

TECHNICAL NOTE

General RGA Spectrum Interpretation Guide

AMU	ION(S)	SOURCE(S)
1	H	Hydrogen, Water, Acids, HY
2	H ₂	Hydrogen
	D	Deuterium
3	HD	Hydrogen – Deuterium
	He	³ Helium
4	He	Helium
6	C	DI Carbon
7	N	DI Nitrogen
8	O	DI Oxygen
10	Ne	DI Neon
11	Ne	DI ²² Neon
12	C	Carbon dioxide or monoxide, HY, HL
13	CH	Methane, HY
14	CH ₂	Methane, HY
	N	Nitrogen, Ammonia
15	CH ₃	Methane, HY
	NH	Ammonia
16	CH ₄	Methane, HY
	NH ₂	Ammonia
	O	Oxygen, Carbon dioxide or monoxide, Water, Alcohol
17	NH ₃	Ammonia
	OH	Water, Alcohol
18	H ₂ O	Water
	Ar	DI ³⁶ Argon

AMU	ION(S)	SOURCE(S)
19	F	Fluorine, Hydrofluoric acid, HL, Silicon tetrafluoride, PFK, PFTBA
20	HF	Hydrofluoric acid
	Ar	DI Argon
	Ne	Neon
22	Ne	²² Neon
	CO ₂	DI Carbon dioxide
24	C ₂	HL, HY
25	C ₂ H	HY
	CF ₂	HL, DI CF ₂
26	C ₂ H ₂	HY
	CN	Hydrogen cyanide
27	C ₂ H ₃	HY
	HCN	Hydrogen cyanide
28	C ₂ H ₄	HY
	CO	Carbon dioxide or monoxide
	N ₂	Nitrogen, Air
	Si	Silicon, Silicon tetrafluoride
29	C ₂ H ₂	HY
	COH	Alcohol
	N ₂	¹⁵ Nitrogen + ¹⁴ Nitrogen
30	C ₂ H ₆	HY
	COH ₂	Alcohol
	N ₂	¹⁵ Nitrogen ₂
	NO	Nitrogen oxides

DI = Doubly ionized
 HY = Hydrocarbon fragment
 HL = Halocarbon fragment
 PFK = Perfluorokerosene
 PFTBA = Perfluorotributylamine

NOTES:
 1) 5, 9, 21, and 23 AMU do not have commonly found ions.
 2) All are seen as positive ions.
 3) Minor isotopes identified by superscripted atomic weight.

AMU	ION(S)	SOURCE(S)
31	CH ₃ O	Alcohol
	CF	HL, PFK, PFTBA
	P	Phosphorus
32	CH ₃ OH	Alcohol
	CHF	HL
	O ₂	Oxygen
	S	Sulfur
33	SH	Hydrogen sulfide
	S	³³ Sulfur
	CH ₂ F	HL
34	H ₂ S	Hydrogen sulfide
	SH	Hydrogen ³³ sulfide
	S	³⁴ Sulfur
	CH ₃ F	HL
35	H ₂ S	Hydrogen ³³ sulfide
	C1	Chlorine, Hydrochloric acid, HL, Chlorobenzene, Carbon, tetrachloride
	OF	HL
36	H ₂ S	Hydrogen ³⁴ sulfide
	HC1	Hydrochloric acid
	C ₃	HY
	Ar	³⁶ Argon
37	C1	³⁷ Chlorine, HL, Hydrochloric acid, Chlorobenzene, Carbon tetrachloride
	C ₃ H	HY
38	HC1	Hydrogen ³⁷ chloride
	C ₃ H ₂	HY
	F ₂	HL, Fluorine

NOTES:

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AMU	ION(S)	SOURCE(S)
39	C ₃ H ₃	HY
40	C ₃ H ₄	HY
	Ar	Argon
41	C ₃ H ₅	HY
	C ₂ HO	Alcohol
42	C ₃ H ₆	HY
	C ₂ H ₂ O	Alcohol
43	C ₃ H ₇	HY
	C ₂ H ₃ O	Alcohol, Acetone, Methyl Ethyl Ketone
44	C ₃ H ₈	HY
	CO ₂	Carbon dioxide
	N ₂ O	Nitrous oxide
	CS	Carbon disulfide
45	C ₂ H ₅ O	Alcohol
46	C ₂ H ₅ OH	Alcohol
	NO ₂	Nitrogen dioxide
47	CC1	Carbon tetrachloride, HL
	SiF	Silicon tetrafluoride
48	CHC1	HL
	SO	Sulfur dioxide
49	CH ₂ C1	HL, Chlorobenzene
	CC1	Carbon tetrachloride, HL
50	CHC1	HL, Chlorobenzene
	CF ₂	HL, PFK, PFTBA
	C ₄ H ₂	HY
	SO ₂	Sulfur dioxide

DI = Doubly ionized

HY = Hydrocarbon fragment

HL = Halocarbon fragment

PFK = Perfluorokerosene

PFTBA = Perfluorotributylamine



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