

Kinter and Sherman 2000

COLLISIONALLY INDUCED DISSOCIATION OF PROTONATED PEPTIDE IONS

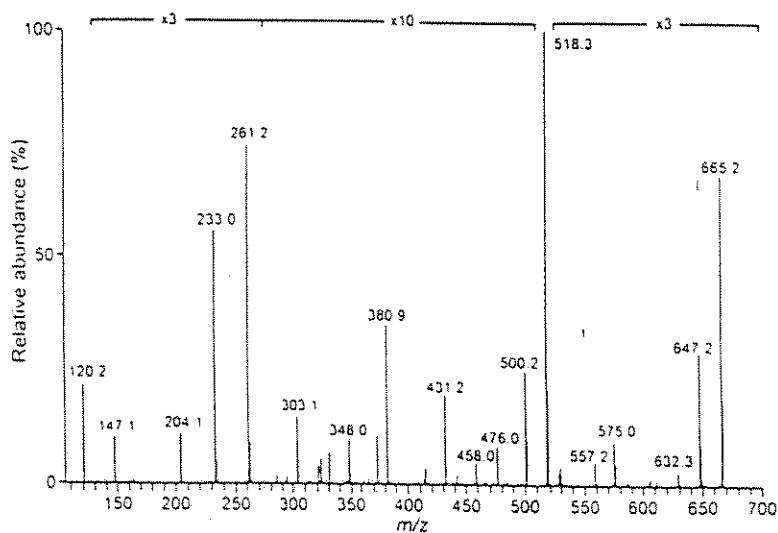


Figure 4.11. Interpretation problem number one. The product ion spectrum was acquired by using an ion trap mass spectrometer by collisionally induced dissociation of a doubly charged ion, m/z 389.9. The peptide was produced by an in-gel tryptic digestion of a Coomassie blue-stained protein band in a 2D electrophoresis gel. All of the ions in the spectrum are normalized to the most abundant ion in the spectrum. However, selected magnification has been used over various portions of the spectrum to enhance the clarity of those regions of the spectrum. No additional ions were observed outside of the displayed m/z range.

Table 4.2. Look-up table for the m/z of the b₂-ion.*

	G	A	S	P	V	T	C	L/I	N	D	O/K	E	M	H	Mo/F	R	C ⁺	Y	C ⁺	W	
G	115																				
A	129	143																			
S	145	159	175																		
P	155	169	185	195																	
V	157	171	187	197	199																
T	159	173	189	199	201	203															
C	161	175	191	201	203	205	207														
L/I	171	185	201	211	213	215	217	227													
N	172	186	202	212	214	216	218	228	229												
D	173	187	203	213	215	217	219	229	230	231											
O/K	186	200	216	226	228	230	232	242	243	244	245	257									
E	187	201	217	227	229	231	233	243	244	245	258	259									
M	189	203	219	229	231	233	235	245	246	247	260	261	263								
H	195	209	225	235	237	239	241	251	252	253	266	267	269	275							
Mo/F	205	219	235	245	247	249	251	261	262	263	276	277	279	285	295						
R	214	228	244	254	256	258	260	270	271	272	285	286	288	294	304	313					
C ⁺	218	232	248	258	260	262	264	274	275	276	289	290	292	298	308	317	321				
Y	221	235	251	261	263	265	267	277	278	279	292	293	295	301	311	320	324	327			
C ⁺	232	246	262	272	274	276	278	288	289	290	303	304	306	312	322	331	335	338	349		
W	244	258	274	284	286	288	290	300	301	302	315	316	318	324	334	343	347	350	361	373	

* The m/z of all possible b₂-ions for combinations of the amino acids residue masses shown in Table 4.1. (One-letter codes are used to designate the different amino acids with the addition of Mo to designate oxidized methionine, C⁺ to designate carbanthionemethylcysteine, and C⁺ to designate acryloylcysteine. Single entries are made for the isobaric amino acid pairs L and I, Q and K, and Mo and F.

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