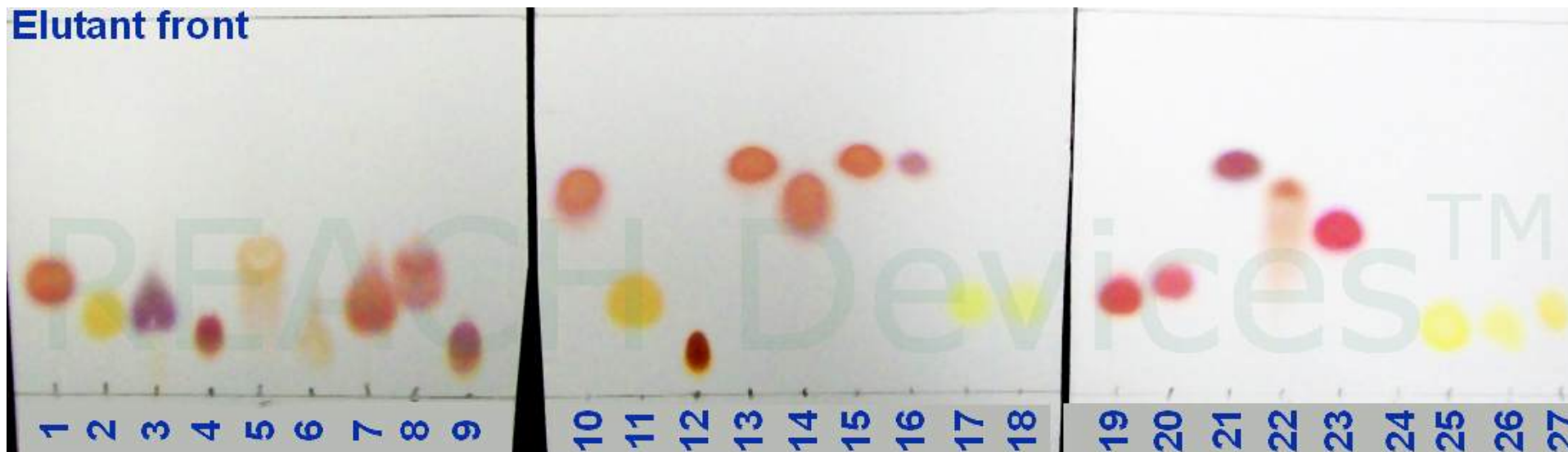


Thin Layer Chromatography of aminoacids and short peptides

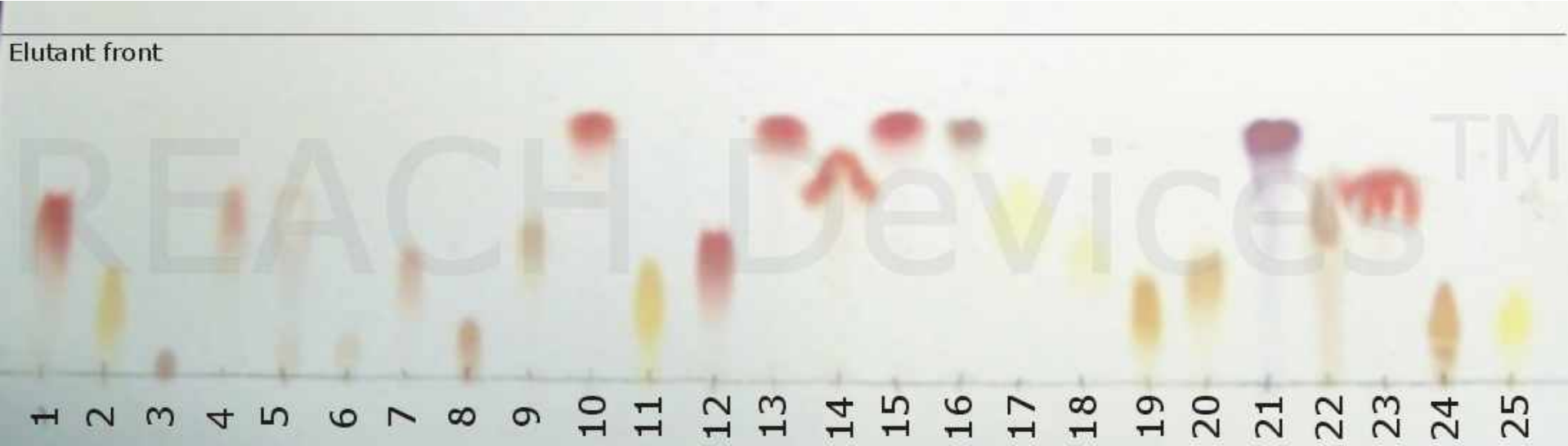
Below is a group TLC of all 20 aminoacids plus some other related compounds. **TLC was done on a regular silica plate.** 1uL of aminoacid solution in water (5mg/mL; 3mg Na₂CO₃ added for Cystine, Phenylalanine and Tyrosine) was applied (about 3mm spot was formed). This means each spot contained 5ug (65 nmols to 25 nmols) of an aminoacid. The plate was eluted with n-butanol:acetic acid:water 3:1:1(by volume) mixture followed by [ninhydrin stain](#)



Same aminoacids, same elutant but on **cellulose TLC plate**, ninhydrin stain.



Same aminoacids, same elutant but on **neutral alumina TLC plate**, ninhydrin stain.



Structures are given for natural L(s-) aminoacids

Lane	Aminoacid	Rf silica (cell.)	FW:	letter codes	structure	Lane	Aminoacid	Rf silica (cell.)	FW:	letter codes	structure
1	Alanine	0.30 (0.46)	89.09	ala A	<chem>C[C@H](N)C(=O)O</chem>	14	Methionine	0.51 (0.60)	149.21	met M	<chem>CSCC[C@H](N)C(=O)O</chem>

2	Asparagine	0.21 (0.24)	132.12	asn N		15	Norleucine	0.63 (0.69)	131.17	nle	
3	Aspartic Acid	0.24 (0.29)	133.10	asp D		16	Phenylalanine	0.62 (0.66)	165.19	phe F	
4	Arginine	0.16 (0.32)	174.20	arg R		17	Proline	0.24 (0.48)	115.13	pro P	
5	Cysteine	0.37 (0.41)	121.16	cys C		18	Hydroxyproline	0.24 (0.31)	131.13	hyp	
6	Cystine	0.14 (0.15)	240.30	- C		19	Serine	0.26 (0.25)	105.09	ser S	
7	Glutamine	0.25 (0.29)	146.14	gln Q		20	Threonine	0.30 (0.36)	119.12	thr T	
8	Glutamic Acid	0.31 (0.35)	147.13	glu E		21	Tryptophan	0.61 (0.57)	204.23	trp W	
9	Histidine	0.12 (0.32)	155.15	his H		22	Tyrosine	0.55 (0.44)	181.19	tyr Y	
10	Isoleucine	0.53 (0.73)	131.17	lle I		23	Valine	0.44 (0.66)	117.15	val V	
				alv			2,3-diamino				

11	Glycine	0.25 (0.26)	75.07	 G	<chem>NCC(=O)O</chem>	24	propionic acid (DAP)	0.10 (0.17)	104.11	dap	<chem>NCC(=O)O</chem>
12	Lysine	0.12 (0.24)	146.19	lys K	<chem>NCCCC[C@H](N)C(=O)O</chem>	25	Gly-Gly-Gly tripeptide	0.18 (0.34)	189.17	-	<chem>NCC(=O)NCC(=O)NCC(=O)O</chem>
13	Leucine	0.61 (0.71)	131.18	leu L	<chem>CC(C)C[C@H](N)C(=O)O</chem>	26	Ser-Gly dipeptide	0.18 (0.40)	162.15	-	<chem>OC[C@H](N)C(=O)NCC(=O)O</chem>
-	-	-	-	-	-	27	Ala-ala dipeptide	0.23 (0.70)	160.17	-	<chem>CC(C)C(=O)N[C@@H](C)C(=O)O</chem>

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