Nonanediol
2.8	1,10-Decanediol	2.8	1,10-Decanediol
2.9	1,11-Undecanediol	2.9	1,11-Undecanediol
3.0	1,12-Dodecanediol	3.0	1,12-Dodecanediol

**2**

Retention Time (min)	Peak Name	Retention Time (min)	Peak Name
3.1	1,13-Tridecanediol	3.1	1,13-Tridecanediol
3.2	1,14-Tetradecanediol	3.2	1,14-Tetradecanediol
3.3	1,15-Pentadecanediol	3.3	1,15-Pentadecanediol
3.4	1,16-Hexadecanediol	3.4	1,16-Hexadecanediol
3.5	1,17-Heptadecanediol	3.5	1,17-Heptadecanediol
3.6	1,18-Octadecanediol	3.6	1,18-Octadecanediol
3.7	1,19-Nonadecanediol	3.7	1,19-Nonadecanediol
3.8	1,20-Eicosanediol	3.8	1,20-Eicosanediol
3.9	1,21-Heneicosanediol	3.9	1,21-Heneicosanediol
4.0	1,22-Docosanediol	4.0	1,22-Docosanediol

**3**

Retention Time (min)	Peak Name	Retention Time (min)	Peak Name
4.1	1,23-Tricosanediol	4.1	1,23-Tricosanediol
4.2	1,24-Tetracosanediol	4.2	1,24-Tetracosanediol
4.3	1,25-Pentacosanediol	4.3	1,25-Pentacosanediol
4.4	1,26-Hexacosanediol	4.4	1,26-Hexacosanediol
4.5	1,27-Heptacosanediol	4.5	1,27-Heptacosanediol
4.6	1,28-Octacosanediol	4.6	1,28-Octacosanediol
4.7	1,29-Nonacosanediol	4.7	1,29-Nonacosanediol
4.8	1,30-Triacontanediol	4.8	1,30-Triacontanediol
4.9	1,31-Triacontanediol	4.9	1,31-Triacontanediol
5.0	1,32-Triacontanediol	5.0	1,32-Triacontanediol

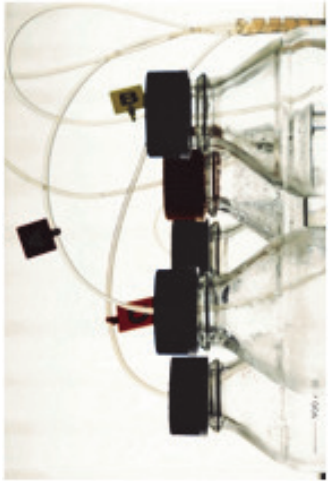
3

UV Cutoff (nm)	pKa	Buffer
>200	12.3	Phosphate, pK <sub>3</sub>
>200	11.0	*Triethylamine
>200	10.2	*Carbonate, pK <sub>2</sub>
205	9.2	*Ammonia
>200	7.2	Phosphate, pK <sub>2</sub>
>200	6.9	*Carbonate, pK <sub>1</sub>

2

UV Cutoff (nm)	pKa	Buffer
230	5.4	Citrate, pK <sub>3</sub>
210 (10mM)	4.8	*Acetate
230	4.7	Citrate, pK <sub>2</sub>
210 (10mM)	3.8	*Formate
230	3.1	Citrate, pK <sub>1</sub>
>200	2.1	Phosphate, pK <sub>1</sub>

\*Volatile buffers suitable for use with MS, ELSD and CAD



# Useful HPLC Data

PocketLab

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## Snyder Polarity Index (P')

Water	10.2
Acetonitrile	5.8
Methanol	5.1
Chloroform	4.1
Tetrahydrofuran	4.0
Isopropanol	3.9
Dichloromethane	3.1
Methyl-t-butyl ether	2.5
n-Hexane	0.1

## Water Solubility (%w/w)

-	190
Miscible	190
Miscible	205
0.815	245
Miscible	212
Miscible	205
1.3	233
4.8	210
0.0012	200

## UV Cutoff (nm)

Pressure Units	Name of Units
MPa	Megapascal
Bar	Bar
Psi	Pounds per square inch
atm	Physical atmosphere

Useful rule of thumb:  
 1000psi ≈ 70 bar  
 100 bar ≈ 1450 psi

## 1 unit equivalent to:

MPa	bar	psi	atm
-	10 bar	145 psi	9.87 atm
0.1 MPa	-	14.5 psi	0.987 atm
0.007 MPa	0.069 bar	-	0.069 atm
0.101 MPa	1.013 bar	14.7 psi	-

Standard HPLC:  
 up to ~ 400 bar, 5800 psi, 40 MPa  
 Very high HPLC:  
 up to ~ 1000 bar, 14500 psi, 100 MPa

4

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