

## PREPARAZIONE E VERIFICA DI ALCUNE PROPRIETÀ DELLE SOLUZIONI TAMPONE

		pH nominale del tampone	[H <sup>+</sup> ]	acido	base	Ka	pKa	pKa - 1	pKa + 1	M acido	M base	volume o massa acido/250 mL	volume o massa base/250 mL	intervallo ± 0,1%		intervallo ± 0,1%		
		2,5	3,2E-03	H <sub>3</sub> PO <sub>4</sub>	KH <sub>2</sub> PO <sub>4</sub>	6,9E-03	2,2	1,2	3,2	0,40	0,87	100,00 mL	29,9944 g	99,90	100,10	29,9644	30,0244	
		4,0	1,0E-04	CH <sub>3</sub> COOH	CH <sub>3</sub> COONa	1,7E-05	4,8	3,8	5,8	0,40	0,22	100,00 mL	1,4087 g	99,90	100,10	1,4073	1,4101	
		4,5	3,16E-05									100,00 mL	4,4546 g	99,90	100,10	4,4502	4,4591	
		5,0	1,0E-05									100,00 mL	14,0868 g	99,90	100,10	14,0727	14,1009	
		6,5	3,2E-07	KH <sub>2</sub> PO <sub>4</sub>	Na <sub>2</sub> HPO <sub>4</sub> · 2 H <sub>2</sub> O	6,2E-08	7,2	6,2	8,2	0,40	0,078	13,7465 g	3,5074 g	13,7327	13,7602	3,5039	3,5109	
		7,0	1,0E-07	NH <sub>4</sub> Cl	NH <sub>3</sub>	5,75E-10	9,24	8,24	10,2	0,40	0,073	13,7465 g	18,2 mL	13,7327	13,7602	18,16	18,20	
		8,5	3,2E-09									0,23	13,7465 g	57,5 mL	13,7327	13,7602	57,44	57,56
		9,0	1,0E-09	NaHCO <sub>3</sub>	Na <sub>2</sub> CO <sub>3</sub>	4,7E-11	10,3	9,3	11,3	0,40	0,19	8,4175 g	5,0066 g	8,4091	8,4260	5,0016	5,0116	
		10,0	1,0E-10									0,59	8,4175 g	15,8321 g	8,4091	8,4260	15,8163	15,8480
		10,5	3,2E-11	Na <sub>2</sub> HPO <sub>4</sub> · 2 H <sub>2</sub> O	Na <sub>3</sub> PO <sub>4</sub> · 12 H <sub>2</sub> O	4,8E-13	12,3	11,3	13,3	0,40	0,061	17,8894 g	5,7814 g	17,8716	17,9073	5,7756	5,7872	
		11,5	3,2E-12									0,19	17,8894 g	18,2823 g	17,8716	17,9073	18,2640	18,3006
		12,0	1,0E-12															

## SOLUTI A DISPOSIZIONE

in soluzione acquosa		solidi		
Nome	Molarità	Nome	MM	purezza % m/m
CH <sub>3</sub> COOH	1,0	NH <sub>4</sub> Cl	53,492	99,5
H <sub>3</sub> PO <sub>4</sub>	1,0	KH <sub>2</sub> PO <sub>4</sub>	136,09	99
NH <sub>3</sub>	1,0	CH <sub>3</sub> COONa	82,035	99
	15,7	Na <sub>2</sub> CO <sub>3</sub>	105,99	99,5
		NaHCO <sub>3</sub>	84,007	99,8
		Na <sub>3</sub> PO <sub>4</sub> · 12H <sub>2</sub> O	380,12	99,8
		Na <sub>2</sub> HPO <sub>4</sub> · 2H <sub>2</sub> O	178,00	99,5