

Alicat Gas Select™ 5.0 Preloaded Gases and Properties

BIOREACTOR GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
145	Bio-5M	5% CH4 / 95% CO2	148.46635	1.75026	0.9951191	136.268	1.9134	0.9935816
146	Bio-10M	10% CH4 / 90% CO2	147.54809	1.69254	0.9952838	135.383	1.8500	0.993893
147	Bio-15M	15% CH4 / 85% CO2	146.55859	1.63484	0.9954484	134.447	1.7867	0.9941932
148	Bio-20M	20% CH4 / 80% CO2	145.49238	1.57716	0.9956130	133.457	1.7235	0.994482
149	Bio-25M	25% CH4 / 75% CO2	144.34349	1.51950	0.9957777	132.407	1.6603	0.9947594
150	Bio-30M	30% CH4 / 70% CO2	143.10541	1.46186	0.9959423	131.290	1.5971	0.9950255
151	Bio-35M	35% CH4 / 65% CO2	141.77101	1.40424	0.9961069	130.102	1.5340	0.9952803
152	Bio-40M	40% CH4 / 60% CO2	140.33250	1.34664	0.9962716	128.834	1.4710	0.9955239
153	Bio-45M	45% CH4 / 55% CO2	138.78134	1.28905	0.9964362	127.478	1.4080	0.9957564
154	Bio-50M	50% CH4 / 50% CO2	137.10815	1.23149	0.9966009	126.025	1.3450	0.9959779
155	Bio-55M	55% CH4 / 45% CO2	135.30261	1.17394	0.9967655	124.462	1.2821	0.9961886
156	Bio-60M	60% CH4 / 40% CO2	133.35338	1.11642	0.9969301	122.779	1.2193	0.9963885
157	Bio-65M	65% CH4 / 35% CO2	131.24791	1.05891	0.9970948	120.959	1.1564	0.9965779
158	Bio-70M	70% CH4 / 30% CO2	128.97238	1.00142	0.9972594	118.987	1.0936	0.9967567
159	Bio-75M	75% CH4 / 25% CO2	126.51146	0.94395	0.9974240	116.842	1.0309	0.9969251
160	Bio-80M	80% CH4 / 20% CO2	123.84817	0.88650	0.9975887	114.501	0.9681	0.9970832
161	Bio-85M	85% CH4 / 15% CO2	120.96360	0.82907	0.9977533	111.938	0.9054	0.9972309
162	Bio-90M	90% CH4 / 10% CO2	117.83674	0.77166	0.9979179	109.119	0.8427	0.9973684
163	Bio-95M	95% CH4 / 5% CO2	114.44413	0.71426	0.9980826	106.005	0.7801	0.9974957

BREATHING GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
164	EAN-32	32% O2 / 68% N2	186.86315	1.19757	0.9996580	174.925	1.3075	0.9993715
165	EAN	36% O2 / 64% N2	187.96313	1.20411	0.9996401	175.963	1.3147	0.9993508
166	EAN-40	40% O2 / 60% N2	189.06268	1.21065	0.9996222	176.993	1.3218	0.9993302
167	HeOx-20	20% O2 / 80% He	217.88794	0.39237	1.0002482	204.175	0.4281	1.000593
168	HeOx-21	21% O2 / 79% He	218.15984	0.40382	1.0002370	204.395	0.4406	1.000591
169	HeOx-30	30% O2 / 70% He	219.24536	0.50683	1.0001363	205.140	0.5530	1.000565
170	HeOx-40	40% O2 / 60% He	218.59913	0.62132	1.0000244	204.307	0.6779	1.000502
171	HeOx-50	50% O2 / 50% He	216.95310	0.73583	0.9999125	202.592	0.8028	1.000401
172	HeOx-60	60% O2 / 40% He	214.82626	0.85037	0.9998006	200.467	0.9278	1.000257
173	HeOx-80	80% O2 / 20% He	210.11726	1.07952	0.9995768	195.872	1.1781	0.9998019
174	HeOx-99	99% O2 / 1% He	205.72469	1.29731	0.9993642	191.646	1.4165	0.9990796
175	EA-40	Enriched Air-40% O2	189.42518	1.21429	0.9996177	177.396	1.3258	0.9993261
176	EA-60	Enriched Air-60% O2	194.79159	1.24578	0.9995295	182.261	1.3602	0.9992266
177	EA-80	Enriched Air-80% O2	200.15060	1.27727	0.9994412	186.937	1.3946	0.9991288
178	Metabol	Metabolic Exhalant (16% O2 / 78.04% N2 / 5% CO2 / 0.96% Ar)	180.95936	1.20909	0.9994833	170.051	1.3200	0.9992587

CHROMATOGRAPHY GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
29	P-5	5% CH4 / 95% Ar	223.91060	1.58505	0.9993265	207.988	1.7307	0.9990036
206	P-10	10% CH4 90% Ar	221.41810	1.53622	0.9992857	205.657	1.6774	0.99895

FUEL GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
185	Syn Gas-1	40% H2 + 29% CO + 20% CO2 + 11% CH4	155.64744	0.79774	0.9989315	144.565	0.8704	0.9992763
186	Syn Gas-2	64% H2 + 28% CO + 1% CO2 + 7% CH4	151.98915	0.43715	1.0001064	142.249	0.4771	1.000263
187	Syn Gas-3	70% H2 + 4% CO + 25% CO2 + 1% CH4	147.33686	0.56024	0.9991225	136.493	0.6111	0.9997559
188	Syn Gas-4	83% H2 + 14% CO + 3% CH4	133.63682	0.24825	1.0003901	125.388	0.2709	1.000509
189	Nat Gas-1	93% CH4 / 3% C2H6 / 1% C3H8 / 2% N2 / 1% CO2	111.77027	0.70709	0.9979255	103.189	0.7722	0.9973965
190	Nat Gas-2	95% CH4 / 3% C2H6 / 1% N2 / 1% CO2	111.55570	0.69061	0.9980544	103.027	0.7543	0.9974642
191	Nat Gas-3	95.2% CH4 / 2.5% C2H6 / 0.2% C3H8 / 0.1% C4H10 / 1.3% N2 / 0.7% CO2	111.49608	0.68980	0.9980410	102.980	0.7534	0.9974725
192	Coal Gas	50% H2 / 35% CH4 / 10% CO / 5% C2H4	123.68517	0.44281	0.9993603	115.045	0.6589	0.996387
193	Endo	75% H2 + 25% N2	141.72100	0.34787	1.0005210	133.088	0.3797	1.000511
194	HHO	66.67% H2 / 33.33% O2	180.46190	0.49078	1.0001804	168.664	0.5356	1.000396
195	HD-5	LPG 96.1% C3H8 / 1.5% C2H6 / 0.4% C3H6 / 1.9% n-C4H10	81.45829	1.83428	0.9836781	74.933	2.0128	0.9784565
196	HD-10	LPG 85% C3H8 / 10% C3H6 / 5% n-C4H10	81.41997	1.85378	0.9832927	74.934	2.0343	0.9780499

LASER GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
179	LG-4.5	4.5% CO2 / 13.5% N2 / 82% He	199.24300	0.36963	1.0001332	187.438	0.4033	1.000551
180	LG-6	6% CO2 / 14% N2 / 80% He	197.87765	0.39910	1.0000471	186.670	0.4354	1.00053
181	LG-7	7% CO2 / 14% N2 / 79% He	197.00519	0.41548	0.9999919	186.204	0.4533	1.000514
182	LG-9	9% CO2 / 15% N2 / 76% He	195.06655	0.45805	0.9998749	184.835	0.4997	1.000478
183	HeNe-9	9% Ne / 91% He	224.68017	0.22301	1.0004728	211.756	0.2276	1.000516
184	LG-9.4	9.4% CO2 / 19.25% N2 / 71.35% He	193.78311	0.50633	0.9998243	183.261	0.5523	1.000458

O2 CONCENTRATOR GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
197	OCG-89	89% O2 / 7% N2 / 4% Ar	204.53313	1.31033	0.9993849	190.897	1.4307	0.9990695
198	OCG-93	93% O2 / 3% N2 / 4% Ar	205.62114	1.31687	0.9993670	191.795	1.4379	0.9990499
199	OCG-95	95% O2 / 1% N2 / 4% Ar	206.16497	1.32014	0.9993580	192.241	1.4414	0.99904

PURE CORROSIVES*			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
32	NH3	Ammonia	100.92580	0.70352	0.9894555	91.930	0.7715	0.9848612
80	1Butene	Butylene (1-Butene)	81.62541	2.35906	0.9721251	74.354	2.6036	0.9614456
81	cButene	Cis-Butene (cis-2-butene)	79.96139	2.36608	0.9692405	Liquid	Liquid	Liquid
82	iButene	Iso-Butene	80.84175	2.35897	0.9721626	73.640	2.6038	0.9613501
83	tButene	Trans-Butene	80.28018	2.36596	0.9692902	Liquid	Liquid	Liquid
84	COS	Carbonyl Sulfide	124.09600	2.48322	0.9888443	113.127	2.7202	0.985328
33	Cl2	Chlorine	134.56600	2.93506	0.9874470	125.464	3.1635	0.98407
85	CH3OCH3	Dimethylether	90.99451	1.91822	0.9816453	82.865	2.1090	0.9745473
34	H2S	Hydrogen Sulfide (H2S)	123.86890	1.40376	0.9923556	112.982	1.5361	0.9898858
31	NF3	NF3 (Nitrogen Trifluoride)	175.42500	2.91339	0.9963859	162.426	3.1840	0.9951506
30	NO	NO (Nitric Oxide)	190.05950	1.22672	0.9997970	176.754	1.3394	0.9995317
36	C3H6	Propylene (Propylene)	85.59895	1.74509	0.9856064	78.129	1.9139	0.9809373
86	SiH4	Silane (SiH4)	115.94400	1.32003	0.9945000	107.053	1.4433	0.99282
35	SO2	Sulfur Dioxide	127.83100	2.66427	0.9828407	116.717	2.9312	0.9750866

*Pure Corrosive gases are only available on S-Series instruments that are compatible with these gases.

PURE NON-CORROSIVE GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
14	C2H2	Acetylene	104.44800	1.07200	0.9928000	97.374	1.1728	0.9905
0	Air	Air	184.89890	1.18402	0.9996967	172.574	1.2930	0.9994
1	Ar	Argon	226.23990	1.63387	0.9993656	210.167	1.7840	0.9991
16	i-C4H10	i-Butane	74.97846	2.44028	0.9735331	68.759	2.6887	0.9645
13	n-C4H10	n-Butane	74.05358	2.44930	0.9699493	67.690	2.7037	0.9591
4	CO2	Carbon Dioxide	149.31840	1.80798	0.9949545	137.107	1.9768	0.9933
3	CO	Carbon Monoxide	176.49330	1.14530	0.9996406	165.151	1.2505	0.9993
60	D2	Deuterium	126.59836	0.16455	1.0005970	119.196	0.1796	1.0006
5	C2H6	Ethane	93.54117	1.23846	0.9923987	86.129	1.3550	0.9901
15	C2H4	Ethylene (Ethene)	103.18390	1.15329	0.9942550	94.697	1.2611	0.9925
7	He	Helium	198.45610	0.16353	1.0004720	186.945	0.1785	1.0005
6	H2	Hydrogen	89.15355	0.08235	1.0005940	83.969	0.0899	1.0006
17	Kr	Krypton	251.32490	3.43229	0.9979266	232.193	3.7490	0.9972
2	CH4	Methane	110.75950	0.65688	0.9982472	102.550	0.7175	0.9976
10	Ne	Neon	311.12640	0.82442	1.0004810	293.822	0.8999	1.0005
8	N2	Nitrogen	178.04740	1.14525	0.9998016	166.287	1.2504	0.9995
9	N2O	Nitrous Oxide	148.41240	1.80888	0.9945327	136.310	1.9779	0.9928
11	O2	Oxygen	205.50210	1.30879	0.9993530	191.433	1.4290	0.9990
12	C3H8	Propane	81.46309	1.83204	0.9838054	74.692	2.0105	0.9785
19	SF6	Sulfur Hexafluoride	153.53200	6.03832	0.9886681	140.890	6.6162	0.9849
18	Xe	Xenon	229.84830	5.39502	0.9947117	212.157	5.8980	0.9932

REFRIGERANTS*			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
100	R-11	Trichlorofluoromethane	101.60480	5.82358	0.9641448	Liquid	Liquid	Liquid
101	R-115	Chloropentafluoroethane	125.14780	6.43293	0.9814628	114.891	7.0666	0.9752287
102	R-116	Hexafluoroethane	137.81730	5.70097	0.9895011	126.635	6.2458	0.9858448
103	R-124	Chlorotetrafluoroethane	115.93110	5.72821	0.9738286	105.808	6.3175	0.963807
104	R-125	Pentafluoroethane	129.61740	4.98169	0.9847599	118.793	5.4689	0.979137
105	R-134A	Tetrafluoroethane	118.18820	4.25784	0.9794810	108.311	4.6863	0.9713825
106	R-14	Tetrafluoromethane	172.44680	3.61084	0.9962553	159.688	3.9467	0.9948964
107	R-142b	Chlorodifluoroethane	104.20190	4.21632	0.9742264	95.092	4.6509	0.9640371
108	R-143a	Trifluoroethane	110.86600	3.49451	0.9830011	101.344	3.8394	0.9765755
109	R-152a	Difluoroethane	100.81320	2.75903	0.9785245	91.952	3.0377	0.9701025
110	R-22	Difluoromonochloromethane	126.30390	3.58679	0.9853641	115.325	3.9360	0.9801128
111	R-23	Trifluoromethane	149.13160	2.88404	0.9922734	136.997	3.1568	0.9895204
112	R-32	Difluoromethane	126.13140	2.15314	0.9875960	115.303	2.3619	0.9827161
113	RC-318	Octafluorocyclobutane	115.04690	8.42917	0.9700156	104.785	9.3017	0.9594738
114	R-404A	44% R-125 / 4% R-134A / 52% R-143A	120.30982	4.18002	0.9836342	111.584	4.5932	0.9770889
115	R-407C	23% R-32 / 25% R-125 / 52% R-134A	123.55369	3.95268	0.9826672	112.698	4.3427	0.9762849
116	R-410A	50% R-32 / 50% R-125	130.24384	3.56538	0.9861780	122.417	3.9118	0.9811061
117	R-507A	50% R-125 / 50% R-143A	121.18202	4.23876	0.9838805	112.445	4.6573	0.9774207

*Refrigerant gases are only available on S-Series instruments that are compatible with these gases.

STACK GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
200	FG-1	2.5% O2 / 10.8% CO2 / 85.7% N2 / 1% Ar	175.22575	1.22550	0.9992625	165.222	1.3379	0.9990842
201	FG-2	2.9% O2 / 14% CO2 / 82.1% N2 / 1% Ar	174.18002	1.24729	0.9991056	164.501	1.3617	0.9989417
202	FG-3	3.7% O2 / 15% CO2 / 80.3% N2 / 1% Ar	174.02840	1.25520	0.9990536	164.426	1.3703	0.9988933
203	FG-4	7% O2 / 12% CO2 / 80% N2 / 1% Ar	175.95200	1.24078	0.9991842	166.012	1.3546	0.9990116
204	FG-5	10% O2 / 9.5% CO2 / 79.5% N2 / 1% Ar	177.65729	1.22918	0.9992919	167.401	1.3419	0.9991044
205	FG-6	13% O2 / 7% CO2 / 79% N2 / 1% Ar	179.39914	1.21759	0.9993996	168.799	1.3293	0.9991932

WELDING GASES			25°C			0°C		
Gas Number	Short Name	Long Name	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA	Absolute Viscosity	Density 14.696 PSIA	Compressibility 14.696 PSIA
23	C-2	2% CO2 / 98% Ar	224.71480	1.63727	0.9993165	208.673	1.7877	0.998993
22	C-8	8% CO2 / 92% Ar	220.13520	1.64749	0.9991624	204.199	1.7989	0.9987964
21	C-10	10% CO2 / 90% Ar	218.60260	1.65091	0.9991086	202.706	1.8027	0.9987278
140	C-15	15% CO2 / 85% Ar	214.74960	1.65945	0.9989687	198.960	1.8121	0.9985493
141	C-20	20% CO2 / 80% Ar	210.86960	1.66800	0.9988210	195.198	1.8215	0.9983605
20	C-25	25% CO2 / 75% Ar	206.97630	1.67658	0.9986652	191.436	1.8309	0.9981609
142	C-50	50% CO2 / 50% Ar	187.53160	1.71972	0.9977484	172.843	1.8786	0.9969777
24	C-75	75% CO2 / 25% Ar	168.22500	1.76344	0.9965484	154.670	1.9271	0.995401
25	He-25	25% He / 75% Ar	231.60563	1.26598	0.9996422	216.008	1.3814	0.9999341
143	He-50	50% He / 50% Ar	236.15149	0.89829	0.9999188	220.464	0.9800	1.00039
26	He-75	75% He / 25% Ar	234.68601	0.53081	1.0001954	216.937	0.5792	1.000571
144	He-90	90% He / 10% Ar	222.14566	0.31041	1.0003614	205.813	0.3388	1.00057
27	A1025	90%He/75%Ar/25%CO2	214.97608	0.31460	1.0002511	201.175	0.3433	1.000556
28	Star29	Stargon CS 90% Ar / 8% CO2 / 2% O2	219.79340	1.64099	0.9991638	203.890	1.7918	0.998798