

## Buffers and Solutions for NA extractions

### 0.2 M Monosodium phosphate

NaH <sub>2</sub> PO <sub>4</sub> ·H <sub>2</sub> O	M.W 137.99	13.799 g
DDW		→500 ml

Filter sterilize and autoclave

### 0.2 M Disodium phosphate

Na <sub>2</sub> HPO <sub>4</sub> ·2H <sub>2</sub> O	M.W 177.99	17.799 g
DDW		→500 ml

Filter sterilize and autoclave

### 120 mM PB pH 8.0

Na <sub>2</sub> H <sub>2</sub> PO <sub>4</sub> ·2H <sub>2</sub> O	M.W 177.99	10.045 g
NaH <sub>2</sub> PO <sub>4</sub> ·H <sub>2</sub> O	M.W 137.99	0.4912 g
DDW		→500 ml

Or prepare by mixing 284.1 ml Na<sub>2</sub>H<sub>2</sub>PO<sub>4</sub>·2H<sub>2</sub>O, 15.9 ml NaH<sub>2</sub>PO<sub>4</sub>·H<sub>2</sub>O, and 200 ml DDW

Filter sterilize and autoclave

### TNS/ TNC pH 8.0

500 mM Tris-HCl pH 8.0	15.76 g
100 mM NaCl	1.1688 g
10% SDS or 10% CTAB	20 g
RNAse free DDW	→ 200 ml

Adjust pH with NaOH 3M

Filter sterilize and autoclave

### Precipitation solution

20% PEG 8000	8 g
2.5 M NaCl	58.44
RNAse free DDW	→ 40 ml

Or

30% PEG 8000	12 g
1.6 M NaCl	58.44
RNAse free DDW	→ 40 ml

Autoclave

## Other possible NA extraction buffers

### Bürgmann et al. 2003 Ext. Solution

0.2% CTAB*	0.8 g	
50 mM EDTA	M.W 372.24	7.4448 g
0.1 M NaCl	M.W 58.44	2.338 g
1 mM DTT	400 µL	
0.2 M disodium phosphate	378.8 ml of 0.2 M	pH 8.0**
0.2 M monosodium phosphate	21.2 ml of 0.2 M	
<b>Final volume</b>	<b>400 ml</b>	

\* or 2.5% SDS

### Hurt et al. 2001 Ext. Solution 1

4 M Guanidine Isothiocyanate	4.7264 g	
10 mM TRIS HCl	M.W 157.6	400 µL of 1M @ pH 7.0
1 mM EDTA		80 µL of 0.5M @ pH 8.0
0.5% β-mercaptoethanol		200 µL
DDW		→40 ml

### Hurt et al. 2001 Ext. Solution 2

1% CTAB	2 g	
2% SDS	4 g	
1.5 M NaCl	M.W 58.44	17.532 g
100 mM EDTA	M.W 372.24	40 ml of 0.5M @ pH 8.0
100 mM TRIS HCl	M.W 157.6	20 ml of 1M @ pH7.0
0.1 M disodium phosphate	61 ml of 0.2 M	pH 7.0
0.1 M monosodium phosphate	39 ml of 0.2 M	
DDW	~60 ml →200 ml	

### Griffiths et al. 2000 Ext. Solution

10% CTAB	20 g	
0.7 M NaCl	M.W 58.44	8.18
0.24 M disodium phosphate	189.4 ml of 0.24 M	pH 8.0*
0.24 M monosodium phosphate	10.6 ml of 0.24 M	
Final volume	200	

\* or pH 7.0 - monosodium phosphate: 78 ml, disodium phosphate: 122ml

### **0.5M EDTA pH 8.0**

EDTA	M.W 372.24	18.612 g
NaOH		~2.3 g
DDW		→100 ml

Dissolve in water and adjust pH with NaOH 3M

Filter sterilize and autoclave

### **TRIS HCl 1M pH 8.0**

TRIS HCl pH 8.0	M.W 157.6	15.76 g
DDW		→100 ml

Dissolve in water and adjust pH with 10% HCl solution

Filter sterilize and autoclave