

BCH 341 Exam 1 - Student Assigned Gas Compounds

Last Initial	First Initial	Gas	a (L ² bar/mol ²)	b (L/mol)
A	A	Acetic acid	17.71	0.1065
A	M	Acetic anhydride	20.158	0.1263
A	N	Acetone	16.02	0.1124
A	M	Acetonitrile	17.81	0.1168
A	J	Acetylene	4.516	0.0522
A	H	Ammonia	4.17	0.0371
B	E	Argon	1.355	0.03201
B	M	Benzene	18.24	0.1154
B	R	Bromobenzene	28.94	0.1539
C	H	Butane	14.66	0.1226
C	T	Carbon dioxide	3.64	0.04267
C	G	Carbon disulfide	11.77	0.07685
C	R	Carbon monoxide	1.505	0.03985
C	S	Carbon tetrachloride	19.7483	0.1281
D	J	Chlorine	6.579	0.05622
D	B	Chlorobenzene	25.77	0.1453
E	M	Chloroethane	11.05	0.08651
E	N	Chloromethane	7.57	0.06483
E	M	Cyanogen	7.769	0.06901
F	E	Cyclohexane	23.11	0.1424
F	S	Diethyl ether	17.61	0.1344
F	T	Diethyl sulfide	19	0.1214
F-J	B	Dimethyl ether	8.18	0.07246
F	D	Dimethyl sulfide	13.04	0.09213
G	K	Ethane	5.562	0.0638
G	C	Ethanethiol	11.39	0.08098
G	L	Ethanol	12.18	0.08407
H	H	Ethyl acetate	20.72	0.1412
H	M	Ethylamine	10.74	0.08409
H	H	Fluorobenzene	20.19	0.1286
H	H	Fluoromethane	4.692	0.05264
H	K	Freon	10.78	0.0998
H	A	Germanium tetrachloric	22.9	0.1485
H	E	Helium	0.0346	0.0238
J	N	Hexane	24.71	0.1735
J	B	Hydrogen	0.2476	0.02661
K	M	Hydrogen bromide	4.51	0.04431

K	J	Hydrogen chloride	3.716	0.04081
K	S	Hydrogen selenide	5.338	0.04637
K	K	Hydrogen sulfide	4.49	0.04287
K	C	Iodobenzene	33.52	0.1656
K	M	Krypton	2.349	0.03978
L	P	Mercury	8.2	0.01696
L	E	Methane	2.283	0.04278
L	C	Methanol	9.649	0.06702
L	A	Neon	0.2135	0.01709
L	J	Nitric oxide	1.358	0.02789
M	S	Nitrogen	1.37	0.0387
M	Y	Nitrogen dioxide	5.354	0.04424
M	B	Nitrous oxide	3.832	0.04415
M	A	Oxygen	1.382	0.03186
M	B	Pentane	19.26	0.146
N	N	Phosphine	4.692	0.05156
N	N	Propane	8.779	0.08445
O	P	Radon	6.601	0.06239
O-G	S	Silane	4.377	0.05786
O	M	Silicon tetrafluoride	4.251	0.05571
P	A	Sulfur dioxide	6.803	0.05636
P	K	Tin tetrachloride	27.27	0.1642
P	S	Toluene	24.38	0.1463
P	S	Water	5.536	0.03049
R	O	Xenon	4.25	0.05105
R	R	Acetic acid	17.71	0.1065
R	R	Acetic anhydride	20.158	0.1263
S	O	Acetone	16.02	0.1124
S	P	Acetonitrile	17.81	0.1168
S	H	Acetylene	4.516	0.0522
S	O	Ammonia	4.17	0.0371
S	H	Argon	1.355	0.03201
S	C	Benzene	18.24	0.1154
S	T	Bromobenzene	28.94	0.1539
S	K	Butane	14.66	0.1226
S	A	Carbon dioxide	3.64	0.04267
S	N	Carbon disulfide	11.77	0.07685
T	C	Carbon monoxide	1.505	0.03985
T	T	Carbon tetrachloride	19.7483	0.1281
W	Z	Chlorine	6.579	0.05622

Y	A	Chlorobenzene	25.77	0.1453
Z	E	Chloroethane	11.05	0.08651

** [https://en.wikipedia.org/wiki/Van_der_Waals_constants_\(data_page\)](https://en.wikipedia.org/wiki/Van_der_Waals_constants_(data_page))