

# SMARTBUFFERS

## IMAC Phosphate & IMAC Elution Buffer Tablets



### Features

- Dissolve and go
- Exactly pre-weighed tablets in bottles
- Mix elution buffer with phosphate buffer to achieve desired imidazole concentration
- Ultrapure, low UV<sub>280</sub> absorbance imidazole
- Formulated from analytical grade chemicals

### Product description

Immobilized metal ion affinity chromatography (IMAC) is a widely used separation method for purifying proteins and peptides that have an affinity for metal ions, such as histidine-tagged proteins but also some untagged recombinant or native proteins. Medicago's IMAC phosphate and elution buffer tablets have been developed exclusively for use in this method.

IMAC buffer tablets are supplied in bottles and in blister packs. One tablet of phosphate buffer dissolved in deionized water yields a 300 mM sodium chloride, 50 mM sodium phosphate buffer with pH 8.0 at 22°C. One tablet of elution buffer yields a 300 mM sodium chloride, 300 mM imidazole, 50 mM sodium phosphate buffer with pH 8.0 at 22°C.

### Applications

- Purification of histidine-tagged and non-histidine-tagged recombinant and native proteins using IMAC chromatography
- The phosphate buffer may be used for other types of affinity chromatography methods

### Directions for use

Prepare the phosphate and the elution buffers separately. Deposit one tablet in a laboratory flask or beaker placed on a magnetic stirrer. Add deionized water up to the given volume for each tablet and stir until full dissolution. Mix the phosphate buffer and elution buffer to achieve desired imidazole concentration, follow the dilution series in **Table 1** on page 2 of this product sheet.

### Shipping and storage

IMAC phosphate and elution buffer tablets are shipped at room temperature. Store the tablets in a dry place at room temperature. Shelf life for IMAC phosphate buffer tablets is five years and shelf life for IMAC elution buffer tablets is three years.

### Specifications

Chemicals	Analytical grade
Format	Exactly pre-weighed tablets
Composition	<b>Phosphate Buffer</b> 300 mM Sodium Chloride 50 mM Sodium Phosphate <b>Elution Buffer</b> 300 mM Sodium Chloride 300 mM Imidazole 50 mM Sodium Phosphate
Volume	<b>Phosphate Buffer:</b> 400 ml <b>Elution Buffer:</b> 100 ml
pH	8.0 ± 0.05 at 22°C
Shelf life	<b>Phosphate Buffer:</b> 5 years after production date <b>Elution Buffer:</b> 3 years after production date

### Tips and hints

- If the tablet is not properly dissolved, make sure:
- the water temperature is 22°C (do not exceed this temperature)
  - the buffer is properly stirred

### Certifications

Medicago's laboratories and manufacturing site in Uppsala are ISO 9001:2008 and ISO 13485:2003 certified. Each stage of the manufacturing process is controlled and monitored by stringent quality control procedures to guarantee the highest possible quality and lot-to-lot reproducibility.



### Ordering information

Article no.	Product name	Pack size	Solution vol.
09-1010-10	IMAC Phosphate Buffer	10 tablets	400 ml/tablet
09-1010-50	IMAC Phosphate Buffer	50 tablets	400 ml/tablet
09-1012-10	IMAC Elution Buffer	10 tablets	100 ml/tablet
09-1012-50	IMAC Elution Buffer	50 tablets	100 ml/tablet

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Dilution series for IMAC Phosphate and Elution buffers		
Final Conc. Imidazole (mM)	IMAC Elution Buffer (ml)	IMAC Phosphate Buffer (ml)
0	0	60
5	1	59
10	2	58
15	3	57
20	4	56
25	5	55
30	6	54
35	7	53
40	8	52
45	9	51
50	10	50
60	12	48
70	14	46
80	16	44
90	18	42
100	20	40
125	25	35
150	30	30
175	35	25
200	40	20
225	45	15
250	50	10
275	55	5
300	60	0

**Table 1:** Dilution series for IMAC phosphate and IMAC elution buffers. Follow the protocol and mix the two buffers to obtain desired final concentration of Imidazole.