

PocketLab

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

Instructions:

Step 1

Print off page 2 of this document. Make sure to set the page scaling to 'None'.

Step 2

Fold the page in half along the shorter edge. Then fold again as shown.

Step 3

Turn over and fold again as shown.

Step 4

Place the folded page as shown.

Step 5

Cut along the dotted line.

Step 6

Fold the cut parts in opposite directions as shown.

Step 7

Your folded page should now look like this.

Step 8

Fold again in half as shown.

Step 9

Your folded page should now look like this.

Step 10

Fold in half again to finish your Pocket Lab booklet.



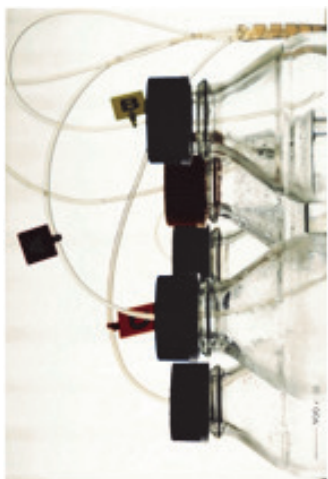
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Buffer	pKa	UV Cutoff (nm)
Phosphate, pK ₃	12.3	>200
*Triethylamine	11.0	>200
*Carbonate, pK ₂	10.2	>200
*Ammonia	9.2	200 (10mM)
*Tris-(hydroxymethyl)aminomethane	8.3	205
Phosphate, pK ₂	7.2	>200
*Carbonate, pK ₁	6.4	>200

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Buffer	pKa	UV Cutoff (nm)
Citrate, pK ₃	5.4	230
*Acetate	4.8	210 (10mM)
Citrate, pK ₂	4.7	230
*Formate	3.8	210 (10mM)
Citrate, pK ₁	3.1	230
Phosphate, pK ₁	2.1	>200
*Trifluoroacetic acid (TFA)	0.3	210 (0.1%)

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



Useful HPLC Data

POCKETLAB

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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)

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

UV Cutoff (nm)

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Pressure Units

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

Name of Units

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
0.1MPa	-	14.5 psi	0.987 atm
0.007MPa	0.069 bar	-	0.068 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

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