

Table S1. Effect of PAN concentration on hR_F values, spot width (w) plate number (N) and plate height (H) of amino acids using mobile phase M_8 .

Amino acids	Concentration of PAN (%)											
	8				10				12			
	(100-300)**				(180-200)**				(450-670)**			
	hR_F	w	N	H	hR_F	w	N	H	hR_F	w	N	H
Ala	47 _T *	14	7	2710	50 _T	11	9	1850	58 _T	17	7	2732
Gly	50 _T	8.0	23	888	58 _T	15	8	2322	55 _T	16	8	2645
	83	3.3	435	48								
Ile	73 _T	11	28	719	53 _T	10	13	1314	75 _T	10	36	556
Leu	75 _T	10	37	566	59 _T	10	16	1063	73 _T	11	28	719
Val	40 _T	16	4	3125	65 _T	6.5	54	349	70 _T	10	31	638
Phe	74 _T	7.0	72	279	88	3.3	340	54	88	5.0	196	102
Try	70 _T	6.5	80	268	81	4.0	210	86	85 _T	6.0	128	156
Tyr	48 _T	9.0	18	1122	58	3.0	235	85	83 _T	7.0	89	225
Asp	90	4.0	363	65	86	3.0	427	421	50 _T	20	4	5000
Glu	50 _T	20	4	6000	50 _T	20	4	5000	50 _T	20	4	5000
Arg	85 _T	6.0	138	161	47 _T	5.0	54	434	83 _T	7.0	89	225
His	89	4.5	260	82	90	2.5	726	29	90	4.0	363	65
Lys	73	5.0	135	149	87	4.7	188	94	88	6.0	128	156
Ser	78 _T	8.0	64	330	68 _T	7.0	60	336	83 _T	7.0	89	225
Thr	75 _T	5.3	129	160	65 _T	8.0	42	473	50 _T	20	4	5000
Met	70 _T	8.0	49	408	78 _T	6.5	85	227	81 _T	6.3	105	192
Cys	58	5.8	72	479	68	5.0	117	172	78 _T	5.8	116	176
(Cys) ₂	58	5.6	50	308	65	6.0	75	266	73 _T	9.0	42	482
Asn	78	4.0	240	83	80	4.0	256	78	80	5.0	164	122
Gln	63	5.8	71	339	68 _T	6.0	81	247	79 _T	6.0	100	200

Each value is an average of four replicates; *T = Tailed spot; **denotes fiber diameter in nm; the values of w in mm and H in μ m.

Table S2. Effect of flow rate on hR_F values, spot width (w), plate number (N) and plate height (H) of amino acids using mobile phase M₈.

Amino acids	Flow rate (mLh ⁻¹)											
	0.2 (180-200)**				0.5 (255-380)**				1.0 (240-425)**			
	hR_F	w	N	H	hR_F	w	N	H	hR_F	w	N	H
Ala	50 _T *	11.0	9	1850	75 _T	6.0	100	200	70 _T	6.3	80	259
Gly	58 _T	15.0	8	2322	23	3.0	38	607	63 _T	14.5	12	1689
					75	4.0	226	90				
Ile	53 _T	10.0	13	1314	83 _T	6.8	100	225	74 _T	5.7	111	184
Leu	59 _T	10.0	16	1063	88	3.8	349	60	83 _T	6.5	106	194
Val	65 _T	6.5	54	349	80	4.0	256	78	85 _T	6.0	138	161
Phe	88	3.3	340	54	85 _T	6.0	128	156	78 _T	8.8	51	355
Try	81	4.0	210	86	88	5.0	196	102	73 _T	8.4	48	428
Tyr	58	3.0	235	85	75 _T	6.0	100	200	73 _T	7.8	57	364
Asp	86	3.0	427	421	13	3.3	12	2321	85 _T	6.0	138	161
					88	3.0	546	37				
Glu	50 _T	20.0	4	5000	88	5.0	196	102	75 _T	9.3	45	588
Arg	47 _T	5.0	54	434	85	5.3	166	124	75 _T	8.7	50	423
His	90	2.5	726	29	88	5.0	227	98	89	3.3	486	45
Lys	87	4.7	188	94	85 _T	6.0	133	158	83 _T	7.0	94	231
Ser	68 _T	7.0	60	336	85 _T	6.0	138	161	83 _T	6.8	102	223
Thr	65 _T	8.0	42	473	85 _T	6.0	135	160	85 _T	6.0	138	161
Met	78 _T	6.5	85	227	85 _T	6.0	135	160	85 _T	6.0	135	160
Cys	68	5.0	117	172	89	4.5	260	82	88	4.5	254	83
(Cys) ₂	65	6.0	75	266	76 _T	7.0	78	270	61	5.0	95	212
Asn	80	4.0	256	78	88	4.8	227	98	86	4.8	218	101
Gln	68 _T	6.0	81	2467	85 _T	6.0	138	161	68 _T	6.3	74	275

Each value is an average of four replicates. *T = Tailed spot; **indicates fiber diameter in nm; the values of w in nm and H in μ m.

Table S3. Effect of decrease in spinning time on hR_F values of amino acids using mobile phase M_8 .

Amino acids	hR_F value					
	Spinning time (h)					
	10	8	6	4	2	1
Ala	50 _{T*}	48 _T	75 _T	78 _T	74 _T	73 _T
Gly	58 _T	55 _T	50 _T	63 _T	54 _T	55 _T
Ile	53 _T	58 _T	73 _T	75 _T	60 _T	70 _T
Leu	59 _T	50 _T	70 _T	75 _T	63 _T	73 _T
Val	65 _T	73	68 _T	70 _T	40 _T	53
Phe	88	85	90	85	90	70 _T
Try	81	60	88	63	60	60
Tyr	58	60	65	58	53	48
Asp	86	93	90	88	71 _T	66 _T
Glu	50 _T	60 _T	92	55 _T	56 _T	63 _T
Arg	47 _T	54	88	75	63 _T	75 _T
His	90	67	90	85	75 _T	78 _T
Lys	87	80 _T	83 _T	93	65	70 _T
Ser	68 _T	68 _T	90	88	58 _T	78
Thr	65 _T	63 _T	88	83	48 _T	65 _T
Met	78 _T	83	84	83	61 _T	70 _T
Cys	68	75	90	88	66 _T	78 _T
(Cys) ₂	65	68 _T	75 _T	75 _T	73 _T	80 _T
Asn	80	85	93	90	53 _T	76
Gln	68 _T	73	60 _T	60 _T	45 _T	70 _T

Each value is an average of four replicates. *T = Tailed spot.

Table S4. Effect of analyte concentration on hR_F values of amino acids using mobile phase M_8 .

Amino acids	Concentrations (%)	
	0.5	1.0
Ala	74	73 _T
Gly	55 _{T*}	55 _T
Ile	90	70 _T
Leu	90	73 _T
Val	56	53
Phe	88	70 _T
Try	60	60
Tyr	48	48
Asp	83	66 _T
Glu	95	63 _T
Arg	83	75 _T
His	85	78 _T
Lys	80	70 _T
Ser	78	78
Thr	67	65 _T
Met	73	70 _T
Cys	95	78 _T
(Cys) ₂	95	80 _T
Asn	78	76
Gln	74	70 _T

Each value is an average of four replicates. *T = Tailed spot.